GZA GeoEnvironmental of New York

Engineers and Scientists

November 22, 2013
File No. 21.0056546.00

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

535 Washington Street
11th Floor
Buffalo, New York
14203
716-685-2300
FAX 716-685-3629
http://www.gza.com

Re: Results of May 2013 and October 2013 Groundwater Sampling
BCP Sites # C932138, C932139, C932140
GM Components Holdings, LLC
200 Upper Mountain Road
Lockport, NY 14094

Dear Glenn:

On behalf of GM Components Holdings LLC (GMCH), GZA GeoEnvironmental of New York (GZA) has prepared this letter report to summarize the results of the May and October 2013 groundwater sampling events conducted at Brownfield Cleanup Program (BCP) Sites Building 7 (C932138), Building 8 (C932139) and Building 10 (C932140) at the GMCH facility located at 200 Upper Mountain Road in Lockport, New York. The initial groundwater sampling event was conducted from May 6th through May 14th, 2013 and included a total of 23 monitoring wells (see Figure 1). Eleven (11) wells are associated with the Building 7 BCP Site (MW-7-1, 7-2, 7-3, 7-4, 7-5, 7-6, 7-7, 7-8, 7-A-6, 7-C-2, and 7-P-1). Eight (8) wells are associated with the Building 8 BCP Site (MW-6-1, 6-2, 6-F-8, 8-1, 8-1, 8-3, 8-4, and 8-003-B) and four (4) are associated with the Building 10 BCP Site (MW-10-1, 10-2, 10-3, and 9-101-A). Groundwater elevation data was also collected during the sampling event. Figure 2 depicts the groundwater contour map generated form water level measurements collected on May 16, 2013 approximately 2 days after the groundwater sampling event was completed.

Based on the results of the May 2013 groundwater sampling event, GMCH elected to resample two (2) monitoring wells to confirm the results, specifically MW-9-101A and Bldg 10-MW-1, and collect samples from MW-9-12 and TK-6 to help assess the potential extent of groundwater contamination. The rationale for the additional sampling is discussed in more detail later in the report. This additional sampling was completed in October 2013. Water level measurements were also collected on October 7, 2013 and Figure 3 depicts the groundwater contours from those measurements. Monitoring wells, MW-9-12 and TK-6, were included in the October 2013 groundwater measurements but not the May 2013 measurements. Monitoring wells MW-7-7 and MW-7-3 were not included in the October 2013 water level measurements as they were not accessible. MW-7-7, located in a grass area, was under a few inches of water and the road box cover from MW-7-3 was damaged and could not be removed.

The groundwater contours generated from the measurements collected in both May and October 2013 generally indicate an easterly flow direction across the GMCH facility, consistent with previous sampling rounds, as shown on Figures 2 and 3, respectively. We note there appears to be some groundwater mounding near the southeastern corner of Building 8, based on the measurements collected at MW-7. This mounding may be due to a leaking fire suppression line riser pipe which was repaired on September 9, 2013. The leak was located about 40 feet east of MW-7. There also appears to be a low groundwater elevation at MW-9-12. This location was last gauged, as part of a site-wide groundwater assessment, during the RI in 2011. Water levels at these locations will be collected during future site-wide groundwater assessments to monitor and assess the groundwater elevations in these areas.

BACKGROUND

GMCH entered into three Brownfield Cleanup Agreements (BCAs) with the New York State Department of Environmental Conservation (NYSDEC) which were executed in May 2010. A BCP Remedial Investigation (RI) was conducted at Buildings 7, 8 and 10 BCP Sites from December 2010 through Spring 2011, in accordance with the NYSDEC approved RI Work Plans for the three sites. This was the first time these 23 monitoring wells were sampled as part of one sampling event. The BCP Remedial Investigation Reports (RIRs; Haley & Aldrich/GZA, November 2011) for Buildings 7, 8 and 10 were approved by NYSDEC in letters dated November 29, 2011.

GMCH has been voluntarily collecting groundwater samples from the three (3) BCP Sites annually since the BCP RI was completed. Groundwater samples were collected and analyzed for compounds of concern (COCs)[1] and monitored natural attenuation (MNA) parameters as identified in the Delphi Harrison Thermal Systems Site (Registry Site #932113, referred to as the "Delphi Site"), Site Management Plan[2] (SMP). This SMP was developed to provide annual sampling and reporting requirements for the Delphi Site located in the eastern portion of the GMCH facility and downgradient of the Building 7, 8 and 10 BCP Sites. This SMP was approved by NYSDEC in a letter dated October 13, 2011 and was the basis for developing the groundwater monitoring protocol for the three (3) BCP Sites.

GROUNDWATER MONITORING & SAMPLING

The May 2013 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 23 monitoring wells was conducted from May 6th through May 14th, 2013. In addition to the MNA parameters identified in the SMP, carbon dioxide (CO_2), volatile fatty acids (VFAs), ethane and ethene

[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.

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.

The October 2013 groundwater sampling event was also conducted consistent with the sampling techniques described in the Delphi Site SMP and BCP RI Work Plan. Due to the increase in compounds of concern (COCs) detected at MW-9-101-A and Bldg 10-MW-1 (as discussed later in the report), GMCH elected to resample these locations for COCs only. GMCH also collected samples from monitoring well MW-9-12, (located east and downgradient of MW-9-101A) and TK-6 (located west of Building 10). These two locations were also sampled for COCs only. The results from the additional sampling have been included on Table 1 under the section for the Building 10 BCP Site Wells.

METHODOLOGY

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

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

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

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

Natural Attenuation Parameters: methane, iron, magnesium, manganese, potassium, sodium, ammonia, alkalinity, total organic carbon (TOC), chloride, nitrate, nitrite, sulfate, sulfide, carbon dioxide, VFAs, 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 (1) well volume was purged.

It should be noted that a stable water level could not be established at three monitoring well locations (MW-7-4, -7-8, and -8-3). These locations were purged to dry-like conditions and allowed to recharge until the water level recovered to at least 85% of the initial water level prior to sample collection.

Table 1 is a summary of the analytical sample results. The Monitoring Well Observations & Groundwater Sampling Logs are included in Appendix A. A summary of the previous sampling event results of the COCs are included in Appendix B. The TestAmerica Laboratories, Inc. laboratory report is provided in Appendix C and the Data Quality Assessment and Verification report is included in Appendix D. Appendix E 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.

ANALYTICAL RESULTS & DISCUSSION

Building 7 BCP Site

Eleven (11) monitoring wells were sampled in association with the Building 7 BCP Site (MW-7-1, -7-2, -7-3, -7-4, -7-5, -7-6, -7-7, -7-8, -7-A-6, -7-C-2, and -7-P-1; see Figure 1). The analytical results for the Building 7 BCP Site monitoring wells are summarized in Table 1 while Appendix E contains the evaluation of the MNA data. A discussion of the results (COC and MNA findings) at the individual monitoring well locations is provided after the summary for the Building 7 BCP Site.

Building 7 BCP Site Summary

Potential Source Area

The 2013 results for the two (2) potential source area wells, MW-7-7 and MW-7-A-6, indicated that the COCs were detected at concentrations very similar to 2012 and there is adequate evidence for anaerobic biodegradation at MW-7-A-6. Although there is limited evidence for anaerobic biodegradation at MW-7-7, the results indicated the presence of a daughter compound, *cis*-DCE (4,400 ppb) which is indicative of natural attenuation.

Mid-Plume Area

The 2013 results for the four (4) 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) and adequate evidence (MW-7-P-1 and MW-7-6) for anaerobic biodegradation. The COC concentrations from these four (4) wells are one (1) to four (4) orders of magnitude lower than the COC concentrations detected in the upgradient potential source areas at MW-7-A-6 and MW-7-7.

[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.

Downgradient Area

The Building 7 BCP Site downgradient 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 (45 ppb total COCs) which located about 600 feet west and upgradient of the GMCH eastern property line. The downgradient well locations indicate there is a five (5) to seven (7) orders of magnitude decrease from the upgradient potential source area well concentrations. Groundwater contamination does not appear to be migrating from the GMCH property (see Figure 4).

Indicators that natural attenuation is occurring include:

- the significant decrease in COC concentrations from potential source area to mid-plume (4 orders of magnitude) 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;
- the concentrations of COCs at the eastern and southeastern downgradient property line are below method detection limits; and
- the limited to adequate 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 E).

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 and 2012 sample results.

MW-7-2: The results were below PQLs, which are less than the Class GA criteria, consistent with the 2007, 2008 and 2011 sample 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: *Cis*-DCE and VC were the two (2) compounds detected at this location at concentrations consistent with the 2011 and 2012 sample results. The detected

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

concentrations were above their respective Class GA criteria. PCE and TCE concentrations have been below PQLs since 2007 when the well was first installed.

The MNA data indicates there is limited evidence for anaerobic biodegradation at this downgradient location. However, aerobic conditions will further enhance the degradation of the breakdown product compounds *cis*-DCE and VC which 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, consistent with the 2008 and 2011 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 results indicate a slight increase in TCE, PCE, and *cis*-DCE concentrations from the 2011 and 2012 results. The concentrations detected for these three (3) compounds exceed their respective Class GA criteria. VC concentration was below its PQL for 2012 and 2013, likely due to the elevated reporting limits from PCE concentrations.

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

MW-7-6: The results show a same order of magnitude increase in concentrations of the COCs since 2011. The detected concentrations exceed their respective Class GA criteria.

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

MW-7-7: The TCE, PCE and *cis*-DCE results are similar to the 2012 results, but higher than the 2011 results. VC concentration was below PQL for 2013, likely due to the elevated reporting limits from PCE concentrations.

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

MW-7-8: The results indicate a decrease in the TCE and PCE concentrations and an increase in *cis*-DCE. The detected concentration of these three (3) compounds is above their respective Class GA criteria. VC has been below PQL since 2011, when the well was first sampled.

The MNA data indicates there is limited evidence for anaerobic biodegradation at this location. However, breakdown product compound *cis*-DCE has the highest concentration of the COCs, indicating biodegradation of the parent compounds is occurring.

MW-7-A-6: The results for PCE have been consistent since 2006. The concentrations of TCE have shown the same order of magnitude fluctuation since 2006 and *cis*-DCE since 2011. VC was not detected above its PQLs in 2011 or 2013 likely due to the elevated limits during those sample rounds. The concentrations of the COCs are above their respective Class GA criteria.

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

MW-7-C-2: The results for *cis*-DCE show an order of magnitude increase in concentration since 2011. The results for VC have been consistent. The detected concentration of these two (2) 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. However, aerobic conditions will further enhance the degradation of the breakdown product compounds *cis*-DCE and VC.

MW-7-P-1: The results for the COCs have decreased since 2006. VC was the only compound detected at a concentration exceeding its Class GA criteria in 2013. The 2011 and 2006 sampling events also had detections of other COCs which were not detected in 2012.

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

Building 8 BCP Site

Eight (8) monitoring wells were sampled in association with the Building 8 BCP Site (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 BCP Site monitoring wells are summarized in Table 1 and Appendix E contains the evaluation of the MNA data. A discussion of the results (COC and MNA findings) at the individual monitoring well locations is provided after the summary for the Building 8 BCP Site.

Building 8 BCP Site Summary

The highest COC concentrations have consistently been detected in wells MW-8-2 (8,347 ppb) and MW-8-003-B (2,180 ppb). The concentrations of COCs detected at both these locations have shown a same order of magnitude fluctuation in the sampling events conducted. The MNA data indicates there is limited anaerobic biodegradation. However, *cis*-DCE is generally the COC detected at the highest concentration in locations were COCs are detected, indicating reductive dechlorination of the parent compound (TCE) is occurring at the Building 8 BCP Site.

Groundwater within the Building 8 BCP Site is migrating in an easterly direction towards the Delphi Site, which is downgradient (east) of Building 8 (see Figure 1). Natural attenuation processes are reducing the COC contamination at the Delphi Site to non-detectable levels or below the NYSDEC Class GA criteria at the GMCH facility downgradient eastern property line (see Figure 4).

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

Building 8 Individual Well Discussions

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

MW-6-2: The results for the COCs were below PQLs, which is less than the Class GA criteria, consistent with analytical results back to August 2008. We note that TCE was detected twice prior to August 2008; at 25 ppb during the November 2007 sampling event and at 4.2 ppb during the April 2008 sampling event.

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

MW-6-F-8: The results for the COCs were below PQLs, which is less than the Class GA criteria, consistent with analytical results back to 2008.

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

MW-8-1: The results for the COCs were below PQLs, which are less than the Class GA criteria, in 2013. *Cis*-DCE was the only COC detected at this location in 2011 and 2012. The detected concentrations were below 1 ppb and below its Class GA criteria.

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

MW-8-2: The results for TCE, *cis*-DCE, *trans*-DCE and VC have shown the same order of magnitude fluctuation since 2011. The detected concentration of these compounds has been above their respective Class GA criteria. The detected concentrations of PCE have been below the PQL, which is less than its Class GA criteria.

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

MW-8-3: The results for TCE, PCE and *cis*-DCE show a decrease in concentrations to below their respective Class GA criteria. VC has been below the PQL which is less than the Class GA criteria since 2011.

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

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

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

MW-8-003-B: The results for the COCs have shown a same order of magnitude fluctuation in concentrations since 2006. The detected concentration of these compounds has been above their respective Class GA criteria.

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

Building 10 BCP Site

Four (4) monitoring wells were sampled in association with the Building 10 BCP Site (Bldg 10 MW-1, MW-10-2, MW-10-3, and MW-9-101A; see Figure 1) in May 2013. Based on the results of this May 2013 sampling, GMCH elected to collect additional groundwater samples from MW-9-101-A, MW-9-12, Bldg 10 MW-1 and TK-6 in October 2013. The October 2013 sampling was for COCs only. MW-9-101A and Bldg 10 MW-1 were resampled to reconfirm the concentrations detected in the May sampling. Bldg 10 MW-1 was also resampled to assess for the presence of methylene chloride. MW-9-12 and TK-6 were sampled to further assess the potential of potential groundwater contamination associated with the BCP Sites.

The analytical results for the Building 10 BCP Site monitoring wells are summarized in Table 1 and Appendix E contains the evaluation of the MNA data. A discussion of the results (COC and MNA findings) at the individual monitoring well locations is provided after the summary for the Building 10 BCP Site.

Building 10 BCP Site Summary

The MNA data at Bldg 10-MW-1 indicates there is generally limited evidence for anaerobic biodegradation. However, *cis*-DCE is the COC detected at the highest concentration at the two (2) downgradient wells (MW-10-2 and MW-10-3) within the Building 10 BCP Site. This is indicative that intrinsic reductive dechlorination of parent compound (PCE) is occurring within the Building 10 BCP Site.

Groundwater at the Building 10 BCP Site 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 the Building 7 BCP Site. However, natural attenuation appears to be occurring and reducing the COC to non-detectable levels at the GMCH Facility downgradient property line (see Figure 4).

Building 10 Individual Well Discussions

MW-9-101A: The 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 is above its Class GA criteria. *Cis*-DCE and VC were below PQL, which is less than their Class GA criteria, consistent with previous sampling events.

Based on the results from May 2013 (total VOCs of 12.7 ppb), GMCH elected to resample this location and also collect a sample from monitoring well, MW-9-12 (located approximately 400 feet east and downgradient of MW-9-101A, see Figure 1). The October 2013 results for both MW-9-101A and MW-9-12 were below PQLs for the COCs, which are less than the Class GA criteria. The May 2013 results for MW-9-101A may have been anomalous. Previous results (see Appendix B) from this location have been 3.4 ppb (total VOCs in 2006) and below PQL (in 2011 and 2012). The results from MW-9-101A may indicate that the northwestern edge of plume the in the northwestern portion of the GMCH facility fluctuates. Monitoring well, MW-9-12 will be added to the 2014 sampling program to reconfirm these results.

The MNA data from MW-9-101A for May 2013 indicates there is inadequate evidence for anaerobic biodegradation. This is not considered a concern as this location is the furthest upgradient well monitored as part of the BCP Sites and results have generally been below PQLs and Class GA criteria.

Bldg 10-MW-1: The PCE and TCE concentrations detected in the May 2013 sampling event were the highest to date but are within the same order of magnitude as those previously detected at this location. The *cis*-DCE and VC results were below PQL in 2012 and 2013, which are above the Class GA criteria. The concentrations of these two (2) compounds detected in the 2007 and 2011 sampling events were above their respective Class GA criteria.

This location was also resampled in October 2013. The resampling was completed to confirm the PCE and TCE concentrations and to assess if methylene chloride is present in this location. [Methylene chloride was a compound present in a solvent formerly used at the GMCH facility. Sample results from Bldg 10 MW-1, presented in the 2007 Focused Environmental Assessment[5], indicated that methylene chloride was detected at a concentration of 200 ppb. The presence of methylene chloride may have been able to be

[5] "Focused Environmental Assessment, Building 10, Lockport, New York" dated August 27, 2007. Prepared for Delphi by GZA GeoEnvironmental of New York.

used to assess Building 10 contaminant migration.] Due to the elevated concentrations of PCE, the method detection limit for methylene chloride was 880 ppb and the results for methylene chloride were reported as non-detect. Therefore, it does not appear that methylene chloride can be used to assist with assessment of the Building 10 contaminant migration.

The results for TCE from October 2013 (3,100 ppb) resample were similar to the results of the May 2013 (3,000 ppb) results and were within 9% of the average concentration for the last 4 sampling events. The PCE results from October 2013 (160,000 ppb) were 30,000 ppb lower (16% decrease) than the May 2013 results (180,000 ppb) and were within 5% of the average concentration for the last 4 sampling events. [Results from 2007 were not used in this assessment as the analysis was completed by a different laboratory].

Based on discussions with the laboratory (TestAmerica), the acceptable range of data concentrations for a sample could vary 16% for TCE and 20% for PCE using the EPA Method 8260C. The acceptable ranges are based on the laboratory control samples. The concentrations of TCE and PCE detected at Bldg 10 MW-1 for the last 4 sampling events fall within their respective acceptable ranges when compared to the average concentrations detected. A duplicate sample will be collected from this location during the 2014 sampling program to assist with confirming these results.

GMCH also elected to sample monitoring well TK-6 (located approximately 500 feet west and upgradient of Bldg 10-MW-1, see Figure 1). The results of the October 2013 sampling indicated that PCE was detected at 1.9 ppb. This location was tested for VOCs in 2006 as part of a previous investigation[6], and in 2008, 2009 and 2010 as required by GMCH's former Major Oil Storage Facility permit. The results for the 2006, 2008, 2009 and 2010 sampling events did not indicate that COCs were present above PQLs. We note that the reported results for the COCs from the 2008 and 2009 analysis (Free-Col Laboratory) were provided as < 2 ppb and the 2010 analysis (IsleChem) results were provided as < 5 ppb. Therefore, the detected concentration of 1.9 ppb at TK-6 in the October 2013 sampling is not likely indicative of a new condition. Monitoring well TK-6 will be added to the 2014 sampling program to reconfirm these results.

The MNA data from Bldg 10 MW-1 for May 2013 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 significant decrease in the COC concentrations from Bldg 10 MW-1 and *cis*-DCE was the compound detected at the highest concentration in MW-10-2 and MW-10-3 indicating intrinsic reductive dechlorination of the parent compounds (PCE) is occurring.

MW-10-2: The results of TCE and PCE have shown an order of magnitude decrease in concentration since 2011. *Cis*-DCE has shown a same order of magnitude increase and the

[6] "Field Investigation Report, West Lockport Complex, Lockport, NY" dated January 17, 2007. Prepared for Delphi Corporation by Environmental Resource Management.

VC results have been consistent 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 have shown a same order of magnitude increase in concentration since 2011. VC was detected above the PQL for the first time in 2013 but below its Class GA criteria. The detected concentrations of TCE, PCE and *cis*-DCE are above their respective Class GA criteria.

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

CONCLUSIONS

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

Although there is limited to adequate evidence for anaerobic biodegradation at well locations where the COCs have been detected, it does not appear that contaminated groundwater is migrating beyond the GMCH facility property boundary in association with the three (3) BCP Sites.

RECOMMENDATIONS

GZA recommends continuing the annual groundwater sampling event using the methodologies outlined in the Delphi Site SMP, in the spring of 2014. In addition to the 23 monitoring wells associated with the three (3) BCP sites, samples will also be collected from MW-9-12 and TK-6.

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

Sincerely,

GZA GEOENVIRONMENTAL OF NEW YORK

Christopher Boron, CPG
Senior Project Manager

Bart A. Klettke, P.E.
Principal

Table 1 – Summary of Groundwater Sample Analytical Results
Figure 1 – Site Plan
Figure 2 – May 2013 Groundwater Contour Map
Figure 3 – October 2013 Groundwater Contour Map
Figure 4 – Extent of Groundwater Contamination
Appendix A: Monitoring Well Observations & Groundwater Sampling Logs
Appendix B: Previous Analytical Results & Graphs
Appendix C: Test America Analytical Laboratory Report
Appendix D: Data Quality Assessment and Verification Report
Appendix E: Anaerobic Biodegradation Screening Tables

TABLES

Table 1
Summary of Groundwater Sample Analytical Results
GMCH Lockport Site
Buildings 7, 8 10
Site No. C932138, C932139 C932140

Sample Location / Sample Date	Class GA Criteria	BUILDING 7 BCP SITE WELLS										
		MW-7-1R 5/6/2013	MW-7-2 5/6/2013	MW-7-3 5/6/2013	MW-7-4 5/7/2013	MW-7-5 5/7/2013	MW-7-6 5/7/2013	MW-7-7 5/8/2013	MW-7-8 5/9/2013	MW-7-A-6 5/8/2013	MW-7-C-2 5/7/2013	MW-7-P-1 5/8/2013
		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
VOC Compounds of Concern (ug/L)												
cis-1,2-Dichloroethene	5	<0.81	<0.81	**7.0**	<0.81	**1,000**	**750**	**4,400**	**280**	**26,000**	**430**	1.1
Tetrachloroethene	5	<0.36	<0.36	<0.36	<0.36	**11,000**	**980**	**120,000**	**110**	**140,000**	<1.8	<0.36
trans-1,2-dichloroethene	5	<0.90	<0.90	<0.90	<0.90	<180	<18	<1,800	<3.6	<1,800	<4.5	2.3
Trichloroethene	5	<0.46	<0.46	<0.46	<0.46	**1,200**	**440**	**2,300**	**66**	**28,000**	<2.3	0.74 J
Vinyl Chloride	2	<0.90	<0.90	**38**	<0.90	<180	**88**	<1,800	<3.6	<1,800	**18**	**11**
Total VOCs	2	0	0	45	0	13,200	2,258	126,700	456	194,000	448	15.14
Field Parameters												
Temperature (Deg. C)	NV	13.6	11.0	13.2	9.6	12	10.8	10.4	10.70	13.4	14	20.6
Specific Conductance (mS/cm)	NV	4.88	1.01	23.25	1.44	14.65	13.06	6.47	7.49	3.1	1.98	18.42
Dissolved Oxygen (mg/L)	NV	0.16	0.94	0.19	1.54	0.28	0.28	0.96	1.11	0.27	0.16	0.17
Oxygen Reduction Potential (mv)	NV	27.3	34.9	-83.9	60.5	94.4	32.1	-205.9	-110.6	16.8	-124.1	-78.6
pH (std. units)	NV	6.96	7.33	6.75	7.39	6.79	7.03	8.72	7.35	6.88	7.12	6.37
Turbidity (NTUs)	NV	4.11	2.11	1.7	2.11	4.65	1.31	10.3	43.2	4.27	3.01	2.65
Inorganics (mg/L)												
Iron	0.3	0.11	0.12	**3.9**	0.2	0.097	0.11	0.370	**3.0**	**0.46**	0.17	**62.5**
Magnesium	35 Note 4	**107**	**35.2**	**251**	28.8	**138**	**99.1**	**122**	**239**	**119**	**90.7**	**384**
Manganese	NV	0.39 B	0.016 B	0.39 B	0.0074	1.3	0.19	0.013	0.21	1.1	0.14	9.2
Potassium	NV	4.5 B	1.4 B	50.7 B	1.9	7.7	10.7	32.9	25.9	3.2	7.6	33.6
Sodium	20	**569**	**92**	**4,640**	**198** B	**2,540** B	**2,400** B	**910**	**976**	**283**	**133** B	**423**
Miscellaneous Water Quality Parameters												
Methane (ug/L)	NV	21.0	<0.22	190	<0.22	22	90	250	44	1,100	49	2,800
Ethane (ug/L)	NV	<0.49	<0.49	17.0	<0.49	<0.49	8.2	27	5.6 J	23	0.87 J	54
Ethene (ug/L)	NV	<0.52	<0.52	11	<0.52	0.75 J	1.6 J	65	0.88 J	200	1.5 J	10 J
Carbon Dioxide (ug/L)	NV	4,900	3,100	7,800	2,000	7,100	4,100	<1,000	2,200	21,000	4,100	30,000
Total Organic Carbon (mg/L)	NV	1.4	1.3	1.8	0.64 J	2	1.5	11.4	0.9 J	8.3	0.67 J	2.6
Alkalinity (mg/L)	NV	339	330	336	333	300	304	89.7	120.0	459	296	264
Ammonia (mg/L)	NV	0.029	<0.009	3.4	<0.009	0.06	0.059	1.4	0.096	0.065	0.32	136
Chloride (mg/L)	NV	1,320	125	7,470	267	5,030	4,220	1,870	2,450	813	179	4,650
Nitrate (mg/L)	NV	0.041 J	<0.020	0.17	0.064	0.94	0.031 J	0.110	<0.020	0.17	0.04 J	<0.020
Nitrite (mg/L)	NV	<0.020	<0.020	0.022 J	<0.02	0.033 J	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Sulfate (mg/L)	NV	115	32.1	746	39.3	177 J	193 J	399	116	81.6	538	85.5
Sulfide (mg/L)	NV	<0.052	<0.052	0.057 J	<0.052	<0.052	<0.052	0.44	<0.052	<0.052	<0.052	<0.052
Volatile Fatty Acids (mg/L)												
Acetic acid (mg/L)	NV	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	4.1	<0.15	0.21 J	<0.15	<0.15
Formic acid (mg/L)	NV	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Lactic acid (mg/L)	NV	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	0.16 J
n-Butyric acid (mg/L)	NV	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Propionic acid (mg/L)	NV	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Pyruvic acid (mg/L)	NV	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080

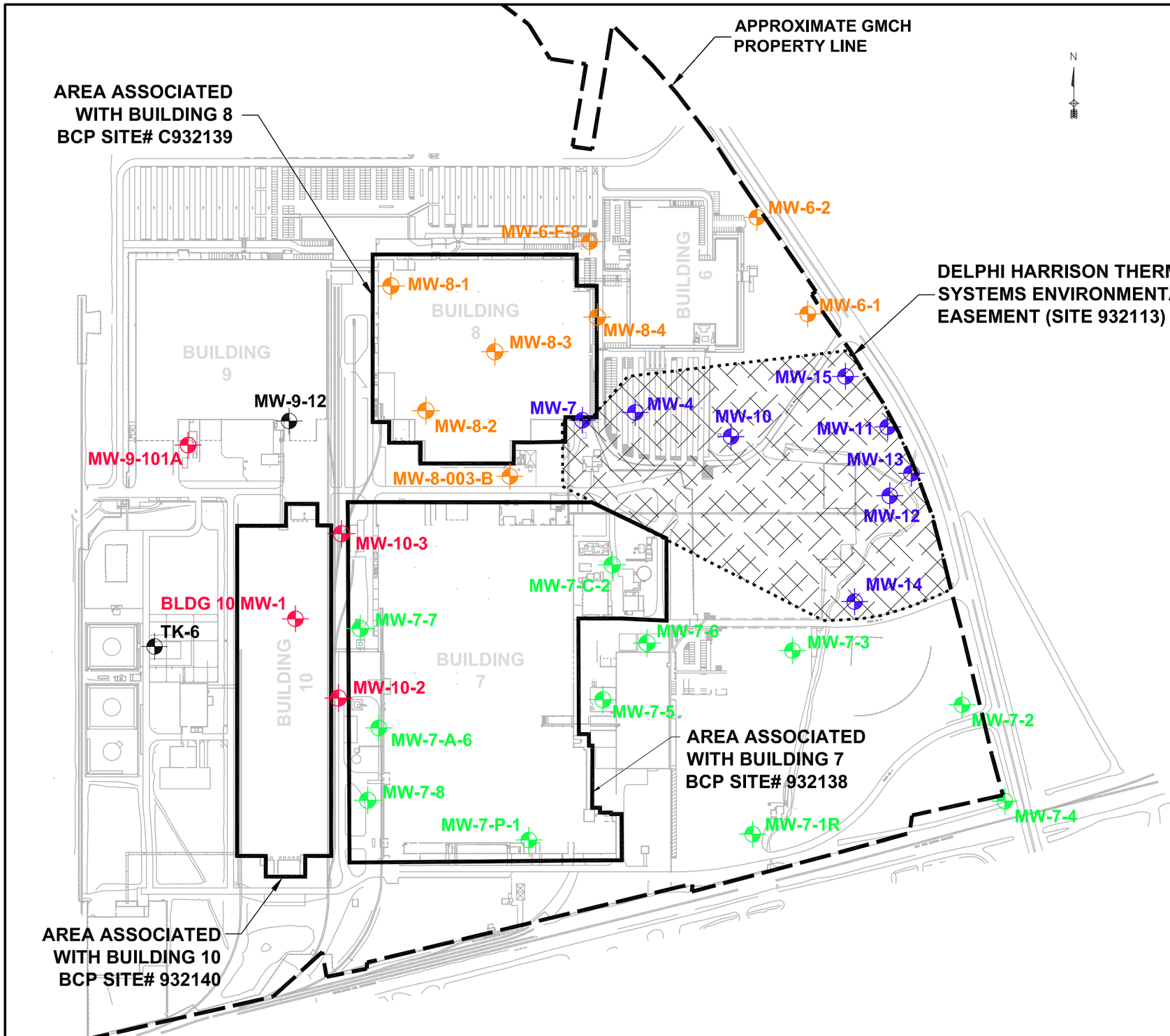
Notes:
1. Only compounds detected in one or more of the groundwater samples are presented in this table.
2. "<" indicates compound was not detected above the method detection limit.
3. Analytical testing completed by TestAmerica.
4. Criteria is a guidance value.
5. Laboratory qualifiers: B = compound was found in the blank and sample; J = result is les than the RL but greater than or equal to the MDL and the concentration is an approximation; * - LCS or LCSD exceeds the 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-A-6 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, C932139 C932140

Sample Location / Sample Date	Class GA Criteria	BUILDING 8 BCP SITE WELLS								BUILDING 10 BCP SITE WELLS							
		MW-6-1 5/14/2013	MW-6-2 5/14/2013	MW-6-F-8 5/14/2013	MW-8-1 5/10/2013	MW-8-2 5/13/2013	MW-8-3 5/14/2013	MW-8-4 5/13/2013	MW-8-003-B 5/10/2013	MW-9-101A 5/10/2013	MW-9-101A 10/1/2013	MW-9-12 10/1/2013	TK-6 10/7/2013	BLDG-10-MW-1 5/9/2013	BLDG-10-MW-1 10/1/2013	MW-10-2 5/9/2013	MW-10-3 5/9/2013
		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
VOC Compounds of Concern (ug/L)																	
cis-1,2-Dichloroethene	5	<0.81	<0.81	<0.81	<0.81	**7,800**	3	**43**	**790**	<0.81	<0.81	<8.1	<0.81	<1,600	<1,600	**2,600**	**38**
Tetrachloroethene	5	<0.36	<0.36	<0.36	<0.36	<0.36	0.49 J	<0.36	**880**	**11**	<0.36	<3.6	1.9	**180,000**	**160,000**	**150**	**24**
trans-1,2-dichloroethene	5	<0.90	<0.90	<0.90	<0.90	**77**	<0.9	<0.90	<23.0	<0.90	<0.90	<9.0	<0.90	<1,800	<1,800	<36	<0.09
Trichloroethene	5	<0.46	<0.46	<0.46	<0.46	**200**	0.78 J	**7.9**	**390**	1.7	<0.46	<4.6	<0.46	**3,000**	**3,100**	**450**	**24**
Vinyl Chloride	2	<0.90	<0.90	<0.90	<0.90	**270**	<0.9	**12**	**120**	<0.90	<0.90	<9.0	<0.90	<1,800	<1,800	**60**	1.4
Total VOCs	2	0	0	0	0	8,347	4.27	62.9	2,180	12.7	0	0	1.9	183,000	163,100	3,260	87.4
Field Parameters																	
Temperature (Deg. C)	NV	10.6	11.1	11.7	13.4	19.4	20.6	11.5	12.3	12.3	19.7	16.4	NT	19.7	21.1	12.1	10.3
Specific Conductance (mS/cm)	NV	3.85	10.01	8.99	6.7	2.07	6.52	10.93	13.47	9.09	8.28	9.2	NT	2.2	2.2	7.19	0.83
Dissolved Oxygen (mg/L)	NV	0.15	0.16	0.31	0.21	0.23	0.84	1.25	0.62	2.6	0.13	0.08	NT	0.83	0.1	4.16	2.01
Oxygen Reduction Potential (mv)	NV	-57.4	7.9	81.7	-270.8	-189.4	-51.3	-93.2	-0.5	122.1	47	-51.3	NT	-31.2	-42.6	-38.9	46.1
pH (std. units)	NV	7.15	7.06	6.8	6.94	7.32	7	6.88	7.58	7.07	6.75	7.28	NT	6.87	6.73	7.19	7.68
Turbidity (NTUs)	NV	19.5	1.6	1.2	7.12	1.39	2	2.09	2.51	3.4	1	10.5	NT	2.51	1.83	7.12	3.14
Inorganics (mg/L)																	
Iron	0.3	**16.7**	0.23	0.12	0.43	0.19	0.56	**1.7**	0.24	0.057	NT	NT	NT	**1.2**	NT	**0.35**	0.038 J
Magnesium	35 [Note 4]	**59.2**	**76.1**	**230**	**130**	**45.4**	**48.4**	**260**	**39.9**	**147**	NT	NT	NT	**87**	NT	**76.3**	22.1
Manganese	NV	2.3	0.6	0.59	0.18	0.021	4.3	1.9	0.54	0.015	NT	NT	NT	0.35	NT	0.13	0.00054
Potassium	NV	2.4	4.4	5.2	21.2	17.6	558	8.1	9	24.8	NT	NT	NT	5.4	NT	9.6	2.9
Sodium	20	**453**	**1,710**	**1,170**	**858**	**282**	**423**	**1,640**	**3,020**	**1,290**	NT	NT	NT	**89.9**	NT	**1,130**	**64.1**
Miscellaneous Water Quality Parameters																	
Methane (ug/L)	NV	14	<0.22	4	110	320	130	93	55	<0.22	NT	NT	NT	9.6	NT	38	<0.22
Ethane (ug/L)	NV	<0.49	<0.49	<0.49	13	<25	9.7	<2.5	0.82 J	<0.49	NT	NT	NT	0.94 J	NT	2.8 J	<0.49
Ethene (ug/L)	NV	<0.52	<0.52	<0.52	<0.52	<26	<0.52	<2.6	7.4	<0.52	NT	NT	NT	6.3 J	NT	2.1 J	<0.52
Carbon Dioxide (ug/L)	NV	26,000	19,000	16,000	14,000	9,300	21,000	15,000	1,600	5,700	NT	NT	NT	16,000	NT	7,800	1,100
Total Organic Carbon (mg/L)	NV	3.9	1.7	1.1	0.86 J	1.5	5.4	0.84 J	2	2.6	NT	NT	NT	4.2	NT	1.3	0.71 J
Alkalinity (mg/L)	NV	394	403	394	318	381	380	328	187	210	NT	NT	NT	334	NT	310	145
Ammonia (mg/L)	NV	0.44	0.018 J	<0.009	1.6	0.85	1.9	0.11	0.15	0.019 J	NT	NT	NT	0.18	NT	0.44	0.015 J
Chloride (mg/L)	NV	968	3,040	2,680	1,710	318	1,730	3,540	4,190	2,180	NT	NT	NT	386	NT	2,010	87.8
Nitrate (mg/L)	NV	0.048 J	0.26	<0.020	<0.020	0.14	0.031 J	0.021 J	0.48	5	NT	NT	NT	<0.020	NT	0.077	1.3
Nitrite (mg/L)	NV	<0.020	0.022 J ^	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NT	NT	NT	<0.020	NT	<0.02	<0.02
Sulfate (mg/L)	NV	52.8	127	228	644	222	58	225	178	1,000	NT	NT	NT	252	NT	226	118
Sulfide (mg/L)	NV	<0.052	<0.052	<0.052	0.82	0.95	<0.052	<0.052	<0.052	<0.052	NT	NT	NT	<0.052	NT	<0.052	<0.052
Volatile Fatty Acids (mg/L)																	
Acetic acid (mg/L)	NV	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	NT	NT	NT	<0.15	NT	<0.15	<0.15
Formic acid (mg/L)	NV	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	NT	NT	NT	<0.11	NT	<0.11	<0.11
Lactic acid (mg/L)	NV	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	NT	NT	NT	<0.14	NT	<0.14	<0.14
n-Butyric acid (mg/L)	NV	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	NT	NT	NT	<0.16	NT	<0.16	<0.16
Propionic acid (mg/L)	NV	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	NT	NT	NT	<0.17	NT	<0.17	<0.17
Pyruvic acid (mg/L)	NV	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	NT	NT	NT	<0.080	NT	<0.080	<0.080

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 les than the RL but greater than or equal to the MDL and the concentration is an approximation; * - LCS or LCSD exceeds the 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-A-6 are the higher of this sample and its respective duplicate.

FIGURES



LEGEND:

MW-11	APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS WITHIN THE DELPHI HARRISON THERMAL SYSTEMS SITE SAMPLED MAY 2013
MW-7-2	APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS ASSOCIATED WITH THE BUILDING 7 BCP SITE AREA
MW-6-1	APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS ASSOCIATED WITH THE BUILDING 8 BCP SITE AREA
MW-10-2	APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS ASSOCIATED WITH THE BUILDING 10 BCP SITE AREA
TK-6	APPROXIMATE LOCATION AND DESIGNATION OF ADDITIONAL MONITORING WELLS SAMPLED IN OCTOBER 2013

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.

DRAWN BY: DEW

DATE: NOVEMBER 2013

GZA GeoEnvironmental of New York

APPROXIMATE SCALE IN FEET

0 200 400 800

GM COMPONENTS HOLDINGS, LLC
LOCKPORT FACILITY
200 UPPER MOUNTAIN ROAD
LOCKPORT, NEW YORK
BCP SITE GROUNDWATER MONITORING

SITE AND GROUNDWATER MONITORING WELL LOCATION PLAN

PROJECT No.
21.0056546.00

FIGURE No.
1

N

LEGEND:

MW-11 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS WITHIN THE DELPHI HARRISON THERMAL SYSTEMS SITE SAMPLED MAY 2013

584.47 — GROUNDWATER ELEVATION (FEET) MEASURED ON MAY 16, 2013

590 — GROUNDWATER CONTOUR (FEET) PLOTTED BASED UPON MAY 16, 2013 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.

BUILDING 9

BUILDING 8

BUILDING 7

BUILDING 10

MW-6-F-8 610.99

MW-8-1 609.64

MW-6-2 603.35

MW-6-1 593.59

MW-8-4 605.88

MW-8-3 605.84

MW-15 585.99

MW-11 584.47

MW-7 607.11

MW-4 604.94

MW-10 590.48

MW-13 584.36

MW-8-2 607.41

MW-9-101-A 609.69

MW-8-003-B 605.99

MW-12 584.80

MW-10-3 607.29

MW-7-C-2 603.94

MW-14 586.49

BLDG 10 MW-1 609.23

MW-7-7 607.64

MW-7-6 602.12

MW-7-3 590.11

MW-7-2 586.34

MW-10-2 607.97

MW-7-5 601.85

MW-7-A-6 609.17

MW-7-8 609.48

MW-7-4 581.73

MW-7-P-1 605.43

MW-7-1R 593.38

610 608 607 606 604 602 600 598 596 594 592 590 588 586 584

APPROXIMATE SCALE IN FEET

0 150 300 600

DRAWN BY: DEW

DATE: NOVEMBER 2013

GZA GeoEnvironmental of New York

GM COMPONENTS HOLDINGS, LLC
LOCKPORT FACILITY
200 UPPER MOUNTAIN ROAD
LOCKPORT, NEW YORK

BCP SITE GROUNDWATER MONITORING

MAY 16, 2013 GROUNDWATER MONITORING WELL ELEVATIONS

PROJECT No.
21.0056546.00

FIGURE No.
2

N

LEGEND:

MW-11 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS WITHIN THE DELPHI HARRISON THERMAL SYSTEMS SITE SAMPLED OCTOBER 2013

606.20 — GROUNDWATER ELEVATION (FEET) MEASURED ON OCTOBER 7, 2013

590 — GROUNDWATER CONTOUR (FEET) PLOTTED BASED UPON OCTOBER 7, 2013 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.

BUILDING 9
BUILDING 8
BUILDING 6
BUILDING 7
BUILDING 10

MW-6-2 606.20
MW-6-F-8 609.45
MW-8-1 609.85
MW-6-1 597.25
MW-8-4 605.38
MW-8-3 606.75
MW-15 587.41
MW-9-12 606.05
MW-8-2 607.71
MW-7 607.32
MW-4 604.48
MW-10 592.08
MW-11 584.87
MW-9-101-A 609.76
MW-13 584.52
MW-8-003-B 606.41
MW-9 601.62
MW-8 603.43
MW-12 584.85
MW-10-3 608.42
MW-7-C-2 604.73
BLDG 10 MW-1 608.93
MW-14 588.73
MW-7-6 602.93
TK-6 612.93
MW-10-2 608.40
MW-7-5 602.04
MW-7-A-6 610.15
MW-7-2 589.38
MW-7-8 610.42
MW-7-1R 593.89
MW-7-4 582.45
MW-7-P-1 605.82

608 607 609 604 602 600 598 596 594 592 590 588 586 585 612 610 591 590 589 587 585 583

DRAWN BY: DEW
DATE: NOVEMBER 2013

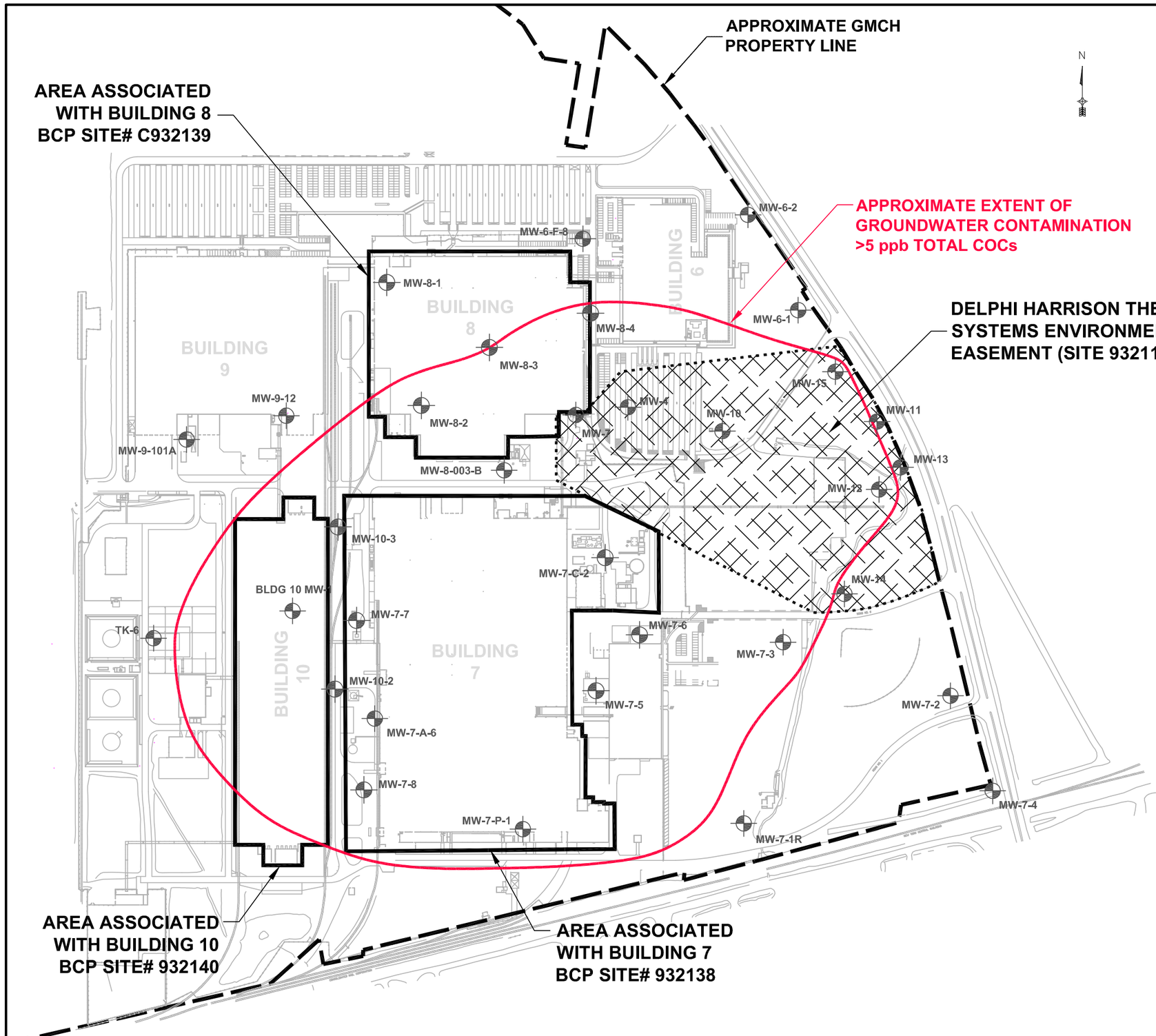
GZA GeoEnvironmental of New York

APPROXIMATE SCALE IN FEET
0 150 300 600

GM COMPONENTS HOLDINGS, LLC
LOCKPORT FACILITY
200 UPPER MOUNTAIN ROAD
LOCKPORT, NEW YORK
BCP SITE GROUNDWATER MONITORING
OCTOBER 7, 2013 GROUNDWATER MONITORING WELL ELEVATIONS

PROJECT No.
21.0056546.00

FIGURE No.
3



LEGEND:

MW-10-3 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELLS

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.

DRAWN BY: TAK

DATE: NOVEMBER 2013

GZA GeoEnvironmental of New York

APPROXIMATE SCALE IN FEET

0 200 400 800

GM COMPONENTS HOLDINGS, LLC
LOCKPORT FACILITY
200 UPPER MOUNTAIN ROAD
LOCKPORT, NEW YORK
BCP SITE GROUNDWATER MONITORING

EXTENT OF GROUNDWATER CONTAMINATION >5 ppb TOTAL COCs

PROJECT No.
21.0056546.00

FIGURE No.
4

APPENDIX A

MONITORING WELL OBSERVATION & GROUNDWATER SAMPLING LOGS

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME: Bldg 7 BCP Site 9-32-138 — PROJECT NO.: 36546

SAMPLING CREW MEMBERS: T. Bolton — SUPERVISOR: C. Boron

DATE OF SAMPLE COLLECTION: 5/6/13 - 5/9/13

[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-7-3-050613	MW-7-3	594.04	25.09	3.90	590.14	3.5	/	4.0	6.75	13.2	23.5	1145	VOC MNA
MW-7-1-050613	MW-7-1	597.67	22.51	4.30	593.37	3.0	/	3.5	6.96	13.6	27.3	1413	VOC MNA
MW-7-2-050613	MW-7-2	592.57	21.66	5.72	586.85	2.6	/	3.0	7.33	11.00	1.01	1710	VOC MNA
MW-7-6-050713	MW-7-6	606.30	16.51	4.06	602.24	2.0	/	2.5	7.03	10.8	13.06	915	VOC MNA
MW-7-5-050713	MW-7-5	610.96	21.97	8.89	602.07	2.1	/	3.6	6.79	12.0	14.65	1213	VOC MNA
MW-7-C-2-050713	MW-7-C-2	609.42	24.08	5.46	603.96	3.0	/	5.0	7.12	14.0	1.98	1535	VOC MNA
MW-7-4-050713	MW-7-4	593.53	21.44	11.77	581.76	1.6	/	1.6	7.39	9.6	1.44	1536	VOC MNA
MW-7-A-6-050813	MW-7-A-6	612.13	14.34	2.82	609.31	1.9	/	1.9	6.88	13.4	3.10	1115	VOC MNA
↳ GW-Duplicate-050813													

Additional Comments:

Copies to:

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

[illegible] Revision: October 29, 2012

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME: Bldg 7 BCP Site 9-32-138

PROJECT NO.: 56546

SAMPLING CREW MEMBERS: T. Bohlen

SUPERVISOR: L. Boron

DATE OF SAMPLE COLLECTION: 5/6/13 - 5/9/13

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

Sample I.D. Number	Well No.	Measuring Point Elev. (ft. AMSL)	Bottom Depth (ft. btoc)	Water Depth (ft. btoc)	Water Elevation (ft. AMSL)	Well Volume (gallons)	Bailer Volume No. Bails	Volume Purged (gallons)	Field pH	Field Temp.	Field Cond.	Time	Sample Description & Analysis
MW-7-7-050813	MW-7-7	610.24	22.05	2.64	607.60	3.2	/	6.4	8.72	10.4	6.47	1505	VOC MNA
MW-7-P-1-050813	MW-7-P-1	615.09	19.88	9.51	605.58	1.7	/	3.4	6.73	20.6	18.42	1815	VOC MNA
MW-7-8-050913	MW-7-8	610.92	19.43	1.12	609.80	3.0	/	3.0	7.35	10.7	7.49	936	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: Bldg7 BCP Site 9-32-138
Ref. No.: 56546

Date: 5/6/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-1
Measurement Point: TOR
Constructed Well Depth (ft): 23.7
Measured Well Depth (ft): 22.51 (hard sounding @ bottom)
Depth of Sediment (ft):

Screen Length (ft): 10'
Depth to Pump Intake (ft)[1]: 17'
Well Diameter, D (in): 2
Well Screen Volume, V_s (mL)[2]: 1 well vol. = 3.0 gal.
Initial Depth to Water (ft): 4.30

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]
1247	100	4.50		7.09	14.9	5.34	35.4	1.93	8.15	0	0
1307		5.11		6.93	13.8	4.87	38.1	0.32	7.06	0.4	0
1327		5.34		6.92	13.8	4.87	37.8	0.23	6.91	1.2	0
1347		5.42		6.96	13.4	4.87	31.6	0.20	5.83	1.8	0
1407		5.44		6.96	13.6	4.88	29.2	0.17	4.61	2.3	0
1413		5.46		6.96	13.6	4.89	26.9	0.17	4.13	2.5	0
1418		5.49		6.96	13.6	4.87	27.5	0.16	4.10	2.7	0
1423		5.52		6.96	13.6	4.88	27.3	0.16	4.11	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 = 0.0 ppm @ TOR

* slowest pump setting - calculated w/ 1L Bottle & stopwatch

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 -

SITE/PROJECT NAME: Bldg 7 BCP Site 9-32-138 WELL # MW-7-1

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
05 06 13	05 06 13	30	35

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 - WATERRA	X- PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	C - BLADDER PUMP	F - DIPPER BOTTLE		X- SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON B - STAINLESS STEEL	D - PVC E - POLYETHYLENE		X- PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E	C - POLYPROPYLENE			X- SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON B - TYGON	D - POLYPROPYLENE E - POLYETHYLENE	F - SILICONE G - COMBINATION TEFLON/POLYPROPYLENE	X- PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E	C - ROPE X- (SPECIFY)			X- SAMPLING OTHER (SPECIFY)

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

FIELD MEASUREMENTS

WELL ELEVATION	597.67 (m/ft)	GROUNDWATER ELEVATION	593.37 (m/ft)
DEPTH TO WATER	4.30 (m/ft)	WELL DEPTH	22.51 (m/ft)

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

FIELD COMMENTS

SAMPLE APPEARANCE: Good ODOR: Clear COLOR: Clear TURBIDITY: Clear

WEATHER CONDITIONS: WIND SPEED: 0-5 DIRECTION: SW PRECIPITATION: Y/(N) OUTLOOK: Sunny ~65°F

SPECIFIC COMMENTS

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/6/13 Thomas Bohlen Thomas Bohlen

DATE PRINT SIGNATURE

ANY 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: Bldg 7 BCP Site 9-32.138
Ref. No.: 5546
Date: 5/6/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-2
Measurement Point: TOR
Constructed Well Depth (ft): 20'
Measured Well Depth (ft): 21.66'
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]: 1well vol. = 2.6 gal
Initial Depth to Water (ft): 5.72

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]
1600		6.09		7.49	11.7	0.87	64.4	2.32	2.90	0	0
1615		8.67		7.36	9.1	0.86	59.6	1.57	2.51	0.3	0
1620		11.49		7.36	8.9	0.86	59.1	1.52	2.51	1.1	0
1625	1107*	12.47		7.38	11.1	0.84	57.4	1.46	2.49	1.5	0
1630		12.53		7.38	10.8	0.86	56.2	1.42	2.31	1.7	0
1635		12.60		7.36	10.9	0.87	55.2	1.32	2.30	1.8	0
1640		12.67		7.35	10.9	0.88	54.9	1.18	2.29	2.0	0
1645		12.73		7.35	10.9	0.89	49.5	1.13	2.15	2.1	0
1650		12.78		7.35	10.9	0.90	46.0	1.11	2.13	2.2	0
1655		12.82		7.35	10.9	0.95	33.0	0.93	2.12	2.3	0
1700		12.88		7.34	10.9	1.00	35.2	0.94	2.10	2.4	0
1705		12.92		7.34	11.0	1.01	33.1	0.98	2.10	2.5	0
1710		12.98		7.33	11.0	1.01	34.9	0.94	2.11	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.

OVM = 0.0 ppm @ TOR

* - calculated w 1L Bottle & Stopwatch

WELL PURGING FIELD INFORMATION FORM

JOB# 5 6 5 4 6 .

SITE/PROJECT NAME: Bldg 7 BCP Site 9-32-138 WELL # M W - 7 - 2

WELL PURGING INFORMATION

0 5 0 6 1 3	0 5 0 6 1 3	2.6	3.0
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING	ACTUAL VOLUME PURGED

PURGING AND SAMPLING EQUIPMENT

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

PURGING DEVICE: B

SAMPLING DEVICE: A

PURGING DEVICE: E

SAMPLING DEVICE: E

PURGING DEVICE: E

SAMPLING DEVICE:

FILTERING DEVICES 0.45:

FIELD MEASUREMENTS

WELL ELEVATION 592.57 (ft/msl) GROUNDWATER ELEVATION 586.85 (ft/msl)

DEPTH TO WATER 5.72 (ft) WELL DEPTH 21.66 (ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

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

WEATHER CONDITIONS: WIND SPEED: 5-10 DIRECTION: NE PRECIPITATION: (N) Sunny ~65°F

SPECIFIC COMMENTS:

5/6/13 Thomas Bohler [signature]

DATE PRINT SIGNATURE

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH BCP Site 9-32-138
Ref. No.: 56546

Date: 5/6/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-3
Measurement Point: TOR
Constructed Well Depth (ft): 25'
Measured Well Depth (ft): 25.09
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): 1 well vol. = 3.5 gal.
Initial Depth to Water (ft): 3.90'

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)
948	101	4.09		6.70	14.4	19.73	210.3	2.66	2.11	0	0
1008		6.89		6.73	13.1	19.65	129.4	1.22	2.01	0.4	0
1028		8.32		6.69	13.0	19.48	-46.8	1.13	1.91	1.1	0
1048		9.72		6.72	13.1	20.12	-84.4	0.52	1.85	1.7	0
1108		11.01		6.73	13.3	21.87	-87.3	0.26	1.84	2.3	0
1125		11.82		6.74	13.2	22.66	-83.8	0.23	1.81	3.0	0
1130		12.06		6.74	13.2	22.95	-83.0	0.20	1.80	3.2	0
1135		12.20		6.74	13.2	23.13	-84.6	0.19	1.71	3.3	0
1140		12.29		6.75	13.2	23.27	-84.0	0.19	1.70	3.4	0
1145		12.37		6.75	13.2	23.25	-83.9	0.19	1.70	3.5	1

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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 = 0.0 ppm TOR

* - slowest pump setting - calculated w/ 1L Bottle & stopwatch

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 - ___

SITE/PROJECT NAME: Bldg 7 BCP Site 9-32138 WELL# MW-7-3

WELL PURGING INFORMATION

050613	050613	3.5	4.0
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOLUME PURGED (GALLONS)

PURGING AND SAMPLING EQUIPMENT

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

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

PURGING DEVICE: B — A - SUBMERSIBLE PUMP, B - PERISTALTIC PUMP, C - BLADDER PUMP, D - GAS LIFT PUMP, E - PURGE PUMP, F - DIPPER BOTTLE, G - BAILER, H - WATERRA, X - ______ (PURGING OTHER SPECIFY)

SAMPLING DEVICE: B — X - ______ (SAMPLING OTHER SPECIFY)

PURGING DEVICE: E — A - TEFLON, B - STAINLESS STEEL, C - POLYPROPYLENE, D - PVC, E - POLYETHYLENE, X - ______ (PURGING OTHER SPECIFY)

SAMPLING DEVICE: E — X - ______ (SAMPLING OTHER SPECIFY)

PURGING DEVICE: E — A - TEFLON, B - TYGON, C - ROPE, D - POLYPROPYLENE, E - POLYETHYLENE, F - SILICONE, G - COMBINATION TEFLON/POLYPROPYLENE, X - ______ (SPECIFY), X - ______ (PURGING OTHER SPECIFY)

SAMPLING DEVICE: E — X - ______ (SAMPLING OTHER SPECIFY)

FILTERING DEVICES 0.45: ___ A - IN-LINE DISPOSABLE, B - PRESSURE, C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	594.04	(msl ft)	GROUNDWATER ELEVATION	590.14	(msl ft)
DEPTH TO WATER	3.90	(msl ft)	WELL DEPTH	25.09	(msl ft)

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

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

WEATHER CONDITIONS: WIND SPEED: 0-5 DIRECTION: SW PRECIPITATION: Y (N) OUTLOOK: Sunny ~65°F

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/6/13 — Thomas Bohlen — Thomas Bohlen

DATE — PRINT — SIGNATURE

ANY 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: Bldg 7 BCP Site 9-32-138

Ref. No.: 56546

Date: 5/6/13

Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-4

Measurement Point: TOR

Constructed Well Depth (ft): 19'

Measured Well Depth (ft): 21.44

Depth of Sediment (ft):

Screen Length (ft): 9-19 = 10'

Depth to Pump Intake (ft)(1): 17'

Well Diameter, D (in): 2"

Well Screen Volume, V_s (mL)(2): 1 well vol. = 1.6 gallons

Initial Depth to Water (ft): 11.77

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)*
1520		12.15		7.86	10.5	1.52	60.1	4.74	4.31	0	0
5/6/13 1525		12.91		7.43	9.8	1.44	60.3	2.02	4.15	0.4	0
1530		15.98		7.41	9.5	1.43	60.7	1.88	3.15	1.2	0
1535		17.58		7.39	9.6	1.44	60.5	1.54	2.11	1.6	1
1536 -	Dry										
5/7/13 1620		12.18									
		↳ sampled									

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length. $V_s = p^*(D/2)^{2*}(5^*12)^*(2.54)^3$

(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 = 0.0ppm @ TOR

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 .

SITE/PROJECT NAME: Bldg 7 BCP Site 9-32-138 WELL# MW-7-4

WELL PURGING INFORMATION

05/06/13	05/07/13	1.6	1.6
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOLUME PURGED (GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y (N) (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE: B
SAMPLING DEVICE: B
A - SUBMERSIBLE PUMP; B - BLADDER PUMP; C - [illegible]; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA; X - OTHER (SPECIFY)

PURGING DEVICE: E
SAMPLING DEVICE: E
A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE; D - PVC; E - POLYETHYLENE; X - OTHER (SPECIFY)

PURGING DEVICE: E
SAMPLING DEVICE: E
A - TEFLON; B - [illegible]; C - [illegible]; D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE; X - OTHER (SPECIFY)

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

FIELD MEASUREMENTS

WELL ELEVATION: 593.53 (msl ft)

GROUNDWATER ELEVATION: 581.76 (msl ft)

DEPTH TO WATER: 11.77 (msl ft)

WELL DEPTH: 21.44 (msl ft)

pH	TURBIDITY (ntu)	CONDUCTIVITY (µmhos/cm at 25°C)	ORP (mV)	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

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

WEATHER CONDITIONS: WIND SPEED: 5-10 DIRECTION: NE PRECIPITATION: Y (N) OUTLOOK: Sunny ~65°F

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/7/13 Thomas Bohlen [signature]

DATE NAME SIGNATURE

ANY 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
Ref. No.: 56546

Date: 5/7/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-5
Measurement Point: TOR
Constructed Well Depth (ft): 22'
Measured Well Depth (ft): 21.97'
Depth of Sediment (ft):

Screen Length (ft): 15-22'
Depth to Pump Intake (ft)[1]: 18'
Well Diameter, D (in): 2
Well Screen Volume, V_s (mL)[2]: 1well vol. = 2.1 gal.
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]
1023		9.32		7.02	12.7	12.32	98.2	3.47	36.3	0	0
1043		9.74		6.82	12.1	12.27	91.5	1.26	25.4	0.2	0
1103		9.75		6.76	12.2	13.09	92.2	0.66	11.81	1.0	0
1113		9.75		6.77	12.4	13.35	93.2	0.46	10.15	1.3	0
1123		9.75		6.77	12.4	13.54	95.5	0.40	10.02	1.6	0
1143		9.75		6.79	12.0	13.92	94.7	0.40	9.33	2.3	1
1203		9.75		6.80	12.0	14.64	94.8	0.28	4.72	3.0	1
1208		9.75		6.79	12.0	14.67	94.3	0.28	4.69	3.2	1
1213		9.75		6.79	12.0	14.65	94.4	0.28	4.65	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.

WELL PURGING FIELD INFORMATION FORM

JOB# 56546.

SITE/PROJECT NAME: Bldg 7. BCP Site 9-32-138

WELL # MW-7-5

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOLUME PURGED (LITERS/GALLONS)
05 07 13	05 07 13	2.1	3.5

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y (N) (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED Y (N) (CIRCLE ONE)

PURGING DEVICE	B	X-
SAMPLING DEVICE	B	X-
PURGING DEVICE	E	X-
SAMPLING DEVICE	E	X-
PURGING DEVICE	E	X-
SAMPLING DEVICE	E	X-
FILTERING DEVICES 0.45		A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	610.96 (ft)	GROUNDWATER ELEVATION	602.07 (ft)
DEPTH TO WATER	8.89 (ft)	WELL DEPTH	21.97 (ft)

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

FIELD COMMENTS

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

WEATHER CONDITIONS: WIND SPEED: 0-5 DIRECTION: SW PRECIPITATION: Y (N) OUTLOOK: Sunny ~65°F

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

DATE	PRINT	SIGNATURE
5/7/13	Thomas Bohlen	Thomas Bohlen

ANY 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: Bldg 7 BCP Site 9-32-138
Ref. No.: 56546

Date: 5/7/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-6
Measurement Point: TOR
Constructed Well Depth (ft): 16.9'
Measured Well Depth (ft): 16.51'
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]: 1 well vol. = 2 gal.
Initial Depth to Water (ft): 4.06

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]
805	* 100	4.39		7.21	11.4	13.05	73.2	1.85	0.91	0	0
820		4.73		7.04	11.1	12.92	41.4	1.29	1.20	0.2	0
840		4.96		7.04	10.7	13.02	31.8	0.67	1.15	1.0	0
900		5.09		7.04	10.9	13.02	32.9	0.37	1.07	1.6	0
905		5.10		7.04	10.7	13.05	32.0	0.31	1.25	1.7	0
910		5.11		7.03	10.8	13.06	31.9	0.28	1.28	1.9	0
915		5.12		7.03	10.8	13.06	32.1	0.28	1.31	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.

VOM TOR = 0.0 ppm

* - slowest pump setting. Calculated w/ 1L Bottle & stopwatch

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

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 . __

SITE/PROJECT NAME: *Bldg 7 BCP Site 9-32-138* WELL # MW-7-6

WELL PURGING INFORMATION

050713	050713	2.0	2.5
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOLUME PURGED (LITERS/GALLONS)

PURGING AND SAMPLING EQUIPMENT

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

PURGING DEVICE	B	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP C - BLADDER PUMP	D - GAS LIFT PUMP E - PURGE PUMP F - DIPPER BOTTLE	G - BAILER H - WATERRA	X- ____ PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B				X- ____ SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON B - STAINLESS STEEL C - POLYPROPYLENE	D - PVC E - POLYETHYLENE		X- ____ PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E				X- ____ SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON B - TYGON C - ROPE X- ____ (SPECIFY)	D - POLYPROPYLENE E - POLYETHYLENE	F - SILICONE G - COMBINATION TEFLON/POLYPROPYLENE	X- ____ PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E				X- ____ SAMPLING OTHER (SPECIFY)

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

FIELD MEASUREMENTS

WELL ELEVATION	606.30	(m, ft)	GROUNDWATER ELEVATION	602.24	(m, ft)
DEPTH TO WATER	4.06	(m, ft)	WELL DEPTH	16.5	(m, ft)

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

FIELD COMMENTS

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

WEATHER CONDITIONS: WIND SPEED: 0-5 DIRECTION: SW PRECIPITATION: Y/(N) OUTLOOK: Sunny ~65°F

SPECIFIC COMMENTS

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/7/13 Thomas Bohlen Thomas Bohlen

DATE PRINT SIGNATURE

ANY 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: Bldg 7 BCP 9-32-138
Ref. No.: 56546
Date: 5/8/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-7
Measurement Point: TOR
Constructed Well Depth (ft): 22.7'
Measured Well Depth (ft): 22.05'
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]: 1 well vol. = 3.2 gal.
Initial Depth to Water (ft): 2.64

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]*
1237		2.94		11.53	11.4	2.03	-61.5	9.14	69	0	0
1257		4.29		10.05	10.9	5.30	-160.6	3.03	45.5	1.0	0
1317		4.95		9.17	11.0	6.55	-184.3	1.48	31.2	1.8	0
1337		5.27		8.99	11.0	6.66	-187.9	1.04	20.1	2.3	0
1357		5.81		8.92	10.7	6.48	-198.7	1.01	11.7	3.3	1
1417		6.28		8.90	10.6	6.38	-202.3	0.97	9.35	5.1	1
1440		6.72		8.81	10.5	6.43	-204.6	0.97	11.8	5.3	1
1450		6.89		8.75	10.4	6.46	-205.8	0.97	10.5	5.6	1
1500		6.99		8.70	10.4	6.47	-205.9	0.96	10.4	6.1	1
1505		7.09		8.72	10.4	6.47	-205.9	0.96	10.3	6.6	2

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.

PVM = 0.0 ppm @ TOR

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 -

SITE/PROJECT NAME: Bldg 7 BCP Site 9-32-138 WELL# MW-7-7

WELL PURGING INFORMATION

PURGE DATE (MMDDYY)	SAMPLE DATE (MMDDYY)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOLUME PURGED (GALLONS)
050813	050813	3.2	6.4

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y (N) (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	B
SAMPLING DEVICE	B
PURGING DEVICE	E
SAMPLING DEVICE	E
PURGING DEVICE	E
SAMPLING DEVICE	E
FILTERING DEVICES 0.45	

FIELD MEASUREMENTS

WELL ELEVATION (m/ft)	610.24	GROUNDWATER ELEVATION (m/ft)	607.60
DEPTH TO WATER (m/ft)	2.64	WELL DEPTH (m/ft)	22.05

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: Good ODOR: Solvent COLOR: L. Brown → Clear TURBIDITY: Cloudy → Clear

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

SPECIFIC COMMENTS

5/8/13 Thomas Bohlen Thomas Bohlen

DATE NAME SIGNATURE

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Bldg 7 BCP Site 9-20-138
Ref. No.: 50546

Date: 5/8/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-8
Measurement Point: TOR
Constructed Well Depth (ft): 19.7
Measured Well Depth (ft): 19.43
Depth of Sediment (ft):

Screen Length (ft): 12.7 - 19.7
Depth to Pump Intake (ft)[1]: 14'
Well Diameter, D (in): 2
Well Screen Volume, V_s (mL)[2]: 1 well vol. = 3.0 gal.
Initial Depth to Water (ft): 1.12

	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]
	908	350	1.60		7.21	12.7	7.46	-85.8	2.29	24.0	0	0
	913		3.21		7.48	11.3	7.25	-112.7	1.13	235	0.3	0
	918		6.24		7.26	11.0	7.47	-120.2	1.18	225	1.1	0
5/8	923		10.10		7.01	11.5	7.47	-74.3	1.46	21.3	1.6	0
	928		11.02		7.47	12.3	7.47	-48.9	1.86	20.3	2.1	0
	933		13.57		7.35	10.7	7.49	-110.6	1.11	43.2	3.0	1
	936	Dry	14.00									
5/9	815		1.44'									
			→ sampled									

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length. $V_s = p^*(D/2)^{2*}(5*12)*(2.54)^3$

(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

* = fastest pump rate - constant head not established

OVM TOR = 58.9 ppm peak

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 -

SITE/PROJECT NAME: Bldg 7 BCP Site 9-32-138 WELL# MW-7-8

WELL PURGING INFORMATION

05/08/13	05/09/13	30	30
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOLUME PURGED (LITERS/GALLONS)

PURGING AND SAMPLING EQUIPMENT

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

PURGING DEVICE: B
SAMPLING DEVICE: B

PURGING DEVICE: E
SAMPLING DEVICE: E

PURGING DEVICE: E
SAMPLING DEVICE: E

FILTERING DEVICES 0.45

FIELD MEASUREMENTS

WELL ELEVATION: 610.92 (m/ft) GROUNDWATER ELEVATION: 609.80 (m/ft)

DEPTH TO WATER: 1.12 (m/ft) WELL DEPTH: 19.43 (m/ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: Good ODOR: none COLOR: L. Yellow TURBIDITY: Clear

WEATHER CONDITIONS: WIND SPEED: 0-5 DIRECTION: SW PRECIPITATION: 0 OUTLOOK: pm showers forecasted

SPECIFIC COMMENTS

5/9/13 Thomas Bohlen [signature]

DATE PRINT SIGNATURE

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Bldg 7. BCP Site 9-32-138
Ref. No.: 56916

Date: 5/8/13
Personnel: T. Bohlen

Monitoring Well Data:

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

Screen Length (ft):
Depth to Pump Intake (ft)(1): 12'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)(2): 1 well vol. = 1.9 gallons
Initial Depth to Water (ft): 2.82

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)
1005		3.02		6.94	13.9	3.36	20.9	2.19	30.7	0	0
1025		3.10		6.89	13.6	3.20	30.7	0.41	25.3	0.6	0
1035		3.10		6.88	13.5	3.06	31.6	0.33	11.1	0.8	0
1045		3.10		6.88	13.4	2.88	26.7	0.26	7.8	1.2	0
1050		3.10		6.88	13.7	2.97	21.5	0.25	6.3	1.3	0
1055		3.10		6.89	13.5	2.99	20.1	0.22	4.56	1.4	0
1100		3.10		6.88	13.6	3.04	18.7	0.26	4.31	1.5	0
1105		3.10		6.88	13.4	3.09	17.0	0.27	4.32	1.7	0
1110		3.10		6.88	13.4	3.11	16.5	0.28	4.28	1.8	0
1115		3.10		6.88	13.4	3.10	16.8	0.27	4.27	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 = 13ppm sustained - (MW cap broken when opened)

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 -

SITE/PROJECT NAME: Bldg. 7 BCP Site 9-32-138 WELL# MW-7-A-16

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOLUME PURGED (GALLONS)
050813	050813	1.9	1.9

PURGING AND SAMPLING EQUIPMENT

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

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

PURGING DEVICE	B	A - SUBMERSIBLE PUMP, B - PERISTALTIC PUMP, C - BLADDER PUMP, D - GAS LIFT PUMP, E - PURGE PUMP, F - DIPPER BOTTLE, G - BAILER, H - WATERRA®, X - OTHER (SPECIFY)
SAMPLING DEVICE	B	
PURGING DEVICE	E	A - TEFLON, B - STAINLESS STEEL, C - POLYPROPYLENE, D - PVC, E - POLYETHYLENE, X - OTHER (SPECIFY)
SAMPLING DEVICE	E	
PURGING DEVICE	E	A - TEFLON, B - TYGON, C - ROPE, D - POLYPROPYLENE, E - POLYETHYLENE, F - SILICONE, G - COMBINATION TEFLON/POLYPROPYLENE, X - OTHER (SPECIFY)
SAMPLING DEVICE	E	

FILTERING DEVICES 0.45: ____ A - IN-LINE DISPOSABLE, B - PRESSURE, C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: ____ (ft/msl) GROUNDWATER ELEVATION: ____ (ft/msl)

DEPTH TO WATER: 21.82 (ft) WELL DEPTH: 114.34 (ft)

pH	TURBIDITY (ntu)	CONDUCTIVITY (umhos/cm at 25°C)	ORP (mV)	DO	SAMPLE TEMPERATURE (°C)

FIELD COMMENTS

SAMPLE APPEARANCE: Good ODOR: None COLOR: Clear TURBIDITY: Clear

WEATHER CONDITIONS: WIND SPEED: 0-5 DIRECTION: SW PRECIPITATION: 0 OUTLOOK: PM showers forcasted

SPECIFIC COMMENTS:

slight sheen

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/8/13 Thomas Bohlen [signature]

DATE NAME SIGNATURE

ANY 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: Bldg 7 BCP Site 9-32-138
Ref. No.: 56546

Date: 5/7/12
Personnel: T. Bohlen

Monitoring Well Data:

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

Screen Length (ft):
Depth to Pump Intake (ft)(1): 21'
Well Diameter, D (in): 2
Well Screen Volume, V_s (mL)(2): 1 well vol. = 3.0 gal.
Initial Depth to Water (ft): 5.46

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)
1330		5.81		7.24	14.5	2.66	15.9	2.18	6.29	0	0
1350		6.80		7.10	14.1	2.49	-22.4	0.39	6.15	0.8	0
1410		7.50		7.14	13.9	2.15	-104.4	0.25	5.21	1.3	0
1425		7.72		7.14	14.1	2.05	-104.7	0.21	4.18	2.0	0
1445		7.72		7.12	13.9	2.01	-115.6	0.17	4.15	2.7	0
1505		7.72		7.11	14.0	1.98	-122.4	0.16	3.91	3.8	1
1515		7.72		7.12	13.9	1.98	-123.7	0.14	3.31	4.1	1
1525		7.72		7.11	14.0	1.98	-123.5	0.15	3.12	4.4	1
1530		7.72		7.12	14.0	1.98	-123.8	0.15	3.15	4.7	1
1535		7.72		7.12	14.0	1.98	-124.1	0.16	3.01	5.0	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# 56546

SITE/PROJECT NAME: Bldg 7 BCP Site 9-32-138 WELL # MW-7-K-2

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOLUME PURGED (LITERS/GALLONS)
05/07/13	05/07/13	30	50

PURGING AND SAMPLING EQUIPMENT

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

PURGING DEVICE: B
SAMPLING DEVICE: B

PURGING DEVICE: E
SAMPLING DEVICE: E

PURGING DEVICE: E
SAMPLING DEVICE: E

FILTERING DEVICES 0.45

FIELD MEASUREMENTS

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

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

pH TURBIDITY CONDUCTIVITY ORP DO SAMPLE TEMPERATURE

FIELD COMMENTS

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

WEATHER CONDITIONS: WIND SPEED: 0-5 DIRECTION: SW PRECIPITATION: 0 OUTLOOK: ~65°F Sunny

SPECIFIC COMMENTS

DATE: 5/7/13 NAME: Thomas Bohlen SIGNATURE: Thomas Bohlen

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Bldg 7 BCPSite 9-32-138

Ref. No.: 56546

Date: 5/8/13

Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-7-P-1

Measurement Point: TOR

Constructed Well Depth (ft): 20'

Measured Well Depth (ft): 19.88'

Depth of Sediment (ft):

Screen Length (ft):

Depth to Pump Intake (ft)(1): 17'

Well Diameter, D (in): 2

Well Screen Volume, V_s (mL)(2): 1 well vol. = 1.7 gal.

Initial Depth to Water (ft): 9.51

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)*
1620		9.89		6.44	20.6	25.58	-87.9	1.55	2.63	0	0
1630		10.20		6.41	20.6	25.65	-73.3	0.39	2.51	0.2	0
1650		10.82		6.42	20.6	25.54	-83.4	0.22	3.51	0.8	0
1710		11.21		6.40	20.6	23.38	-76.9	0.23	3.14	1.3	0
1730		11.51		6.38	20.6	20.67	-69.0	0.29	2.91	1.8	1
1750		11.70		6.37	20.6	19.55	-74.6	0.21	2.82	2.3	1
1800		11.81		6.37	20.6	18.81	-77.7	0.17	2.82	2.7	1
1805		11.87		6.37	20.6	18.41	-78.3	0.17	2.75	2.9	1
1810		11.94		6.37	20.6	18.42	-78.9	0.17	2.71	3.1	1
1815		12.01		6.37	20.6	18.42	-78.6	0.17	2.65	3.4	2

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.

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

WELL PURGING FIELD INFORMATION FORM

JOB# 5b 546 -

SITE/PROJECT NAME: Bldg 7 BCP Site 9-32-138 WELL# MW-7-P-1

WELL PURGING INFORMATION

050813	050813	1.7	3.4
PURGE DATE (MMDDYY)	SAMPLE DATE (MMDDYY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOLUME PURGED (LITERS/GALLONS)

PURGING AND SAMPLING EQUIPMENT

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

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

FIELD MEASUREMENTS

WELL ELEVATION	.	(m) (ft)	GROUNDWATER ELEVATION	.	(m) (ft)
DEPTH TO WATER	9.51	(m) (ft)	WELL DEPTH	19.88	(m) (ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
. (std)	. (ntu)	. (µmhos/cm at 25°C)	. (mV)	.	. (°C)
. (std)	. (ntu)	. (µmhos/cm at 25°C)	. (mV)	.	. (°C)
. (std)	. (ntu)	. (µmhos/cm at 25°C)	. (mV)	.	. (°C)
. (std)	. (ntu)	. (µmhos/cm at 25°C)	. (mV)	.	. (°C)
. (std)	. (ntu)	. (µmhos/cm at 25°C)	. (mV)	.	. (°C)

FIELD COMMENTS

SAMPLE APPEARANCE Good ODOR none COLOR Clear TURBIDITY Clear

WEATHER CONDITIONS WIND SPEED 0 NA DIRECTION NA PRECIPITATION Y/N NA

SPECIFIC COMMENTS Indoor location

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/8/13 Thomas Bohlen Thomas Bohlen

DATE PRINT SIGNATURE

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

Form FMG 5.1-01

GROUNDWATER LEVEL MONITORING REPORT

WELL NUMBER

Page 1 of 1

PROJECT: GMCH
LOCATION: Bldg 7 BCP Site 9-32-138
CLIENT:
ELEVATION REFERENCED TO:

PROJECT MANAGER: C. Borgia
FIELD REP.: T. Bohlen
DATE:

Date	Time	Elapsed Time (days)	Depth of Water from (TOR) in ft	Elevation of Water	Remarks	Read By
5/6/13	927	-	3.90		MW-7-3	TB
	945	-	4.30		MW-7-1	"
	1515	-	11.77		MW-7-4	"
	1555	-	5.72		MW-7-2	"
5/7/13	732		13.02		MW-7-4	TB
	800	-	4.06		MW-7-6	"
	1020	-	8.89		MW-7-5	"
	1325	-	5.46		MW-7-C-2	"
	1620	-	12.18		MW-7-4	TB
5/8/13	1000	-	2.82		MW-7-A-6	"
	905	-	1.12		MW-7-8	"
	1235	-	2.64		MW-7-7	"
	1615	-	9.51		MW-7-P-1	"
5/9/13	815		1.44		MW-7-8	"

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

[illegible]
Revised November 30, 2011

Form ENG 5.1-01

GROUNDWATER LEVEL MONITORING REPORT

WELL NUMBER

Page 1 of 1

PROJECT: Bldg 7 BCP Site 9-32-138
LOCATION: Lockport, NY
CLIENT:
ELEVATION REFERENCED TO: TOR

PROJECT MANAGER: C. Boron
FIELD REP.: T. Bohlen
DATE: 5/16/13

Date	Time	Elapsed Time (days)	Depth of Water from (TOR) in ft	Elevation of Water	Remarks	Read By
5/16/13	1407	-	3.93		MW-7-3	TB
	1413	-	4.29		MW-7-1	"
	1418	-	6.23		MW-7-2	"
	1423	-	11.80		MW-7-4	"
	1428	-	4.18		MW-7-6	"
	1436	-	9.11		MW-7-5	"
	1451	-	2.96		MW-7-A-6	"
	1454	-	2.60		MW-7-7	"
	1446	-	1.44		MW-7-8	"
	1431	-	5.48		MW-7-C-2	"
	1440	-	9.66		MW-7-P-1	"

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

Form FMG 8.0-01

INSTRUMENT CALIBRATION RECORD

PROJECT: GMCH
LOCATION: Bldg 7 BCP Site 9-31-138
CLIENT:
PROJECT MANAGER: C. Baron
FIELD REP.: T. Bohlen
DATE:

Instrument	Date Calibrated	By	Standard Used	Decontamination, Maintenance, or Repair Performed	Remarks
OVM	5/6/13	TB	Iso. Gas	Cal.	OK
LaMotte	"	"	Cal Sol.	Cal.	OK
YSI	"	"	Cal. Sols.	Cal.	OK
OVM	5/7/13	"	Iso Gas	Cal.	OK
LaMotte	"	"	Cal Sol.	Cal.	OK
YSI	"	"	Cal Sols.	Cal.	OK
OVM	5/8/13	TB	Iso. Gas	Cal.	O.K.
LaMotte	"	"	Cal Sol.	Cal.	OK
YSI	"	"	Cal. Sols	Cal	OK
OVM	5/9/13	"	Iso. Gas	Cal.	OK
LaMotte YSI	"	"	Cal Sols.	Cal.	OK

Other Remarks:

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

Client Information
Client Contact: Mr. Christopher Boron
Company: GZA GeoEnvironmental, Inc.
Address: 535 Washington Street 11th Floor
City: Buffalo
State, Zip: NY, 14203
Phone: (716) 685-2300
Email: christopher.boron@gza.com
Project Name: 058507, GM-Lockport Groundwater Sampling
Site: Bldg 7 RCP Site 9-32-138

Sampler: Thomas Bohlen
Phone: (716) 844-7050
Lab PM: Deyo, Melissa L
E-Mail: melissa.deyo@testamericainc.com
Carrier Tracking No(s):

Due Date Requested:
TAT Requested (days): 3 Weeks
PO #: 4047065
WO #: 58507
Project #: 48004014
SSOW#: 256015

COC No:
Page: Page 1 of 1
GZA Job #: 21.0056546.00 Task 24

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N			
MW-7-3-050613	5/6/13	1150	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X			
MW-7-1-050613		1430		Water	N	N														
MW-7-2-050613		1715			N	N														
											X									
Trip Blank																				

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:

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

Special Instructions/QC Requirements:

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

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

	Date/Time	Company		Date/Time	Company
Relinquished by: Thomas Bohlen	5/6/13 18:15		Received by: Michael [illegible]	5-6-13 1815	
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:

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24

Address: 535 Washington Street 11th Floor	Due Date Requested:	Analysis Requested
City: Buffalo	TAT Requested (days): 3 Weeks	
State, Zip: NY, 14203		
Phone: (716) 685-2300	PO #: 4047065	
Email: christopher.boron@gza.com	WO #: 58507	
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014	
Site: Bldg 7 BCP Site 9-32-138	SSOW#: 256015	

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX		Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N				
MW-7-6-050713	5/7/13	920	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X			
MW-7-C-2-050713		1545		Water																
MW-7-5-050713		1615																		
MW-7-4-050713		1630																		
Trip Blank											X									

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: Thomas Bohlen	Date/Time: 5/7/13 1742	Company	Received by: Andrew Kolb	Date/Time: 5/7/13 1742	Company 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:

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24

Address: 535 Washington Street 11th Floor	Due Date Requested:
City: Buffalo	TAT Requested (days): 3 Weeks
State, Zip: NY, 14203	
Phone: (716) 685-2300	PO #: 4047065
Email: christopher.boron@gza.com	WO #: 58507
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014
Site: Bldg 7 BCP Site 9-32-138	SSOW#: 256015

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX		Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N				
MW-7-A-6-050813	5/8/13	1115	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X				
MW-7-7-050813		1515		Water																	
MW-7-A-1-050813		1815																			
GW-Duplicate-050813		-																			
Trip Blank											X										

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	Thomas Bohlen	5/8/13 1920			5/8/13 1920	TA
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:

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days): 3 Weeks			
State, Zip: NY, 14203				
Phone: (716) 685-2300	PO #: 4047065			
Email: christopher.boron@gza.com	WO #: 58507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site: Bldg BCP Site 9-32-138	SSOW#: 256015			

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX		Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N				
MW-7-8-050913	5/9/13	820	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X				
				Water																	

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
☐ 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	Thomas Bohlen	5/9/13 1840			5/9/13 1840	TA
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:

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME: Bldg 8 BCP Site 9-32-139

PROJECT NO.: 56546

SAMPLING CREW MEMBERS: T. Bohlen

SUPERVISOR: C. Boron

DATE OF SAMPLE COLLECTION: 5/10/13 - 5/14/13

[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-8-1-051013	MW-8-1	615.11	20.27	5.44	609.67	2.4	/	4.8	6.94	13.4	6.70	1630	VOC MNA
MW-8-003B 051013	MW-8-003B	610.94	14.37	5.00	605.94	1.5	/	1.7	7.58	12.3	-0.5	1250	VOC MNA
MW-8-4-051313	MW-8-4	613.42	21.42	7.52	605.90	2.3	/	2.5	6.88	11.5	10.93	1155	VOC MNA
MW-8-2-051313	MW-8-2	615.14	22.74	7.89	607.25	2.4	/	3.5	7.32	19.4	189.4	1620	VOC MNA
MW-6-F-8-051413	MW-6-F-8	613.22	14.32	2.10	611.12	2.0	/	2.0	6.80	11.7	8.99	900	VOC MNA
MW-6-2-051413	MW-6-2	609.33	26.12	5.83	603.50	3.3	/	3.3	7.06	11.1	10.01	1145	VOC MNA
MW-6-1-051413	MW-6-1	598.23	18.80	4.50	584.73	2.3	/	2.3	7.15	10.6	3.85	1400	VOC MNA
MW-8-3-051413	MW-8-3	615.06	22.04	8.83	606.23	2.1	/	2.2	7.00	20.6	6.52	1350	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: Bldg 8 BCP Site 9-32-139
Ref. No.: 56346

Date: 5/14/13
Personnel: T. Bohen

Monitoring Well Data:

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

Screen Length (ft): 7-17'
Depth to Pump Intake (ft)(1): 15'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)(2): 1 well vol. = 2.3 gallons
Initial Depth to Water (ft): 4.50

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, Vp (mL)	No. of Well Screen Volumes Purged(4)
1230		4.80		7.09	10.6	3.82	-88.2	4.02	66.7	0	0
1250		4.95		7.12	10.6	3.71	-59.6	0.42	40.1	0.5	0
1310		4.95		7.21	10.5	3.81	-63.6	0.24	34.2	1.1	0
1330		4.95		7.18	10.5	3.83	-62.1	0.16	26.7	1.6	0
1340		4.95		7.18	10.5	3.84	-55.8	0.16	21.5	1.8	0
1345		4.95		7.17	10.5	3.84	-56.9	0.15	20.3	2.0	0
1350		4.95		7.15	10.6	3.86	-57.7	0.15	20.1	2.1	0
1355		4.95		7.15	10.6	3.85	-56.8	0.15	19.8	2.2	0
1400		4.95		7.15	10.6	3.85	-52.4	0.15	19.5	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# 56546 - | | |

SITE/PROJECT NAME: Bldg 8 BCP Site 9-32-139 WELL# MW-6-1

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOLUME PURGED (LITERS/GALLONS)
05/14/13	05/14/13	2.3	2.3

PURGING AND SAMPLING EQUIPMENT

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

	Code	Options	Other
PURGING DEVICE	B	A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA	X - PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B		X - SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE; D - PVC; E - POLYETHYLENE	X - PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E		X - SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON; B - TYGON; C - ROPE; D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE; X - (SPECIFY)	X - PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E		X - SAMPLING OTHER (SPECIFY)

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

FIELD MEASUREMENTS

WELL ELEVATION	598.23 (m/ft)	GROUNDWATER ELEVATION	584.73 (m/ft)
DEPTH TO WATER	14.50 (m/ft)	WELL DEPTH	18.80 (m/ft)

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

FIELD COMMENTS

SAMPLE APPEARANCE: Good ODOR: none COLOR: Y→Clear TURBIDITY: Cloudy→Clear

WEATHER CONDITIONS: WIND SPEED: 0-5 DIRECTION: SW PRECIPITATION: Y / (N) OUTLOOK: P. Cloudy

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE EPA PROTOCOLS

DATE	PRINT	SIGNATURE
5/14/13	Thomas Bohlen	Thomas Bohlen

EMG 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: Bldg 8 BCP Site 9-32-139

Ref. No.: 56546

Date: 5/14/13

Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-6-2

Measurement Point: TOR

Constructed Well Depth (ft): 24.6

Measured Well Depth (ft): 26.12

Depth of Sediment (ft):

Screen Length (ft): 14.6' - 24.6'

Depth to Pump Intake (ft)(1): 19'

Well Diameter, D (in): 2"

Well Screen Volume, V_s (mL)(2): 1 well vol. = 3.3 gallons

Initial Depth to Water (ft): 5.83'

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)
1005			6.04	7.41	10.6	6.58	65.1	4.64	1.87	0	0
1025			6.04	7.09	10.6	6.61	75.3	1.57	1.83	0.7	0
1045			6.04	7.02	10.9	8.81	11.3	0.30	1.74	1.3	0
1105			6.04	7.03	10.9	9.77	-0.9	0.23	1.62	2.0	0
1125			6.04	7.05	11.1	9.97	1.7	0.18	1.61	2.7	0
1130			6.04	7.06	11.2	9.98	5.9	0.16	1.63	2.8	0
1135			6.04	7.06	11.1	10.01	7.6	0.16	1.63	3.0	0
1140			6.04	7.06	11.1	10.02	7.8	0.16	1.62	3.1	0
1145			6.04	7.06	11.1	10.01	7.9	0.16	1.60	3.3	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.

WELL PURGING FIELD INFORMATION FORM

JOB# 56596 . __

SITE/PROJECT NAME: Bldg 8 BCP Site 9-32-139 WELL# MW-6-2

WELL PURGING INFORMATION

05/14/13	05/14/13	3.3	3.3
PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOLUME PURGED (LITERS/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y (N) (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	B	X= ______ PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	X= ______ SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	X= ______ PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E	X= ______ SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	X= ______ PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E	X= ______ SAMPLING OTHER (SPECIFY)
FILTERING DEVICES 0.45		A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	609.33	(m/ft)	GROUNDWATER ELEVATION	603.50	(m/ft)
DEPTH TO WATER	5.83	(m/ft)	WELL DEPTH	26.12	(m/ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

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

WEATHER CONDITIONS: WIND SPEED: 0-5 DIRECTION: SW PRECIPITATION: Y/N OUTLOOK: P. Cloudy

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/14/13	Thomas Bohlen	Thomas Bohlen
DATE	NAME	SIGNATURE

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

6

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Bldg 8 RCP Site 9-32-139
Ref. No.: 56546

Date: 5/14/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-6-F-8
Measurement Point: TOR
Constructed Well Depth (ft): 15.4
Measured Well Depth (ft): 14.32
Depth of Sediment (ft):

Screen Length (ft): 8-15.4
Depth to Pump Intake (ft)[1]: 12
Well Diameter, D (in): 2
Well Screen Volume, V_s (mL)[2]: 1 well vol. = 2.0 gallons
Initial Depth to Water (ft): 2.10

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]
800		2.28		7.13	11.1	8.90	79.6	6.72	9.95	0	0
810		2.28		6.84	11.5	8.93	80.7	1.24	5.12	0.2	0
820		2.28		6.82	11.7	8.84	80.4	1.04	3.97	0.6	0
830		2.28		6.81	11.7	8.84	80.5	0.67	2.14	1.0	0
840		2.28		6.80	11.7	8.87	80.9	0.46	1.35	1.2	0
850		2.28		6.81	11.6	8.95	80.6	0.35	1.21	1.6	0
855		2.28		6.81	11.6	8.98	81.2	0.32	1.21	1.8	0
900		2.28		6.80	11.7	8.99	81.7	0.31	1.20	2.0	1

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(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

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

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 .

SITE/PROJECT NAME: Bldg 8 BCP Site 9-32-139

WELL # MW-6-F-8

WELL PURGING INFORMATION

05/14/13	05/14/13	2.0	2.0
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOLUME PURGED (LITERS/GALLONS)

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 - WATERRA	X- ______ PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	C - BLADDER PUMP	F - DIPPER BOTTLE		X- ______ SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON B - STAINLESS STEEL	D - PVC E - POLYETHYLENE		X- ______ PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E	C - POLYPROPYLENE			X- ______ SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON B - TYGON	D - POLYPROPYLENE E - POLYETHYLENE	F - SILICONE G - COMBINATION TEFLON/POLYPROPYLENE	X- ______ TUBING OTHER (SPECIFY)
SAMPLING DEVICE	E	C - ROPE	X- ______ (SPECIFY)		X- ______ SAMPLING OTHER (SPECIFY)
FILTERING DEVICES 0.45		A - IN-LINE DISPOSABLE	B - PRESSURE	C - VACUUM	

FIELD MEASUREMENTS

WELL ELEVATION	613.22 (m/ft)		GROUNDWATER ELEVATION	611.12 (m/ft)
DEPTH TO WATER	2.10 (m/ft)		WELL DEPTH	14.32 (m/ft)

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

FIELD COMMENTS

SAMPLE APPEARANCE: Good ODOR: None COLOR: Clear TURBIDITY: Clear

WEATHER CONDITIONS: WIND SPEED: 0-5 DIRECTION: SW PRECIPITATION: Y/N: 0 OUTLOOK: P. Cloudy

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/14/13	Thomas Bohlen	Thomas Bohlen
DATE	PRINT	SIGNATURE

ANY 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: Bldg 8 BCP Site 9-32-139
Ref. No.: 56546

Date: 5/10/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-8-1
Measurement Point: TOR
Constructed Well Depth (ft): 22.5
Measured Well Depth (ft): 20.27
Depth of Sediment (ft):

Screen Length (ft): 15.5-22.5
Depth to Pump Intake (ft)[1]: 17'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: 1 well vol. = 2.4 gal.
Initial Depth to Water (ft): 5.44

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]
1350		5.65		7.25	12.8	6.66	78.0	1.56	31.3	0	0
1410		5.91		7.11	13.0	6.50	-11.1	0.39	55.1	0.6	0
1420		6.08		6.98	13.5	6.65	-150.7	0.28	37.8	1.1	0
1440		6.13		6.96	13.3	6.67	-176.9	0.22	24.7	1.4	0
1500		6.22		6.96	13.3	6.70	-206.2	0.18	21.3	2.0	0
1520		6.22		6.95	13.4	6.69	-238.5	0.16	17.1	2.5	1
1540		6.22		6.95	13.4	6.69	-254.8	0.17	13.1	3.2	1
1600		6.22		6.94	13.3	6.70	-267.3	0.17	9.67	3.8	1
1605		6.22		6.94	13.3	6.69	-267.4	0.18	7.10	4.0	1
1610		6.22		6.94	13.4	6.70	-269.5	0.19	7.08	4.2	1
1615		6.22		6.94	13.4	6.70	-270.3	0.20	7.05	4.4	1
1620		6.22		6.94	13.3	6.70	-270.8	0.21	7.15	4.6	1
1630		6.22		6.94	13.4	6.70	-270.8	0.21	7.12	4.8	2

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

WELL PURGING FIELD INFORMATION FORM

JOB# 56546

SITE/PROJECT NAME: Bldg 8 BCP-9-32-L39 WELL# MW-8-11

WELL PURGING INFORMATION

05/10/13	05/10/13	2.4	4.8
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOLUME PURGED (LITERS/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y (N) (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE: B
SAMPLING DEVICE: B

A - SUBMERSIBLE PUMP, B - PERISTALTIC PUMP, C - BLADDER PUMP, D - GAS LIFT PUMP, E - PURGE PUMP, F - DIPPER BOTTLE, G - BAILER, H - WATERRA, X - PURGING OTHER (SPECIFY), X - SAMPLING OTHER (SPECIFY)

PURGING DEVICE: E
SAMPLING DEVICE: E

A - TEFLON, B - STAINLESS STEEL, C - POLYPROPYLENE, D - PVC, E - POLYETHYLENE, X - PURGING OTHER (SPECIFY), X - SAMPLING OTHER (SPECIFY)

PURGING DEVICE: E
SAMPLING DEVICE: E

A - TEFLON, B - TYGON, C - ROPE, D - POLYPROPYLENE, E - POLYETHYLENE, F - SILICONE, G - COMBINATION TEFLON/POLYPROPYLENE, X - (SPECIFY), X - PURGING OTHER (SPECIFY), X - SAMPLING OTHER (SPECIFY)

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

FIELD MEASUREMENTS

WELL ELEVATION	615.11 (m/ft)	GROUNDWATER ELEVATION	609.67 (m/ft)
DEPTH TO WATER	5.44 (m/ft)	WELL DEPTH	20.27 (m/ft)

pH	TURBIDITY (ntu)	CONDUCTIVITY (µmhos/cm AT 25°C)	ORP (mV)	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: Good ODOR: sulfur COLOR: Yellow → Clear ODOR: Cloudy → Clear

WEATHER CONDITIONS: WIND SPEED — DIRECTION — PRECIPITATION Y/N T. Storms

SPECIFIC COMMENTS: interior location

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/10/13 Thomas Bohlen Thomas Bohlen
DATE PRINT SIGNATURE

ANY 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: Bldg 8 BCP Site 9-32-139

Ref. No.: 56546

Date: 5/13/13

Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-8-2

Measurement Point: TOR

Constructed Well Depth (ft): 23.0

Measured Well Depth (ft): 22.74

Depth of Sediment (ft):

Screen Length (ft): 7

Depth to Pump Intake (ft)(1): 19

Well Diameter, D (in): 2

Well Screen Volume, V_s (mL)(2): 1 well vol. = 2.4 gallons

Initial Depth to Water (ft): 7.89

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, Vp (mL)	No. of Well Screen Volumes Purged(4)
1413		8.11		7.78	19.1	2.26	-0.7	3.16	1.66	0	0
1433		9.29		7.64	19.3	2.03	-92.0	0.59	1.67	0.4	0
1450		10.00		7.40	19.3	1.87	-168.3	0.43	1.65	1.1	0
1510		10.00		7.36	19.3	1.91	-181.8	0.37	1.65	1.4	0
1530		10.00		7.34	19.3	1.91	-170.0	0.32	1.55	2.3	0
1550		10.00		7.33	19.4	2.03	-183.9	0.27	1.44	2.9	1
1600		10.00		7.31	19.4	2.06	-188.7	0.25	1.41	3.1	1
1605		10.00		7.31	19.4	2.06	-188.7	0.24	1.41	3.2	1
1610		10.00		7.31	19.4	2.06	-189.3	0.24	1.44	3.3	1
1615		10.00		7.32	19.4	2.07	-189.5	0.23	1.45	3.4	1
1620		10.00		7.32	19.4	2.07	-189.4	0.23	1.39	3.5	1

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length. $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(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 = 4.8 ppm peak

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 -

SITE/PROJECT NAME: Bldg 8 RCP Site 9-32-139 WELL# MW-8-2

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING	ACTUAL VOLUME PURGED
05/13/13	05/13/13	2.4	3.5

PURGING AND SAMPLING EQUIPMENT

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

PURGING DEVICE	B	X-
SAMPLING DEVICE	B	X-
PURGING DEVICE	E	X-
SAMPLING DEVICE	E	X-
PURGING DEVICE	E	X-
SAMPLING DEVICE	E	X-

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

FIELD MEASUREMENTS

WELL ELEVATION	615.14 (m/ft)	GROUNDWATER ELEVATION	607.25 (m/ft)
DEPTH TO WATER	7.89 (m/ft)	WELL DEPTH	22.74 (m/ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE Good ODOR Sulfur COLOR Clear TURBIDITY Clear

WEATHER CONDITIONS WIND SPEED — DIRECTION — PRECIPITATION (Y) N light rain

SPECIFIC COMMENTS

Interior location

5/13/13 Thomas Bohlen Thomas Bohlen

DATE NAME SIGNATURE

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Bldg 8 BCP-Site - 9-32-139
Ref. No.: 56546

Date: 5/13/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-8-3
Measurement Point: TOR
Constructed Well Depth (ft): 22.4
Measured Well Depth (ft): 22.04
Depth of Sediment (ft):

Screen Length (ft): 15.4-22.4 = 7'
Depth to Pump Intake (ft)[1]: 19'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: 1 well vol. = 2.1 gallons
Initial Depth to Water (ft): 8.83

	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]
	1309		9.22		7.19	20.0	8.50	-105.5	3.32	2.83	0	0
5/13	1317		10.67		7.09	20.5	7.21	-89.7	1.88	2.51	0.2	0
	1322		12.05		7.17	20.5	7.17	-31.2	2.57	2.09	0.7	0
	1327		13.73		7.12	20.6	6.46	-5.1	2.41	2.05	1.1	0
	1332		14.78		7.08	20.6	6.46	-17.3	2.45	2.05	1.4	0
	1337		17.23		6.96	20.6	6.52	-40.0	1.36	2.01	1.9	0
	1348		18.51		7.00	20.6	6.52	-51.3	0.84	2.00	2.2	1
	1350	Dry	18.88									
5/14	1508		9.31									

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# 56546 -

SITE/PROJECT NAME: Bldg 8 BCP Site 9-32-139 WELL# MW-8-3

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOLUME PURGED (LITERS/GALLONS)
05/13/13	05/14/13	2.1	2.2

PURGING AND SAMPLING EQUIPMENT

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

PURGING DEVICE: B

SAMPLING DEVICE: B

PURGING DEVICE: E

SAMPLING DEVICE: E

PURGING DEVICE: E

SAMPLING DEVICE: E

FILTERING DEVICES 0.45

FIELD MEASUREMENTS

WELL ELEVATION	611.506 (ft)	GROUNDWATER ELEVATION	606.23 (ft)
DEPTH TO WATER	8.83 (ft)	WELL DEPTH	32.04 (ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

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

WEATHER CONDITIONS: WIND SPEED: NA DIRECTION: NA PRECIPITATION: Y/(N) OUTLOOK: Clear light rain

SPECIFIC COMMENTS: Interior location

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/14/13 Thomas Bohlen [signature]

DATE PRINT SIGNATURE

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

Project Data:

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Name: Bldg 8 RCP Site 9-32-139
Ref. No.: 56546

Date: 5/13/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-8-4
Measurement Point: TOR
Constructed Well Depth (ft): 21.8
Measured Well Depth (ft): 21.42
Depth of Sediment (ft):

Screen Length (ft): 14.8-21.8 = 7'
Depth to Pump Intake (ft)[1]: 18'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: 1 well vol = 2.3 gal.
Initial Depth to Water (ft): 7.52

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]
1002		7.90		6.94	11.1	11.62	-57.7	5.19	2.36	0	0
1015		9.58		6.93	11.6	11.71	-108.6	1.73	2.31	0.2	0
1025		9.58		7.00	11.5	8.92	-84.6	3.88	2.31	0.6	0
1045		9.58		6.96	11.3	9.15	-92.3	3.41	2.30	1.1	0
1105		9.58		6.90	11.5	10.44	-96.0	2.00	2.15	1.3	0
1125		9.58		6.87	11.5	10.99	-94.5	1.33	2.12	1.9	0
1130		9.58		6.88	11.5	10.98	-93.9	1.25	2.12	2.0	0
1135		9.58		6.87	11.5	10.99	-93.2	1.23	2.10	2.1	0
1140		9.58		6.88	11.5	10.93	-93.5	1.27	2.15	2.2	0
1145		9.58		6.88	11.5	10.93	-93.6	1.27	2.12	2.3	1
1150		9.58		6.88	11.5	10.93	-93.2	1.24	2.13	2.4	1
1155		9.58		6.88	11.5	10.93	-93.2	1.25	2.09	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 = V_p/V_s.

OVM @ TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 -

SITE/PROJECT NAME: Bldg 8 BCP Site Site 9-32-139

WELL# MW-8-4

WELL PURGING INFORMATION

05/13/13	05/13/13	23	25
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOLUME PURGED (LITERS/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y (N) (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE: B

SAMPLING DEVICE: B

PURGING DEVICE: E

SAMPLING DEVICE: E

PURGING DEVICE: E

SAMPLING DEVICE: E

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

FIELD MEASUREMENTS

WELL ELEVATION	613.42 (m/ft)	GROUNDWATER ELEVATION	605.90 (m/ft)
DEPTH TO WATER	7.52 (m/ft)	WELL DEPTH	21.42 (m/ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(su)	(ntu)	(µmhos/cm at 25°C)	(mV)		(°C)
(su)	(ntu)	(µmhos/cm at 25°C)	(mV)		(°C)
(su)	(ntu)	(µmhos/cm at 25°C)	(mV)		(°C)
(su)	(ntu)	(µmhos/cm at 25°C)	(mV)		(°C)
(su)	(ntu)	(µmhos/cm at 25°C)	(mV)		(°C)

FIELD COMMENTS

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

WEATHER CONDITIONS: WIND SPEED: 0-5 DIRECTION: SW PRECIPITATION: 0 OUTLOOK: light rain

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/13/13 Thomas Bohlen Thomas Bohlen

DATE PRINT SIGNATURE

FORM 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: Bldg 8 BCP Site 9-32-139
Ref. No.: 56546

Date: 5/10/13
Personnel: T. Bahlen

Monitoring Well Data:

Well No.: MW-8-003-B
Measurement Point: TOR
Constructed Well Depth (ft): 15'
Measured Well Depth (ft): 14.37'
Depth of Sediment (ft):

Screen Length (ft):
Depth to Pump Intake (ft)[1]: 12'
Well Diameter, D (in): 2
Well Screen Volume, V_s (mL)[2]: 1 well vol. = 1.5 gal.
Initial Depth to Water (ft): 5.00'

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]
1155		5.11		7.90	12.3	6.59	83.7	2.16	9.96	0	0
1215		5.11		7.62	12.4	10.69	27.0	0.72	6.13	0.8	0
1220		5.11		7.61	12.2	11.52	15.9	0.70	5.89	0.9	0
1225		5.11		7.60	12.1	12.27	9.0	0.69	5.71	1.0	0
1230		5.11		7.59	12.2	12.78	6.4	0.69	3.79	1.1	0
1235		5.11		7.59	12.3	13.17	3.9	0.68	3.54	1.2	0
1240		5.11		7.58	12.3	13.45	0.0	0.66	2.51	1.4	0
1245		5.11		7.58	12.3	13.45	-0.3	0.65	2.53	1.5	1
1250		5.11		7.58	12.3	13.47	-0.5	0.62	2.51	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= V_p/V_s

WELL PURGING FIELD INFORMATION FORM

JOB# 5B546 -

SITE/PROJECT NAME: Bldg 8 BCP Site 9.32-139 WELL# MW-8-003B

WELL PURGING INFORMATION

05/10/13	05/10/13	15	17
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOL. PURGED (LITERS/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y (N) (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE: B
SAMPLING DEVICE: B

PURGING DEVICE: B
SAMPLING DEVICE: E

PURGING DEVICE: E
SAMPLING DEVICE: E

FILTERING DEVICES 0.45

FIELD MEASUREMENTS

WELL ELEVATION: 610.94 (m/ft)
GROUNDWATER ELEVATION: 605.94 (m/ft)
DEPTH TO WATER: 5.00 (m/ft)
WELL DEPTH: 14.37 (m/ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

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

WEATHER CONDITIONS: WIND SPEED: 0-5 DIRECTION: SW PRECIPITATION: light rain

SPECIFIC COMMENTS:

5/10/13 Thomas Bohler Thomas Bohler

DATE PRINT SIGNATURE

Form FMG 5.1-01

GROUNDWATER LEVEL MONITORING REPORT

WELL NUMBER

Page of

PROJECT Bldg 8 RCP Site 9-32-139
LOCATION Lockport, NY
CLIENT
ELEVATION REFERENCED TO:

PROJECT MANAGER C. Boson
FIELD REP. T. Bohlen
DATE

Date	Time	Elapsed Time (days)	Depth of Water from (TOC) in ft	Elevation of Water	Remarks	Read By
5/10/13		-	5.44	-	MW-8-1	TB
"	1150		5.00	-	MW-8-003-B	"
5/13/13	1000	-	7.52	-	MW-8-4	"
	1615	-	7.89	-	MW-8-2	"
5/14/13	755	-	2.10	-	MW-6-F-8	"
	945	-	5.83	-	MW-6-2	"
	1225	-	4.50	-	MW-6-1	"
5/13/13	1305	-	8.83	-	MW-8-3	"

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

Form EMG 5.1-01	**GROUNDWATER LEVEL MONITORING REPORT**	WELL NUMBER Page 1 of 1

PROJECT: Bldg 8 BCP - Site 9-32-139
LOCATION: Lockport, NY
CLIENT:
ELEVATION REFERENCED TO: TOR

PROJECT MANAGER: C. Bacon
FIELD REP.: T. Bahlen
DATE: 5/16/13

Date	Time	Elapsed Time (days)	Depth of Water from (TOR) in ft	Elevation of Water	Remarks	Read By
5/16/13	1627		4.64		MW-6-1	
	1624		5.98		MW-6-2	
	1618		7.54		MW-8-4	
	1620		2.23		MW-6-F-8	
	1602		9.22		MW-8-3	
	1532		4.95		MW-8-003B	
	1528		5.47		MW-8-1	
	1604		7.73		MW-8-2	

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

Form FMG 8.0-01

INSTRUMENT CALIBRATION RECORD

PROJECT: Bldg 8 BCP Site 9-30-139 | PROJECT MANAGER: C. Boron
LOCATION: Lockport, NY | FIELD REP.: T. Bohlen
CLIENT: | DATE:

Instrument	Date Calibrated	By	Standard Used	Decontamination, Maintenance, or Repair Performed	Remarks
OVM	5/10/13	YB	Iso Gas	Cal.	OK
YSI	"	"	Cal. Sols.	"	"
LaMotte	"	"	Cal. Sol	"	"
OVM	5/13/13	YB	Iso Gas	Cal	OK
YSI	"	"	Cal. Sols.	"	"
LaMotte	"	"	Cal. Sol.	"	"
OVM	5/14/13	YB	Cal Gas	Cal.	OK
YSI	"	"	Cal sols	"	"
LaMotte	"	"	Cal Sol.	"	"

Other Remarks:

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

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days): 3 Weeks			
State, Zip: NY, 14203				
Phone: (716) 685-2300	PO #: 4047065			
Email: christopher.boron@gza.com	WO #: 58507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site: Bldg 8 BCP Site 9-32-139	SSOW#: 256015			

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX		Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N				
MW-8-003-B-057013	5/10/13	1300	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X				
MW-8-1-057013	↓	1640	↓	Water	↓	↓	X	X	X	X	X	X	X	X	X	X	X				
Trip Blank											X										

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
Thomas Bohlen	5/10/13 1740			5/10/13 1740	TA Buffalo
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 5.3

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days): 3 Weeks			
State, Zip: NY, 14203				
Phone: (716) 685-2300	PO #: 4047065			
Email: christopher.boron@gza.com	WO #: 58507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site: Bldg 8 BCP Site 9-32-139	SSOW#: 256015			

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX		Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N				
MW-8-4-057313	5/13/13	1200	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X				
MW-8-2-057313	↓	1630	↓	Water	↓	↓	X	X	X	X	X	X	X	X	X	X	X				
Trip Blank	5/13/13	-	-	-							X										

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
Thomas Bohlen	5/13/13/1725			5/13/13 1725	TA BUFFALO
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:

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.		Analysis Requested		GZA Job #: 21.0056546.00 Task 24
Address: 535 Washington Street 11th Floor	Due Date Requested:			Preservation Codes:
City: Buffalo	TAT Requested (days): 3 Weeks			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) 685-2300	PO #: 4047065			
Email: christopher.boron@gza.com	WO #: 58507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site: Bldg 8 BCP Site 9-32-139	SSOW#: 256015			

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX		Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N				
MW-6-F-8-051413	5/14/13	910	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X				
MW-6-2-051413		1150		Water																	
MW-6-1-051413		1410																			
MW-8-3-051413		1515																			
Trip Blank											X										

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
Thomas Bohlen	5/14/13 1635			5/14/13 16:35	TA BUFFALO
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:

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME Bldg 10 BCP Site 9-32-140 PROJECT NO. 56546

SAMPLING CREW MEMBERS T. Bohlen SUPERVISOR C. Boron

DATE OF SAMPLE COLLECTION 5/9/13 - 5/10/13

[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-10-2-050913	MW-10-2	610.96	16.06	3.01	608.25	2.1		6.3	7.14	12.1	7.19	1127	VOC MNA
MW-10-3-050913	MW-10-3	610.40	15.39	3.10	607.30	2.0		4.0	7.68	10.3	0.83	1535	VOC MNA
BLDG-10-MW-1-050913	BLDG-10-MW1	615.05	15.55	5.75	609.30	1.6		1.7	6.87	19.7	2.2	1740	VOC MNA
MW-9-101-A-051013	MW-9-101-A	615.00	12.54	5.28	609.72	1.2		1.4	7.07	12.3	9.09	1015	VOC MNA

Additional Comments:

Copies to:

FMC 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: Bldg 10 ECP Site - 9-32-140
Ref. No.: 58546

Date: 5/10/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-9-101-A
Measurement Point: TOR
Constructed Well Depth (ft): 12.54
Measured Well Depth (ft): 9.22 - boiler in well
Depth of Sediment (ft):

Screen Length (ft): 5
Depth to Pump Intake (ft)[1]: 8'
Well Diameter, D (in): 2
Well Screen Volume, V_s (mL)[2]: 1 well vol. = 1.2 gal.
Initial Depth to Water (ft): 5.28

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]
920		5.40		7.14	12.9	9.11	126.3	4.01	4.15	0	0
930		5.40		7.10	12.8	9.15	122.1	3.64	4.11	0.1	0
940		5.40		7.08	12.5	9.17	120.3	3.04	4.02	0.2	0
950		5.40		7.07	12.4	9.14	120.3	2.69	3.51	0.5	0
1000		5.40		7.07	12.3	9.10	122.0	2.49	3.51	0.8	0
1005		5.40		7.07	12.3	9.09	122.8	2.60	3.49	1.0	0
1010		5.40		7.07	12.3	9.10	122.5	2.61	3.41	1.2	1
1015		5.40		7.07	12.3	9.09	122.1	2.60	3.40	1.4	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.

WELL PURGING FIELD INFORMATION FORM

JOB# 53546 -

SITE/PROJECT NAME: Bldg 10 BCP Site 9-32-140

WELL # MW-9-101+A

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOL. PURGED (LITERS/GALLONS)
05/10/13	05/10/13	1.2	1.4

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 - BLADDER PUMP, D - GAS LIFT PUMP, E - PURGE PUMP, F - DIPPER BOTTLE, G - BAILER, H - WATERRA, X - ______ (PURGING OTHER SPECIFY)

SAMPLING DEVICE: B — X - ______ (SAMPLING OTHER SPECIFY)

PURGING DEVICE: E — A - TEFLON, B - STAINLESS STEEL, C - POLYPROPYLENE, D - PVC, E - POLYETHYLENE, X - ______ (PURGING OTHER SPECIFY)

SAMPLING DEVICE: E — X - ______ (SAMPLING OTHER SPECIFY)

PURGING DEVICE: E — A - TEFLON, B - TYGON, C - ROPE, D - POLYPROPYLENE, E - POLYETHYLENE, F - SILICONE, G - COMBINATION TEFLON/POLYPROPYLENE, X - ______ (SPECIFY), X - ______ (PURGING OTHER SPECIFY)

SAMPLING DEVICE: E — X - ______ (SAMPLING OTHER SPECIFY)

FILTERING DEVICES 0.45: ______ A - IN-LINE DISPOSABLE, B - PRESSURE, C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: ______ (m/ft)

GROUNDWATER ELEVATION: ______ (m/ft)

DEPTH TO WATER: 5.28 (m/ft)

WELL DEPTH: 12.54 (m/ft)

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

FIELD COMMENTS

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

WEATHER CONDITIONS: WIND SPEED: 0 DIRECTION: – PRECIPITATION: Ø OUTLOOK: light rain, t. storms forecasted

SPECIFIC COMMENTS:

I HEREBY CERTIFY THAT SAMPLES WERE COLLECTED IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/10/13	Thomas Bohlen	Thomas Bohlen
DATE	PRINT	SIGNATURE

ANY 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: Bldg 10 BCP Site 7-32-140
Ref. No.: 56546

Date: 5/9/12
Personnel: T. Bohler

Monitoring Well Data:

Well No.: BLDG-10-MW-1
Measurement Point: TOR
Constructed Well Depth (ft): 16.0
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 well vol. = 1.6 gal
Initial Depth to Water (ft): 5.75

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]
1639		6.01		7.02	19.9	2.34	-31.9	1.19	4.38	0	0
1651		6.82		6.88	19.7	2.23	-38.2	0.98	4.42	0.5	0
1705		6.82		6.89	19.7	2.17	-34.1	1.28	4.61	1.0	0
1710		6.82		6.88	19.7	2.18	-28.7	1.06	3.57	1.1	0
1715		6.82		6.88	19.7	2.19	-28.0	0.83	3.34	1.2	0
1720		6.82		6.88	19.7	2.19	-30.0	0.81	3.21	1.3	0
1725		6.82		6.87	19.7	2.20	-30.2	0.84	2.63	1.4	0
1730		6.82		6.87	19.7	2.20	-30.9	0.82	2.57	1.5	0
1735		6.82		6.87	19.7	2.20	-30.5	0.83	2.52	1.6	1
1740		6.82		6.87	19.7	2.20	-31.2	0.83	2.57	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.

OVM@TOR = 34 ppm peak

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 -

SITE/PROJECT NAME: Bldg 10 BCP Site 9-32-140 WELL# BAAG-10MW-1

WELL PURGING INFORMATION

050913	050913	1.6	1.7
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (APPROXIMATE)	ACTUAL VOLUME PURGED (APPROXIMATE)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y (N) (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE	B	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X- ____ PURGING OTHER (SPECIFY)
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA	
SAMPLING DEVICE	B	C - BLADDER PUMP	F - DIPPER BOTTLE		X- ____ SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON	C - PVC		X- ____ PURGING OTHER (SPECIFY)
		B - STAINLESS STEEL	D - POLYETHYLENE		
SAMPLING DEVICE	E	C - POLYPROPYLENE			X- ____ SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON	D - POLYPROPYLENE	F - SILICONE	X- ____ PURGING OTHER (SPECIFY)
		B - TYGON	E - POLYETHYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	
SAMPLING DEVICE	E	C - ROPE	X- ____ (SPECIFY)		X- ____ SAMPLING OTHER (SPECIFY)

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

FIELD MEASUREMENTS

WELL ELEVATION	615.50 (m/ft)	GROUNDWATER ELEVATION	609.75 (m/ft)
DEPTH TO WATER	5.75 (m/ft)	WELL DEPTH	15.55 (m/ft)

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

FIELD COMMENTS

SAMPLE APPEARANCE: Good ODOR: solvent? COLOR: Clear TURBIDITY: Clear

WEATHER CONDITIONS: WIND SPEED: — DIRECTION: — PRECIPITATION: Y/N OUTLOOK: NA

SPECIFIC COMMENTS: interior location

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/9/13 Thomas Bohlen Thomas Bohlen

DATE PRINT SIGNATURE

EMG 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: Bdald BCP Site 9-32-140
Ref. No.: 56346

Date: 5/9/13
Personnel: M Bohlen

Monitoring Well Data:

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

Screen Length (ft): 9.8 - 16.8 = 7.0'
Depth to Pump Intake (ft)[1]: 14'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: 1 well vol. = 2.1 gal.
Initial Depth to Water (ft): 3.01

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]
1005		3.61		6.10	12.4	11.94	-164.3	1.54	35.5	0	0
1025		6.35		7.84	12.0	5.67	-67.6	4.3	30.2	1	0
1045		8.20		7.57	11.9	5.43	-32.6	3.6	25.6	1.8	0
1105		9.44		7.34	12.2	6.01	-27.1	2.46	37.3	2.7	1
1125		10.27		7.26	12.2	6.47	-32.1	1.62	22.1	3.7	1
1145		10.93		7.19	12.2	7.07	-45.6	0.96	15.5	4.6	2
1202		11.11		7.21	12.2	7.21	-49.3	2.75	12.8	5.3	2
1212		11.11		7.19	12.1	7.17	-41.6	3.71	9.98	5.8	2
1217		11.11		7.19	12.1	7.19	-39.2	4.15	7.35	5.9	2
1222		11.11		7.19	12.1	7.19	-38.4	4.18	7.31	6.1	2
1227		11.11		7.19	12.1	7.19	-38.9	4.16	7.12	6.3	3

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

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 . _ _

SITE/PROJECT NAME: Bldg 10 BCP Site 9-32/140   WELL # MW-10-2

WELL PURGING INFORMATION

05/09/13	05/09/13	2.1	6.3
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOLUME PURGED (GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y 0 (CIRCLE ONE)   SAMPLING EQUIPMENT DEDICATED 8 N (CIRCLE ONE)

PURGING DEVICE: B — A - SUBMERSIBLE PUMP; B - PERISTALTIC PUMP; C - BLADDER PUMP; D - GAS LIFT PUMP; E - PURGE PUMP; F - DIPPER BOTTLE; G - BAILER; H - WATERRA; X - ______ (PURGING OTHER (SPECIFY))

SAMPLING DEVICE: B — X - ______ (SAMPLING OTHER (SPECIFY))

PURGING DEVICE: E — A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE; D - PVC; E - POLYETHYLENE; X - ______ (PURGING OTHER (SPECIFY))

SAMPLING DEVICE: E — X - ______ (SAMPLING OTHER (SPECIFY))

PURGING DEVICE: E — A - TEFLON; B - TYGON; C - ROPE; D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE; X - ______ (SPECIFY); X - ______ (PURGING OTHER (SPECIFY))

SAMPLING DEVICE: E — X - ______ (SAMPLING OTHER (SPECIFY))

FILTERING DEVICES 0.45: ____ A - IN-LINE DISPOSABLE; B - PRESSURE; C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	611.26	(m/ft)	GROUNDWATER ELEVATION	608.25	(m/ft)
DEPTH TO WATER	3.01	(m/ft)	WELL DEPTH	16.06	(m/ft)

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

FIELD COMMENTS

SAMPLE APPEARANCE: Good   ODOR: solvent   COLOR: Clear   TURBIDITY: Clear

WEATHER CONDITIONS: WIND SPEED: 0-5   DIRECTION: SW   PRECIPITATION Y/N: 0   OUTLOOK: forecasted pm showers

SPECIFIC COMMENTS:

sheen observed

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/9/13	Thomas Bohlen	Thomas Bohlen
DATE	PRINT	SIGNATURE

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

[illegible]

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Bldg 10 BCP Site 9-32-140
Ref. No.: 56546

Date: 5/9/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-10-3
Measurement Point: TOR
Constructed Well Depth (ft): 15.80
Measured Well Depth (ft): 15.39
Depth of Sediment (ft):

Screen Length (ft): 8.8-15.8=7.0'
Depth to Pump Intake (ft)[1]: 13'
Well Diameter, D (in): 2"
Well Screen Volume, V_s (mL)[2]: 1 well vol. = 2 gal.
Initial Depth to Water (ft): 3.10

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]
1357		3.50		8.15	10.8	1.33	34.8	4.91	3.90	0	0
1417		5.06		7.64	10.7	1.23	48.3	1.99	3.50	0.8	0
1435		5.54		7.54	10.8	1.03	40.8	1.69	3.41	1.5	0
1445		5.54		7.62	10.7	0.96	42.3	1.90	3.30	1.9	0
1455		5.54		7.66	10.7	0.92	40.8	1.88	3.25	2.2	1
1505		5.54		7.67	10.6	0.86	40.7	1.91	3.21	2.8	1
1515		5.54		7.68	10.4	0.84	42.9	1.91	3.20	3.2	1
1525		5.54		7.68	10.3	0.83	45.6	1.98	3.15	3.6	1
1530		5.54		7.68	10.3	0.83	45.9	2.00	3.12	3.8	1
1535		5.54		7.68	10.3	0.83	46.1	2.01	3.14	4.0	2

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.

WELL PURGING FIELD INFORMATION FORM

JOB# 56546

SITE/PROJECT NAME: Bldg 10 BCP Site 9-32-140

WELL# MW-7-13

WELL PURGING INFORMATION

05/09/13	05/09/13	2.0	4.0
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOLUME PURGED (LITERS/GALLONS)

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- BLADDER PUMP; D- GAS LIFT PUMP; E- PURGE PUMP; F- DIPPER BOTTLE; G- BAILER; H- WATERRA; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: B — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: E — A- TEFLON; B- STAINLESS STEEL; C- POLYPROPYLENE; D- PVC; E- POLYETHYLENE; X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: E — X- ______ SAMPLING OTHER (SPECIFY)

PURGING DEVICE: E — A- TEFLON; B- TYGON; C- ROPE; D- POLYPROPYLENE; E- POLYETHYLENE; F- SILICONE; G- COMBINATION TEFLON/POLYPROPYLENE; X- ______ (SPECIFY); X- ______ PURGING OTHER (SPECIFY)

SAMPLING DEVICE: E — X- ______ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45: ______ A- IN-LINE DISPOSABLE; B- PRESSURE; C- VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	610.40	(m/ft)	GROUNDWATER ELEVATION	607.30	(m/ft)
DEPTH TO WATER	3.10	(m/ft)	WELL DEPTH	15.39	(m/ft)

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

FIELD COMMENTS

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

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

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/9/13 Thomas Bohlen Thomas Bohlen

DATE PRINT SIGNATURE

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

Form EMG 5.1-01

GROUNDWATER LEVEL MONITORING REPORT

WELL NUMBER

Page 1 of 1

PROJECT: Bldg 10 BCP Site 9-32-140
LOCATION: Lockport, NY
CLIENT:
ELEVATION REFERENCED TO: TOR

PROJECT MANAGER: L. Bacon
FIELD REP.: T. Bahan
DATE: 5/16/13

Date	Time	Elapsed Time (days)	Depth of Water from (TOR) in ft	Elevation of Water	Remarks	Read By
5/16/13	1501		2.99		MW-10-2	TB
	1517		3.11		MW-10-3	"
	1507		5.82		BLDG-10-MW-1	"
	1514		5.31		MW-9-101-A	"

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

Form EMG 5.1-01	GROUNDWATER LEVEL MONITORING REPORT	WELL NUMBER Page of

PROJECT: Bldg 10 BCP Site 9-30-140
LOCATION: Lockport, NY
CLIENT:
ELEVATION REFERENCED TO:

PROJECT MANAGER: C. Boron
FIELD REP.: T. Bohlen
DATE:

Date	Time	Elapsed Time (days)	Depth of Water from (TOR) in ft	Elevation of Water	Remarks	Read By
5/9/13	1000	-	3.01	-	MW-10-2	TB
	1355	-	3.10	-	MW-10-3	"
	1638	-	5.75	-	BLDG-10-MW-1	"
5/10/13	915	-	5.28	-	MW-9-101-A	TB

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

Form FMG 8.0-01

INSTRUMENT CALIBRATION RECORD

PROJECT: Bldg 10 BCP Site 9-32-140 | PROJECT MANAGER: C. Boron
LOCATION: Lockport, NY | FIELD REP.: T. Bohlen
CLIENT: | DATE:

Instrument	Date Calibrated	By	Standard Used	Decontamination, Maintenance, or Repair Performed	Remarks
OVM	5/9/13	TB	Iso. Gas.	Cal.	OK
YSI	"	"	Cal. Sols.	"	"
LaMotte	"	"	Cal Sol.	"	"
OVM	5/10/13	TB	Iso Gas	Cal	OK
YSI	"	"	Cal Sols.	"	"
LaMotte	"	"	Cal Sol.	"	"

Other Remarks:

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

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page of
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days): 3 Weeks			
State, Zip: NY, 14203				
Phone: (716) 685-2300	PO #: 4047065			
Email: christopher.boron@gza.com	WO #: 58507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site: Bldg10 - BCP Site 9-30-140	SSOW#: 256015			

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX		Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N				
MW-10-2-050913	5/9/13	1230	G	Water	N	N	0	X	X	X	X	X	X	X	X	X	X			6	
MW-10-3-050913		1545		Water																	
BLDG-10-MW-1-050913		1745																			
Trip Blank											X										

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	Thomas Bohlen	5/9/13 1840			5/9/13 1840	TA
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:

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days): 3 Weeks			
State, Zip: NY, 14203				
Phone: (716) 685-2300	PO #: 4047065			
Email: christopher.boron@gza.com	WO #: 58507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site: Bldg 10 BCP-Site 9-32-140	SSOW#: 256015			

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX		Total Number of containers	Special Instructions/Note:
				Preservation Code:			N	N	S	D	A	A	A	CB	N	N	N				
MW-9-101-A-057013	5/10/13	1020	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X				
				Water																	
Trip Blank											X										

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
Thomas Bohlen	5/10/13 / 1740			5/10/13 1740	TA BUFFALO
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 5.3

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME: Bldg 10 BCP Site 9-32-140

PROJECT NO: 21.0056546.0 Task 24

SAMPLING CREW MEMBERS: Tom Bohlen

SUPERVISOR: C. Baron

DATE OF SAMPLE COLLECTION: 10/1/2013 and 10/7/2013

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

Sample I.D. Number	Well No.	Measuring Point Elev. (ft. AMSL)	Bottom Depth (ft. btoc)	Water Depth (ft. btoc)	Water Elevation (ft. AMSL)	Well Volume (gallons)	Bailer Volume No. Bails	Volume Purged (gallons)	Field pH	Field Temp.	Field Cond.	Time	Sample Description & Analysis
MW-9-101A-100113	MW-9-101A	615.0	12.54	5.39	609.61	1.2		1.2	6.75	19.7	8.28	1142	VOC
MW-9-12-100113	MW-9-12	614.92	15.43	9.01	605.91	1		1.2	7.28	16.4	9.2	1240	VOC
Bldg 10-MW-1-100113	Bldg 10 MW-1	615.05	15.55	5.96	609.09	1.6		1.7	6.73	21.1	2.2	1430	VOC
TK-6-100713	TK-6	621.69	13.22	8.93	612.76	2.8		8.5	-	-	-	1535	VOC

Additional Comments:

Copies to:

ENG 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 9-30-140
Ref. No.: 21.0056546.00 Task 24

Date: 10/1/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-9-101A
Measurement Point: TOR
Constructed Well Depth (ft): 12.54
Measured Well Depth (ft): 9.22 - bailer in well
Depth of Sediment (ft): -

Screen Length (ft): 5
Depth to Pump Intake (ft)[1]: 8'
Well Diameter, D (in): 2
Well Screen Volume, V_s (mL)[2]: 1.2 gal.
Initial Depth to Water (ft): 5.39'

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1102		5.48		6.77	20.3	7.90	135.8	0.42	4.66	0	0
1107		5.50		6.73	20.5	7.99	97.3	0.21	4.61	0.1	0
1112		5.50		6.77	20.0	8.21	47.3	0.10	1.02	0.8	0
1132		5.50		6.75	19.8	8.27	46.9	0.13	1.05	1.0	0
1137		5.50		6.75	19.7	8.28	46.7	0.12	1.04	1.2	1
1142		5.50		6.75	19.7	8.30	47.1	0.14	1.01	1.4	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 = 0.0 ppm TOR

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH - BCP Site 9-30-140
Ref. No.: J1.0056546.00 Task 04

Date: 10/1/13
Personnel: T. Bohlen

Monitoring Well Data:

Well No.: MW-9-12
Measurement Point: TOR
Constructed Well Depth (ft): 16.6' bgs
Measured Well Depth (ft): 15.43 TOR
Depth of Sediment (ft):

Screen Length (ft): 10'
Depth to Pump Intake (ft)[1]: 13.6
Well Diameter, D (in): 2"
Well ~~Screen~~ Volume, V_s (mL)[2]: 1 well vol = 1 gal
Initial Depth to Water (ft): 9.01'

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]
1205		9.04		7.25	16.7	12.37	-10.5	0.32	55.7	0	0
1215		9.04		7.23	16.5	11.92	-39.8	0.15	37.3	0.2	0
1220		9.04		7.26	16.4	10.94	-46.3	0.10	26.3	0.4	0
1225		9.04		7.29	16.4	9.74	-46.7	0.08	14.6	0.6	0
1230		9.04		7.28	16.4	9.23	-51.3	0.08	11.8	0.8	0
1235		9.04		7.28	16.4	9.19	-51.4	0.08	10.7	1.0	1
1240		9.04		7.28	16.4	9.17	-51.2	0.08	10.5	1.2	1

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 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.

slt for odor
DVM = 0.0 ppm TOR

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH - BCP Site 9-30-14D
Ref. No.: 21.0056346.00 Task 24

Date: 10/1/13
Personnel: T. Bahlen

Monitoring Well Data:

Well No.: BLDG-10-MW-1
Measurement Point: TOR
Constructed Well Depth (ft): 16.0
Measured Well Depth (ft): 15.56
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 well vol. = 1.6 gal.
Initial Depth to Water (ft): 5.96

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]
1345		6.33		6.77	21.1	3.40	-16.2	0.25	3.82	0	0
1350		6.69		6.73	21.1	2.38	-33.2	0.13	3.31	0.2	0
1355		6.83		6.72	21.1	2.29	-35.8	0.11	3.25	0.4	0
1400		6.96		6.72	21.1	2.24	-39.7	0.14	2.53	0.7	0
1410		7.14		6.73	21.1	2.19	-43.8	0.10	2.10	1.1	0
1420		7.29		6.73	21.1	2.20	-42.6	0.08	1.85	1.3	0
1425		7.34		6.73	21.1	2.19	-42.8	0.09	1.80	1.5	0
1430		7.40		6.73	21.1	2.19	-42.6	0.10	1.83	1.7	1

Notes:

* - slowest pump speed

(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.

chemical/solvent odor
OVM = 3.7 ppm peak
TOR

APPENDIX B

PREVIOUS ANALYTICAL RESULTS

MW-7-1/MW-7-1R Groundwater Data
Building 7 BCP Site
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	<	<	<	<

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result

* = results are associated with MW-7-1 which was abondoned due to poor hydraulic conductuivity and replaced with MW-7-1R, approximately 80 feet to the southeast.

MW-7-2 Groundwater Data
Building 7 BCP Site
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	<	<	<	<

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

MW-7-3 Groundwater Data
Building 7 BCP Site
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

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

MW-7-4 Groundwater Data
Building 7 BCP Site
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	<	<	<	<

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

MW-7-5 Groundwater Data
Building 7 BCP Site
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	<

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
Building 7 BCP Site
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

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

MW-7-7 Groundwater Data
Building 7 BCP Site
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	<

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

MW-7-8 Groundwater Data
Building 7 BCP Site
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	<

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

MW-7-A-6 Groundwater Data
Building 7 BCP Site
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	<

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

MW-7-C-2 Groundwater Data
Building 7 BCP Site
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

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

MW-7-P-1 Groundwater Data
Building 7 BCP Site
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

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

MW-6-1 Groundwater Data
Building 8 BCP Site
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	<	<	<	<

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

MW-6-2 Groundwater Data
Building 8 BCP Site
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	<	<	<	<

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

MW-6-F-8 Groundwater Data
Building 8 BCP Site
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	<	<	<	<

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

MW-8-1 Groundwater Data
Building 8 BCP Site
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	<	<	<	<

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

MW-8-2 Groundwater Data
Building 8 BCP Site
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

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

MW-8-3 Groundwater Data
Building 8 BCP Site
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	<

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

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

MW-8-003-B Groundwater Data
Building 8 BCP Site
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

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result

MW-9-101A Groundwater Data
Building 10 BCP Site
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	<	<
10/1/2013	<	<	<	<

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

Bldg 10-MW-1 Groundwater Data
Building 10 BCP Site
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	<	<
10/1/2013	3,100	160,000	<	<

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

MW-10-2 Groundwater Data
Building 10 BCP Site
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

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

MW-10-3 Groundwater Data
Building 10 BCP Site
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

Notes:

Results are provided in parts per billion (ppb)

< = non-detect laboratory result

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

TK-6 Groundwater Data
Building 10 BCP Site
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	<	<

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

APPENDIX C

TESTAMERICA ANALYTICAL LABORATORY REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-37710-1

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

Melissa Deyo

Authorized for release by:
5/16/2013 7:23:34 PM

Melissa Deyo, Project Manager I
melissa.deyo@testamericainc.com

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 7
Surrogate Summary 11
QC Sample Results 12
QC Association Summary 18
Lab Chronicle 21
Certification Summary 23
Method Summary 25
Sample Summary 26
Chain of Custody 27
Receipt Checklists 30

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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)
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)

Job ID: 480-37710-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-37710-1

Receipt
The samples were received on 5/6/2013 6:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.3º C.

GC/MS VOA
Method 8260B: The following volatile sample was analyzed with headspace in the sample vial due to multiple injections and/or limited volume: TRIP BLANK (480-37710-4).

No other analytical or quality issues were noted.

IC
Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-3-050613 (480-37710-1), MW-7-1-050613 (480-37710-2) and MW-7-2-050613 (480-37710-3). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC VOA
Method RSK-175: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-7-3-050613 (480-37710-1 DL). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

Metals
Method 6010B: The method blank for preparation batch 117221 contained Manganese and Potassium above the method detection limits. These target analyte concentrations were less than the reporting limits (RLs); therefore, re-extraction and/or re-analysis of samples was not performed.

No other analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 480-37710-1

Client Sample ID: MW-7-3-050613 — Lab Sample ID: 480-37710-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	7.0		1.0	0.81	ug/L	1		8260B	Total/NA
Vinyl chloride	38		1.0	0.90	ug/L	1		8260B	Total/NA
Ethane	17		7.5	0.49	ug/L	1		RSK-175	Total/NA
Ethene	11		7.0	0.52	ug/L	1		RSK-175	Total/NA
Methane - DL	190		20	1.1	ug/L	5		RSK-175	Total/NA
Iron	3.9		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	251		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.39	B	0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	50.7	B	0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	4640		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	7470		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	746		20.0	3.5	mg/L	10		300.0	Total/NA
Ammonia	3.4		0.040	0.018	mg/L	2		350.1	Total/NA
Nitrate	0.17		0.050	0.020	mg/L	1		353.2	Total/NA
Nitrite	0.022	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.8		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	336		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Sulfide	0.057	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	7800		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-7-1-050613 — Lab Sample ID: 480-37710-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	21		4.0	0.22	ug/L	1		RSK-175	Total/NA
Iron	0.11		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	107		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.39	B	0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	4.5	B	0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	569		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	1320		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	115		10.0	1.7	mg/L	5		300.0	Total/NA
Ammonia	0.029		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.041	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.4		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	339		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: MW-7-2-050613 — Lab Sample ID: 480-37710-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.12		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	35.2		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.016	B	0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	1.4	B	0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	92.0		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	125		1.0	0.56	mg/L	2		300.0	Total/NA
Sulfate	32.1		2.0	0.35	mg/L	1		300.0	Total/NA
Total Organic Carbon	1.3		1.0	0.43	mg/L	1		9060	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-7-2-050613 (Continued)

Lab Sample ID: 480-37710-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Alkalinity	330		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	3100		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-37710-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.75	J	1.0	0.46	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-7-3-050613

Date Collected: 05/06/13 11:50
Date Received: 05/06/13 18:15

Lab Sample ID: 480-37710-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**7.0**		1.0	0.81	ug/L			05/14/13 08:00	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/14/13 08:00	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/14/13 08:00	1
Trichloroethene	ND		1.0	0.46	ug/L			05/14/13 08:00	1
Vinyl chloride	**38**		1.0	0.90	ug/L			05/14/13 08:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*66 - 137*		*05/14/13 08:00*	*1*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*		*05/14/13 08:00*	*1*
Toluene-d8 (Surr)	*93*		*71 - 126*		*05/14/13 08:00*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**17**		7.5	0.49	ug/L			05/08/13 09:39	1
Ethene	**11**		7.0	0.52	ug/L			05/08/13 09:39	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**7800**		1000	1000	ug/L			05/13/13 14:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**190**		20	1.1	ug/L			05/08/13 11:50	5

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**3.9**		0.050	0.019	mg/L		05/08/13 07:00	05/08/13 17:27	1
Magnesium	**251**		0.20	0.043	mg/L		05/08/13 07:00	05/08/13 17:27	1
Manganese	**0.39**	**B**	0.0030	0.00040	mg/L		05/08/13 07:00	05/08/13 17:27	1
Potassium	**50.7**	**B**	0.50	0.10	mg/L		05/08/13 07:00	05/08/13 17:27	1
Sodium	**4640**		1.0	0.32	mg/L		05/08/13 07:00	05/08/13 17:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7470**		50.0	28.2	mg/L			05/08/13 20:55	100
Sulfate	**746**		20.0	3.5	mg/L			05/07/13 22:46	10
Ammonia	**3.4**		0.040	0.018	mg/L			05/08/13 13:33	2
Nitrate	**0.17**		0.050	0.020	mg/L			05/07/13 21:06	1
Nitrite	**0.022**	**J**	0.050	0.020	mg/L			05/07/13 21:06	1
Total Organic Carbon	**1.8**		1.0	0.43	mg/L			05/07/13 19:26	1
Total Alkalinity	**336**		5.0	0.79	mg/L			05/09/13 02:46	1
Sulfide	**0.057**	**J**	0.10	0.052	mg/L			05/07/13 12:24	1
Acetic acid	ND		1.0	0.15	mg/L			05/09/13 15:31	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 15:31	1
Lactic acid	ND		1.0	0.14	mg/L			05/09/13 15:31	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 15:31	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 15:31	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 15:31	1

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

TestAmerica Job ID: 480-37710-1

Client Sample ID: MW-7-1-050613
Date Collected: 05/06/13 14:30
Date Received: 05/06/13 18:15

Lab Sample ID: 480-37710-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/14/13 08:25	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/14/13 08:25	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/14/13 08:25	1
Trichloroethene	ND		1.0	0.46	ug/L			05/14/13 08:25	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/14/13 08:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*66 - 137*		*05/14/13 08:25*	*1*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*05/14/13 08:25*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/14/13 08:25*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	0.49	ug/L			05/08/13 09:56	1
Ethene	ND		7.0	0.52	ug/L			05/08/13 09:56	1
Methane	**21**		4.0	0.22	ug/L			05/08/13 09:56	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**4900**		1000	1000	ug/L			05/13/13 14:48	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.11**		0.050	0.019	mg/L		05/08/13 07:00	05/08/13 17:30	1
Magnesium	**107**		0.20	0.043	mg/L		05/08/13 07:00	05/08/13 17:30	1
Manganese	**0.39**	**B**	0.0030	0.00040	mg/L		05/08/13 07:00	05/08/13 17:30	1
Potassium	**4.5**	**B**	0.50	0.10	mg/L		05/08/13 07:00	05/08/13 17:30	1
Sodium	**569**		1.0	0.32	mg/L		05/08/13 07:00	05/08/13 17:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1320**		10.0	5.6	mg/L			05/08/13 21:09	20
Sulfate	**115**		10.0	1.7	mg/L			05/07/13 22:56	5
Ammonia	**0.029**		0.020	0.0090	mg/L			05/08/13 11:57	1
Nitrate	**0.041**	**J**	0.050	0.020	mg/L			05/07/13 19:28	1
Nitrite	ND		0.050	0.020	mg/L			05/07/13 19:28	1
Total Organic Carbon	**1.4**		1.0	0.43	mg/L			05/07/13 20:28	1
Total Alkalinity	**339**		5.0	0.79	mg/L			05/09/13 02:53	1
Sulfide	ND		0.10	0.052	mg/L			05/07/13 12:32	1
Acetic acid	ND		1.0	0.15	mg/L			05/09/13 17:27	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 17:27	1
Lactic acid	ND		1.0	0.14	mg/L			05/09/13 17:27	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 17:27	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 17:27	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 17:27	1

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

TestAmerica Job ID: 480-37710-1

Client Sample ID: MW-7-2-050613
Date Collected: 05/06/13 17:15
Date Received: 05/06/13 18:15

Lab Sample ID: 480-37710-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/14/13 08:50	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/14/13 08:50	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/14/13 08:50	1
Trichloroethene	ND		1.0	0.46	ug/L			05/14/13 08:50	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/14/13 08:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*66 - 137*		*05/14/13 08:50*	*1*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*05/14/13 08:50*	*1*
Toluene-d8 (Surr)	*95*		*71 - 126*		*05/14/13 08:50*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	0.49	ug/L			05/08/13 10:13	1
Ethene	ND		7.0	0.52	ug/L			05/08/13 10:13	1
Methane	ND		4.0	0.22	ug/L			05/08/13 10:13	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**3100**		1000	1000	ug/L			05/13/13 14:57	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.12**		0.050	0.019	mg/L		05/08/13 07:00	05/08/13 17:33	1
Magnesium	**35.2**		0.20	0.043	mg/L		05/08/13 07:00	05/08/13 17:33	1
Manganese	**0.016**	**B**	0.0030	0.00040	mg/L		05/08/13 07:00	05/08/13 17:33	1
Potassium	**1.4**	**B**	0.50	0.10	mg/L		05/08/13 07:00	05/08/13 17:33	1
Sodium	**92.0**		1.0	0.32	mg/L		05/08/13 07:00	05/08/13 17:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**125**		1.0	0.56	mg/L			05/08/13 21:24	2
Sulfate	**32.1**		2.0	0.35	mg/L			05/07/13 23:06	1
Ammonia	ND		0.020	0.0090	mg/L			05/08/13 11:58	1
Nitrate	ND		0.050	0.020	mg/L			05/07/13 19:29	1
Nitrite	ND		0.050	0.020	mg/L			05/07/13 19:29	1
Total Organic Carbon	**1.3**		1.0	0.43	mg/L			05/07/13 22:31	1
Total Alkalinity	**330**		5.0	0.79	mg/L			05/09/13 02:59	1
Sulfide	ND		0.10	0.052	mg/L			05/07/13 12:34	1
Acetic acid	ND		1.0	0.15	mg/L			05/09/13 17:56	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 17:56	1
Lactic acid	ND		1.0	0.14	mg/L			05/09/13 17:56	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 17:56	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 17:56	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 17:56	1

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

TestAmerica Job ID: 480-37710-1

Client Sample ID: TRIP BLANK
Date Collected: 05/06/13 00:00
Date Received: 05/06/13 18:15

Lab Sample ID: 480-37710-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/14/13 01:16	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/14/13 01:16	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/14/13 01:16	1
Trichloroethene	**0.75**	**J**	1.0	0.46	ug/L			05/14/13 01:16	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/14/13 01:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*66 - 137*		*05/14/13 01:16*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*05/14/13 01:16*	*1*
Toluene-d8 (Surr)	*95*		*71 - 126*		*05/14/13 01:16*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-37710-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		12DCE	BFB	TOL
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)
480-37710-1	MW-7-3-050613	92	103	93
480-37710-2	MW-7-1-050613	93	106	97
480-37710-3	MW-7-2-050613	92	106	95
480-37710-4	TRIP BLANK	91	105	95
LCS 480-118368/4	Lab Control Sample	91	106	97
MB 480-118368/5	Method Blank	89	104	95

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-118368/5
Matrix: Water
Analysis Batch: 118368

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			05/14/13 00:19	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/14/13 00:19	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/14/13 00:19	1
Trichloroethene	ND		1.0	0.46	ug/L			05/14/13 00:19	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/14/13 00:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*66 - 137*		*05/14/13 00:19*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*05/14/13 00:19*	*1*
Toluene-d8 (Surr)	*95*		*71 - 126*		*05/14/13 00:19*	*1*

Lab Sample ID: LCS 480-118368/4
Matrix: Water
Analysis Batch: 118368

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	26.0		ug/L		104	74 - 124
Tetrachloroethene	25.0	27.6		ug/L		111	74 - 122
trans-1,2-Dichloroethene	25.0	26.6		ug/L		106	73 - 127
Trichloroethene	25.0	24.7		ug/L		99	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*66 - 137*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*
Toluene-d8 (Surr)	*97*		*71 - 126*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-117312/2
Matrix: Water
Analysis Batch: 117312

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	0.49	ug/L			05/08/13 06:26	1
Ethene	ND		7.0	0.52	ug/L			05/08/13 06:26	1
Methane	ND		4.0	0.22	ug/L			05/08/13 06:26	1

Lab Sample ID: LCS 480-117312/3
Matrix: Water
Analysis Batch: 117312

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.4	16.2		ug/L		112	67 - 128
Ethene	13.5	15.1		ug/L		112	60 - 137
Methane	7.69	8.18		ug/L		106	48 - 174

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

Lab Sample ID: LCSD 480-117312/4
Matrix: Water
Analysis Batch: 117312

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	14.4	16.4		ug/L		114	67 - 128	1	50
Ethene	13.5	15.5		ug/L		115	60 - 137	3	50
Methane	7.69	8.22		ug/L		107	48 - 174	1	50

Lab Sample ID: MB 200-55461/3
Matrix: Water
Analysis Batch: 55461

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			05/13/13 13:43	1

Lab Sample ID: LCS 200-55461/2
Matrix: Water
Analysis Batch: 55461

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	5660		ug/L		113	70 - 130

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 480-117221/1-A
Matrix: Water
Analysis Batch: 118939

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117221

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/08/13 07:00	05/15/13 14:02	1
Magnesium	ND		0.20	0.043	mg/L		05/08/13 07:00	05/15/13 14:02	1
Manganese	0.000890	J	0.0030	0.00040	mg/L		05/08/13 07:00	05/15/13 14:02	1
Potassium	0.160	J	0.50	0.10	mg/L		05/08/13 07:00	05/15/13 14:02	1
Sodium	ND		1.0	0.32	mg/L		05/08/13 07:00	05/15/13 14:02	1

Lab Sample ID: LCS 480-117221/2-A
Matrix: Water
Analysis Batch: 118939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117221

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.42		mg/L		104	80 - 120
Magnesium	10.0	10.38		mg/L		104	80 - 120
Manganese	0.200	0.205		mg/L		102	80 - 120
Potassium	10.0	10.47		mg/L		105	80 - 120
Sodium	10.0	10.36		mg/L		104	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-117251/28
Matrix: Water
Analysis Batch: 117251

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			05/07/13 20:24	1
Sulfate	ND		2.0	0.35	mg/L			05/07/13 20:24	1

Lab Sample ID: LCS 480-117251/27
Matrix: Water
Analysis Batch: 117251

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.52		mg/L		103	90 - 110
Sulfate	20.0	20.68		mg/L		103	90 - 110

Lab Sample ID: MB 480-117478/4
Matrix: Water
Analysis Batch: 117478

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			05/08/13 18:04	1
Sulfate	ND		2.0	0.35	mg/L			05/08/13 18:04	1

Lab Sample ID: LCS 480-117478/3
Matrix: Water
Analysis Batch: 117478

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	19.64		mg/L		98	90 - 110
Sulfate	20.0	19.34		mg/L		97	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-117465/123
Matrix: Water
Analysis Batch: 117465

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			05/08/13 12:51	1

Lab Sample ID: MB 480-117465/147
Matrix: Water
Analysis Batch: 117465

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			05/08/13 13:14	1

Lab Sample ID: MB 480-117465/51
Matrix: Water
Analysis Batch: 117465

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			05/08/13 11:40	1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-117465/124
Matrix: Water
Analysis Batch: 117465

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	0.996		mg/L		100	90 - 110

Lab Sample ID: LCS 480-117465/148
Matrix: Water
Analysis Batch: 117465

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: LCS 480-117465/52
Matrix: Water
Analysis Batch: 117465

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

Lab Sample ID: 480-37710-1 DU
Matrix: Water
Analysis Batch: 117465

Client Sample ID: MW-7-3-050613
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia	3.4		3.34		mg/L		0.4	20

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-117289/3
Matrix: Water
Analysis Batch: 117289

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			05/07/13 21:02	1

Lab Sample ID: LCS 480-117289/4
Matrix: Water
Analysis Batch: 117289

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.49		mg/L		99	90 - 110

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-117408/3
Matrix: Water
Analysis Batch: 117408

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			05/07/13 16:22	1

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

Lab Sample ID: LCS 480-117408/4
Matrix: Water
Analysis Batch: 117408

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

Lab Sample ID: 480-37710-2 MS
Matrix: Water
Analysis Batch: 117408

Client Sample ID: MW-7-1-050613
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	1.4		20.3	20.75		mg/L		95	54 - 131

Lab Sample ID: 480-37710-1 DU
Matrix: Water
Analysis Batch: 117408

Client Sample ID: MW-7-3-050613
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	1.8		1.80		mg/L		0.08	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-117560/6
Matrix: Water
Analysis Batch: 117560

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			05/09/13 00:52	1

Lab Sample ID: LCS 480-117560/7
Matrix: Water
Analysis Batch: 117560

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	95.51		mg/L		96	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-117205/3
Matrix: Water
Analysis Batch: 117205

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			05/07/13 12:02	1

Lab Sample ID: LCS 480-117205/4
Matrix: Water
Analysis Batch: 117205

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	0.714		mg/L		95	90 - 110

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

TestAmerica Job ID: 480-37710-1

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography

Lab Sample ID: MB 480-117667/4
Matrix: Water
Analysis Batch: 117667

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/09/13 12:07	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 12:07	1
Lactic acid	ND		1.0	0.14	mg/L			05/09/13 12:07	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 12:07	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 12:07	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 12:07	1

Lab Sample ID: LCS 480-117667/3
Matrix: Water
Analysis Batch: 117667

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	9.68		mg/L		97	80 - 120
Formic-acid	10.0	9.77		mg/L		98	80 - 120
Lactic acid	10.0	10.47		mg/L		105	80 - 120
n-Butyric Acid	10.0	9.42		mg/L		94	80 - 120
Propionic acid	10.0	10.75		mg/L		108	80 - 120
Pyruvic Acid	10.0	10.49		mg/L		105	80 - 120

GC/MS VOA

Analysis Batch: 118368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	8260B	
480-37710-2	MW-7-1-050613	Total/NA	Water	8260B	
480-37710-3	MW-7-2-050613	Total/NA	Water	8260B	
480-37710-4	TRIP BLANK	Total/NA	Water	8260B	
LCS 480-118368/4	Lab Control Sample	Total/NA	Water	8260B	
MB 480-118368/5	Method Blank	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 55461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	RSK-175	
480-37710-2	MW-7-1-050613	Total/NA	Water	RSK-175	
480-37710-3	MW-7-2-050613	Total/NA	Water	RSK-175	
LCS 200-55461/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-55461/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 117312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	RSK-175	
480-37710-1 - DL	MW-7-3-050613	Total/NA	Water	RSK-175	
480-37710-2	MW-7-1-050613	Total/NA	Water	RSK-175	
480-37710-3	MW-7-2-050613	Total/NA	Water	RSK-175	
LCS 480-117312/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-117312/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-117312/2	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 117221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	3005A	
480-37710-2	MW-7-1-050613	Total/NA	Water	3005A	
480-37710-3	MW-7-2-050613	Total/NA	Water	3005A	
LCS 480-117221/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-117221/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 117612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	6010B	117221
480-37710-2	MW-7-1-050613	Total/NA	Water	6010B	117221
480-37710-3	MW-7-2-050613	Total/NA	Water	6010B	117221

Analysis Batch: 118939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-117221/2-A	Lab Control Sample	Total/NA	Water	6010B	117221
MB 480-117221/1-A	Method Blank	Total/NA	Water	6010B	117221

General Chemistry

Analysis Batch: 117205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	SM 4500 S2 D	
480-37710-2	MW-7-1-050613	Total/NA	Water	SM 4500 S2 D	
480-37710-3	MW-7-2-050613	Total/NA	Water	SM 4500 S2 D	
LCS 480-117205/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-117205/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 117251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	300.0	
480-37710-2	MW-7-1-050613	Total/NA	Water	300.0	
480-37710-3	MW-7-2-050613	Total/NA	Water	300.0	
LCS 480-117251/27	Lab Control Sample	Total/NA	Water	300.0	
MB 480-117251/28	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 117289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	353.2	
LCS 480-117289/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-117289/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 117290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	353.2	
480-37710-2	MW-7-1-050613	Total/NA	Water	353.2	
480-37710-3	MW-7-2-050613	Total/NA	Water	353.2	

Analysis Batch: 117291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-2	MW-7-1-050613	Total/NA	Water	353.2	
480-37710-3	MW-7-2-050613	Total/NA	Water	353.2	

Analysis Batch: 117408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	9060	
480-37710-1 DU	MW-7-3-050613	Total/NA	Water	9060	
480-37710-2	MW-7-1-050613	Total/NA	Water	9060	
480-37710-2 MS	MW-7-1-050613	Total/NA	Water	9060	
480-37710-3	MW-7-2-050613	Total/NA	Water	9060	
LCS 480-117408/4	Lab Control Sample	Total/NA	Water	9060	
MB 480-117408/3	Method Blank	Total/NA	Water	9060	

Analysis Batch: 117465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	350.1	
480-37710-1 DU	MW-7-3-050613	Total/NA	Water	350.1	
480-37710-2	MW-7-1-050613	Total/NA	Water	350.1	
480-37710-3	MW-7-2-050613	Total/NA	Water	350.1	
LCS 480-117465/124	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-117465/148	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-117465/52	Lab Control Sample	Total/NA	Water	350.1	
MB 480-117465/123	Method Blank	Total/NA	Water	350.1	

General Chemistry (Continued)

Analysis Batch: 117465 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-117465/147	Method Blank	Total/NA	Water	350.1	
MB 480-117465/51	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 117478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	300.0	
480-37710-2	MW-7-1-050613	Total/NA	Water	300.0	
480-37710-3	MW-7-2-050613	Total/NA	Water	300.0	
LCS 480-117478/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-117478/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 117560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	SM 2320B	
480-37710-2	MW-7-1-050613	Total/NA	Water	SM 2320B	
480-37710-3	MW-7-2-050613	Total/NA	Water	SM 2320B	
LCS 480-117560/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-117560/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 117667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37710-1	MW-7-3-050613	Total/NA	Water	VFA-IC	
480-37710-2	MW-7-1-050613	Total/NA	Water	VFA-IC	
480-37710-3	MW-7-2-050613	Total/NA	Water	VFA-IC	
LCS 480-117667/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-117667/4	Method Blank	Total/NA	Water	VFA-IC	

Lab Chronicle

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

TestAmerica Job ID: 480-37710-1

Client Sample ID: MW-7-3-050613

Lab Sample ID: 480-37710-1

Date Collected: 05/06/13 11:50

Matrix: Water

Date Received: 05/06/13 18:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	118368	05/14/13 08:00	NQN	TAL BUF
Total/NA	Analysis	RSK-175		1	55461	05/13/13 14:39	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	117312	05/08/13 09:39	JM	TAL BUF
Total/NA	Analysis	RSK-175	DL	5	117312	05/08/13 11:50	JM	TAL BUF
Total/NA	Prep	3005A			117221	05/08/13 07:00	SS	TAL BUF
Total/NA	Analysis	6010B		1	117612	05/08/13 17:27	LH	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	117205	05/07/13 12:24	KJ	TAL BUF
Total/NA	Analysis	300.0		10	117251	05/07/13 22:46	KAC	TAL BUF
Total/NA	Analysis	353.2		1	117289	05/07/13 21:06	KS	TAL BUF
Total/NA	Analysis	353.2		1	117290	05/07/13 21:06	KS	TAL BUF
Total/NA	Analysis	9060		1	117408	05/07/13 19:26	KC	TAL BUF
Total/NA	Analysis	350.1		2	117465	05/08/13 13:33	SB	TAL BUF
Total/NA	Analysis	300.0		100	117478	05/08/13 20:55	KC	TAL BUF
Total/NA	Analysis	SM 2320B		1	117560	05/09/13 02:46	LK	TAL BUF
Total/NA	Analysis	VFA-IC		1	117667	05/09/13 15:31	KC	TAL BUF

Client Sample ID: MW-7-1-050613

Lab Sample ID: 480-37710-2

Date Collected: 05/06/13 14:30

Matrix: Water

Date Received: 05/06/13 18:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	118368	05/14/13 08:25	NQN	TAL BUF
Total/NA	Analysis	RSK-175		1	55461	05/13/13 14:48	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	117312	05/08/13 09:56	JM	TAL BUF
Total/NA	Prep	3005A			117221	05/08/13 07:00	SS	TAL BUF
Total/NA	Analysis	6010B		1	117612	05/08/13 17:30	LH	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	117205	05/07/13 12:32	KJ	TAL BUF
Total/NA	Analysis	300.0		5	117251	05/07/13 22:56	KAC	TAL BUF
Total/NA	Analysis	353.2		1	117290	05/07/13 19:28	KS	TAL BUF
Total/NA	Analysis	353.2		1	117291	05/07/13 19:28	KS	TAL BUF
Total/NA	Analysis	9060		1	117408	05/07/13 20:28	KC	TAL BUF
Total/NA	Analysis	350.1		1	117465	05/08/13 11:57	SB	TAL BUF
Total/NA	Analysis	300.0		20	117478	05/08/13 21:09	KC	TAL BUF
Total/NA	Analysis	SM 2320B		1	117560	05/09/13 02:53	LK	TAL BUF
Total/NA	Analysis	VFA-IC		1	117667	05/09/13 17:27	KC	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-37710-1

Client Sample ID: MW-7-2-050613

Lab Sample ID: 480-37710-3

Date Collected: 05/06/13 17:15
Matrix: Water
Date Received: 05/06/13 18:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	118368	05/14/13 08:50	NQN	TAL BUF
Total/NA	Analysis	RSK-175		1	55461	05/13/13 14:57	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	117312	05/08/13 10:13	JM	TAL BUF
Total/NA	Prep	3005A			117221	05/08/13 07:00	SS	TAL BUF
Total/NA	Analysis	6010B		1	117612	05/08/13 17:33	LH	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	117205	05/07/13 12:34	KJ	TAL BUF
Total/NA	Analysis	300.0		1	117251	05/07/13 23:06	KAC	TAL BUF
Total/NA	Analysis	353.2		1	117290	05/07/13 19:29	KS	TAL BUF
Total/NA	Analysis	353.2		1	117291	05/07/13 19:29	KS	TAL BUF
Total/NA	Analysis	9060		1	117408	05/07/13 22:31	KC	TAL BUF
Total/NA	Analysis	350.1		1	117465	05/08/13 11:58	SB	TAL BUF
Total/NA	Analysis	300.0		2	117478	05/08/13 21:24	KC	TAL BUF
Total/NA	Analysis	SM 2320B		1	117560	05/09/13 02:59	LK	TAL BUF
Total/NA	Analysis	VFA-IC		1	117667	05/09/13 17:56	KC	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-37710-4

Date Collected: 05/06/13 00:00
Matrix: Water
Date Received: 05/06/13 18:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	118368	05/14/13 01:16	NQN	TAL BUF

Laboratory References:

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

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

Certification Summary

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

TestAmerica Job ID: 480-37710-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAP	9	1169CA	09-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-14
Georgia	State Program	4	956	06-30-13
Georgia	State Program	4	956	03-31-14
Illinois	NELAP	5	200003	09-30-13
Iowa	State Program	7	374	03-15-15
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-13
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13 *
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-13
New Hampshire	NELAP	1	2337	11-17-13
New Jersey	NELAP	2	NY455	06-30-13
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAP	10	NY200003	06-09-13
Pennsylvania	NELAP	3	68-00281	07-31-13
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-13
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	09-30-13
Wisconsin	State Program	5	998310390	08-31-13

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	09-30-13
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-13
L-A-B	DoD ELAP		L2336	10-26-13
Louisiana	NELAP	6	176292	06-30-13
Minnesota	NELAP	5	050-999-436	12-31-13
New Hampshire	NELAP	1	2006	12-18-13
New Jersey	NELAP	2	VT972	06-30-13
New York	NELAP	2	10391	04-01-14
Pennsylvania	NELAP	3	68-00489	04-30-14
USDA	Federal		P330-11-00093	02-17-14

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

Certification Summary

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

TestAmerica Job ID: 480-37710-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Vermont	State Program	1	VT-4000	12-31-13
Virginia	NELAP	3	460209	12-14-13

Method Summary

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

TestAmerica Job ID: 480-37710-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010B	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
9060	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	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.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

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: 480-37710-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-37710-1	MW-7-3-050613	Water	05/06/13 11:50	05/06/13 18:15
480-37710-2	MW-7-1-050613	Water	05/06/13 14:30	05/06/13 18:15
480-37710-3	MW-7-2-050613	Water	05/06/13 17:15	05/06/13 18:15
480-37710-4	TRIP BLANK	Water	05/06/13 00:00	05/06/13 18:15

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24

Address: 535 Washington Street 11th Floor	Due Date Requested:
City: Buffalo	TAT Requested (days): 3 Weeks
State, Zip: NY, 14203	
Phone: (716) 685-2300	PO #: 4047065
Email: christopher.boron@gza.com	WO #: 58507
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014
Site: Bldg 7 RCP Site 9-32-138	SSOW#: 256015

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N			
MW-7-3-050613	5/6/13	1150	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X			
MW-7-1-050613		1430		Water	N	N														
MW-7-2-050613		1715			N	N														
Trip Blank											X									

480-37710 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:

	Date/Time	Company		Date/Time	Company
Relinquished by: Thomas Bohlen	5/6/13 18:15		Received by: Michael [illegible]	5-6-13 1815	
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: 5.3 #1

5/16/2013

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: 480-9955.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-37710-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/16/2013			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel)	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-7-3-050613 (480-37710-1)	5/6/13	11:50 Eastern		Water			X	3	
MW-7-1-050613 (480-37710-2)	5/6/13	14:30 Eastern		Water			X	3	
MW-7-2-050613 (480-37710-3)	5/6/13	17:15 Eastern		Water			X	3	

480-37710 Chain of Custody

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
				5/8/13 1015	TA BUF
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:

5/16/2013


ORIGIN ID: DKKA (716) 691-2600
KEN KINECKI
TESTAMERICA
10 HAZELWOOD DR
AMHERST, NY 14228
UNITED STATES US
SHIP DATE: 07MAY13
ACTWGT: 12.0 LB MAN
CAD: 735603/CAFE2608
DIMS: 19x15x10 IN
BILL RECIPIENT
TO MARK PHILLIPS
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
DEPT: SAMPLE CONTROL
REF: BURLINGTON
FedEx
Express
WED - 08 MAY 3:00P
STANDARD OVERNIGHT
TRK# 0201 4485 0264 3435
ZF BTVA
05403
VT-US BTV

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-37710-1

Login Number: 37710

List Source: TestAmerica Buffalo

List Number: 1

Creator: Wienke, Robert

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.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-37710-1

Login Number: 37710
List Number: 1
Creator: Gagne, Eric

List Source: TestAmerica Burlington
List Creation: 05/08/13 12:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	709061
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 IR GUN ID 181. CF 0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	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: 480-37789-1

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

Melissa Deyo

Authorized for release by:
5/14/2013 3:41:16 PM

Melissa Deyo, Project Manager I
melissa.deyo@testamericainc.com

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 7
Surrogate Summary 12
QC Sample Results 13
QC Association Summary 20
Lab Chronicle 23
Certification Summary 26
Method Summary 28
Sample Summary 29
Chain of Custody 30
Receipt Checklists 33

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

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

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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)
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: 480-37789-1

Job ID: 480-37789-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-37789-1

Receipt
The samples were received on 5/7/2013 5:42 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.8º C.

GC/MS VOA
Method 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-6 050713 (480-37789-1), MW-7-C-2-050713 (480-37789-2) and MW-7-5-050713 (480-37789-3). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

IC
Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-6 050713 (480-37789-1), MW-7-C-2-050713 (480-37789-2), MW-7-5-050713 (480-37789-3) and MW-7-4-050713 (480-37789-4). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC VOA
Method RSK-175: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-7-6 050713 (480-37789-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

Metals
Method 6010B: The method blank for preparation batch 117356 contained Sodium above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No other analytical or quality issues were noted.

General Chemistry
Method SM 4500 S2 D: The matrix spike (MS) recovery for batch 117788 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 480-37789-1

Client Sample ID: MW-7-6 050713 — Lab Sample ID: 480-37789-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	750		20	16	ug/L	20		8260B	Total/NA
Tetrachloroethene	980		20	7.2	ug/L	20		8260B	Total/NA
Trichloroethene	440		20	9.2	ug/L	20		8260B	Total/NA
Vinyl chloride	88		20	18	ug/L	20		8260B	Total/NA
Ethane	8.2		7.5	0.49	ug/L	1		RSK-175	Total/NA
Ethene	1.6	J	7.0	0.52	ug/L	1		RSK-175	Total/NA
Methane - DL	90		20	1.1	ug/L	5		RSK-175	Total/NA
Iron	0.11		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	99.1		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.19		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	10.7		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	2400	B	1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	4220		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	193	J	200	34.9	mg/L	100		300.0	Total/NA
Ammonia	0.059		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.031	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.5		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	304		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-7-C-2-050713 — Lab Sample ID: 480-37789-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	430		5.0	4.1	ug/L	5		8260B	Total/NA
Vinyl chloride	18		5.0	4.5	ug/L	5		8260B	Total/NA
Ethane	0.87	J	7.5	0.49	ug/L	1		RSK-175	Total/NA
Ethene	1.5	J	7.0	0.52	ug/L	1		RSK-175	Total/NA
Methane	49		4.0	0.22	ug/L	1		RSK-175	Total/NA
Iron	0.17		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	90.7		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.14		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	7.6		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	133	B	1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	179		5.0	2.8	mg/L	10		300.0	Total/NA
Sulfate	538		20.0	3.5	mg/L	10		300.0	Total/NA
Ammonia	0.32		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.040	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	0.67	J	1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	296		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-7-5-050713 — Lab Sample ID: 480-37789-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1000		200	160	ug/L	200		8260B	Total/NA
Tetrachloroethene	11000		200	72	ug/L	200		8260B	Total/NA
Trichloroethene	1200		200	92	ug/L	200		8260B	Total/NA
Ethene	0.75	J	7.0	0.52	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample ID: MW-7-5-050713 (Continued)

Lab Sample ID: 480-37789-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	22		4.0	0.22	ug/L	1		RSK-175	Total/NA
Iron	0.097		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	138		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	1.3		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	7.7		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	2540	B	1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	5030		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	177	J	200	34.9	mg/L	100		300.0	Total/NA
Ammonia	0.060		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.94		0.050	0.020	mg/L	1		353.2	Total/NA
Nitrite	0.033	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	2.0		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	300		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	7100		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-7-4-050713

Lab Sample ID: 480-37789-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.20		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	28.8		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.0074		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	1.9		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	198	B	1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	267		2.5	1.4	mg/L	5		300.0	Total/NA
Sulfate	39.3		2.0	0.35	mg/L	1		300.0	Total/NA
Nitrate	0.064		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	0.64	J	1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	333		5.0	0.79	mg/L	1		SM 2320B	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	2000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: Trip Blank

Lab Sample ID: 480-37789-5

No Detections.

This Detection Summary does not include radiochemical test results.

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

TestAmerica Job ID: 480-37789-1

Client Sample ID: MW-7-6 050713
Date Collected: 05/07/13 09:20
Date Received: 05/07/13 17:42

Lab Sample ID: 480-37789-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	750		20	16	ug/L			05/09/13 18:00	20
Tetrachloroethene	980		20	7.2	ug/L			05/09/13 18:00	20
trans-1,2-Dichloroethene	ND		20	18	ug/L			05/09/13 18:00	20
Trichloroethene	440		20	9.2	ug/L			05/09/13 18:00	20
Vinyl chloride	88		20	18	ug/L			05/09/13 18:00	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*05/09/13 18:00*	*20*
4-Bromofluorobenzene (Surr)	*107*		*73 - 120*		*05/09/13 18:00*	*20*
Toluene-d8 (Surr)	*105*		*71 - 126*		*05/09/13 18:00*	*20*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	8.2		7.5	0.49	ug/L			05/08/13 13:01	1
Ethene	1.6	J	7.0	0.52	ug/L			05/08/13 13:01	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	4100		1000	1000	ug/L			05/13/13 15:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	90		20	1.1	ug/L			05/08/13 14:18	5

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.11		0.050	0.019	mg/L		05/08/13 10:20	05/08/13 19:24	1
Magnesium	99.1		0.20	0.043	mg/L		05/08/13 10:20	05/08/13 19:24	1
Manganese	0.19		0.0030	0.00040	mg/L		05/08/13 10:20	05/08/13 19:24	1
Potassium	10.7		0.50	0.10	mg/L		05/08/13 10:20	05/08/13 19:24	1
Sodium	2400	B	1.0	0.32	mg/L		05/08/13 10:20	05/08/13 19:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4220		50.0	28.2	mg/L			05/09/13 18:17	100
Sulfate	193	J	200	34.9	mg/L			05/09/13 18:17	100
Ammonia	0.059		0.020	0.0090	mg/L			05/08/13 13:05	1
Nitrate	0.031	J	0.050	0.020	mg/L			05/07/13 20:36	1
Nitrite	ND		0.050	0.020	mg/L			05/07/13 20:36	1
Total Organic Carbon	1.5		1.0	0.43	mg/L			05/13/13 20:26	1
Total Alkalinity	304		5.0	0.79	mg/L			05/09/13 13:02	1
Sulfide	ND		0.10	0.052	mg/L			05/09/13 18:30	1
Acetic acid	ND		1.0	0.15	mg/L			05/09/13 18:25	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 18:25	1
Lactic acid	ND		1.0	0.14	mg/L			05/09/13 18:25	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 18:25	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 18:25	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 18:25	1

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

TestAmerica Job ID: 480-37789-1

Client Sample ID: MW-7-C-2-050713
Date Collected: 05/07/13 15:45
Date Received: 05/07/13 17:42

Lab Sample ID: 480-37789-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	430		5.0	4.1	ug/L			05/09/13 18:23	5
Tetrachloroethene	ND		5.0	1.8	ug/L			05/09/13 18:23	5
trans-1,2-Dichloroethene	ND		5.0	4.5	ug/L			05/09/13 18:23	5
Trichloroethene	ND		5.0	2.3	ug/L			05/09/13 18:23	5
Vinyl chloride	18		5.0	4.5	ug/L			05/09/13 18:23	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/09/13 18:23*	*5*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/09/13 18:23*	*5*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/09/13 18:23*	*5*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.87	J	7.5	0.49	ug/L			05/08/13 13:18	1
Ethene	1.5	J	7.0	0.52	ug/L			05/08/13 13:18	1
Methane	49		4.0	0.22	ug/L			05/08/13 13:18	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	4100		1000	1000	ug/L			05/13/13 15:16	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.17		0.050	0.019	mg/L		05/08/13 10:20	05/08/13 19:31	1
Magnesium	90.7		0.20	0.043	mg/L		05/08/13 10:20	05/08/13 19:31	1
Manganese	0.14		0.0030	0.00040	mg/L		05/08/13 10:20	05/08/13 19:31	1
Potassium	7.6		0.50	0.10	mg/L		05/08/13 10:20	05/08/13 19:31	1
Sodium	133	B	1.0	0.32	mg/L		05/08/13 10:20	05/08/13 19:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	179		5.0	2.8	mg/L			05/09/13 18:27	10
Sulfate	538		20.0	3.5	mg/L			05/09/13 18:27	10
Ammonia	0.32		0.020	0.0090	mg/L			05/08/13 13:06	1
Nitrate	0.040	J	0.050	0.020	mg/L			05/07/13 20:38	1
Nitrite	ND		0.050	0.020	mg/L			05/07/13 20:38	1
Total Organic Carbon	0.67	J	1.0	0.43	mg/L			05/11/13 22:26	1
Total Alkalinity	296		5.0	0.79	mg/L			05/09/13 13:08	1
Sulfide	ND		0.10	0.052	mg/L			05/09/13 18:30	1
Acetic acid	ND		1.0	0.15	mg/L			05/09/13 18:55	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 18:55	1
Lactic acid	ND		1.0	0.14	mg/L			05/09/13 18:55	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 18:55	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 18:55	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 18:55	1

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

TestAmerica Job ID: 480-37789-1

Client Sample ID: MW-7-5-050713
Date Collected: 05/07/13 12:15
Date Received: 05/07/13 17:42

Lab Sample ID: 480-37789-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1000		200	160	ug/L			05/09/13 18:46	200
Tetrachloroethene	11000		200	72	ug/L			05/09/13 18:46	200
trans-1,2-Dichloroethene	ND		200	180	ug/L			05/09/13 18:46	200
Trichloroethene	1200		200	92	ug/L			05/09/13 18:46	200
Vinyl chloride	ND		200	180	ug/L			05/09/13 18:46	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/09/13 18:46*	*200*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*05/09/13 18:46*	*200*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/09/13 18:46*	*200*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	0.49	ug/L			05/08/13 13:35	1
Ethene	0.75	J	7.0	0.52	ug/L			05/08/13 13:35	1
Methane	22		4.0	0.22	ug/L			05/08/13 13:35	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	7100		1000	1000	ug/L			05/13/13 15:25	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.097		0.050	0.019	mg/L		05/08/13 10:20	05/08/13 19:33	1
Magnesium	138		0.20	0.043	mg/L		05/08/13 10:20	05/08/13 19:33	1
Manganese	1.3		0.0030	0.00040	mg/L		05/08/13 10:20	05/08/13 19:33	1
Potassium	7.7		0.50	0.10	mg/L		05/08/13 10:20	05/08/13 19:33	1
Sodium	2540	B	1.0	0.32	mg/L		05/08/13 10:20	05/08/13 19:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5030		50.0	28.2	mg/L			05/09/13 18:38	100
Sulfate	177	J	200	34.9	mg/L			05/09/13 18:38	100
Ammonia	0.060		0.020	0.0090	mg/L			05/08/13 13:07	1
Nitrate	0.94		0.050	0.020	mg/L			05/07/13 21:19	1
Nitrite	0.033	J	0.050	0.020	mg/L			05/07/13 21:19	1
Total Organic Carbon	2.0		1.0	0.43	mg/L			05/12/13 00:46	1
Total Alkalinity	300		5.0	0.79	mg/L			05/09/13 13:26	1
Sulfide	ND		0.10	0.052	mg/L			05/13/13 04:00	1
Acetic acid	ND		1.0	0.15	mg/L			05/09/13 19:24	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 19:24	1
Lactic acid	ND		1.0	0.14	mg/L			05/09/13 19:24	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 19:24	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 19:24	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 19:24	1

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

TestAmerica Job ID: 480-37789-1

Client Sample ID: MW-7-4-050713
Date Collected: 05/07/13 16:30
Date Received: 05/07/13 17:42

Lab Sample ID: 480-37789-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/09/13 19:09	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/09/13 19:09	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/09/13 19:09	1
Trichloroethene	ND		1.0	0.46	ug/L			05/09/13 19:09	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/09/13 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*66 - 137*		*05/09/13 19:09*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*05/09/13 19:09*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*05/09/13 19:09*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	0.49	ug/L			05/08/13 13:52	1
Ethene	ND		7.0	0.52	ug/L			05/08/13 13:52	1
Methane	ND		4.0	0.22	ug/L			05/08/13 13:52	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**2000**		1000	1000	ug/L			05/13/13 15:34	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.20**		0.050	0.019	mg/L		05/08/13 10:20	05/08/13 19:36	1
Magnesium	**28.8**		0.20	0.043	mg/L		05/08/13 10:20	05/08/13 19:36	1
Manganese	**0.0074**		0.0030	0.00040	mg/L		05/08/13 10:20	05/08/13 19:36	1
Potassium	**1.9**		0.50	0.10	mg/L		05/08/13 10:20	05/08/13 19:36	1
Sodium	**198**	**B**	1.0	0.32	mg/L		05/08/13 10:20	05/08/13 19:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**267**		2.5	1.4	mg/L			05/09/13 18:48	5
Sulfate	**39.3**		2.0	0.35	mg/L			05/09/13 08:47	1
Ammonia	ND		0.020	0.0090	mg/L			05/08/13 13:08	1
Nitrate	**0.064**		0.050	0.020	mg/L			05/07/13 21:20	1
Nitrite	ND		0.050	0.020	mg/L			05/07/13 21:20	1
Total Organic Carbon	**0.64**	**J**	1.0	0.43	mg/L			05/12/13 01:15	1
Total Alkalinity	**333**		5.0	0.79	mg/L			05/09/13 13:33	1
Sulfide	ND		0.10	0.052	mg/L			05/13/13 04:00	1
Acetic acid	ND		1.0	0.15	mg/L			05/09/13 19:53	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 19:53	1
Lactic acid	ND		1.0	0.14	mg/L			05/09/13 19:53	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 19:53	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 19:53	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 19:53	1

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

TestAmerica Job ID: 480-37789-1

Client Sample ID: Trip Blank
Date Collected: 05/07/13 00:00
Date Received: 05/07/13 17:42

Lab Sample ID: 480-37789-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/09/13 19:31	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/09/13 19:31	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/09/13 19:31	1
Trichloroethene	ND		1.0	0.46	ug/L			05/09/13 19:31	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/09/13 19:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*05/09/13 19:31*	*1*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*05/09/13 19:31*	*1*
Toluene-d8 (Surr)	*105*		*71 - 126*		*05/09/13 19:31*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-37789-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		12DCE	BFB	TOL
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)
480-37789-1	MW-7-6 050713	104	107	105
480-37789-2	MW-7-C-2-050713	101	102	103
480-37789-3	MW-7-5-050713	101	104	103
480-37789-4	MW-7-4-050713	96	100	99
480-37789-5	Trip Blank	104	106	105
LCS 480-117585/4	Lab Control Sample	94	100	101
MB 480-117585/5	Method Blank	95	100	99

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-117585/5
Matrix: Water
Analysis Batch: 117585

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			05/09/13 11:13	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/09/13 11:13	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/09/13 11:13	1
Trichloroethene	ND		1.0	0.46	ug/L			05/09/13 11:13	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/09/13 11:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*66 - 137*		*05/09/13 11:13*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*05/09/13 11:13*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*05/09/13 11:13*	*1*

Lab Sample ID: LCS 480-117585/4
Matrix: Water
Analysis Batch: 117585

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	27.1		ug/L		108	74 - 124
Tetrachloroethene	25.0	27.9		ug/L		112	74 - 122
trans-1,2-Dichloroethene	25.0	29.0		ug/L		116	73 - 127
Trichloroethene	25.0	26.2		ug/L		105	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*66 - 137*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*
Toluene-d8 (Surr)	*101*		*71 - 126*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-117312/2
Matrix: Water
Analysis Batch: 117312

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	0.49	ug/L			05/08/13 06:26	1
Ethene	ND		7.0	0.52	ug/L			05/08/13 06:26	1
Methane	ND		4.0	0.22	ug/L			05/08/13 06:26	1

Lab Sample ID: LCS 480-117312/3
Matrix: Water
Analysis Batch: 117312

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.4	16.2		ug/L		112	67 - 128
Ethene	13.5	15.1		ug/L		112	60 - 137
Methane	7.69	8.18		ug/L		106	48 - 174

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

Lab Sample ID: LCSD 480-117312/4
Matrix: Water
Analysis Batch: 117312

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	14.4	16.4		ug/L		114	67 - 128	1	50
Ethene	13.5	15.5		ug/L		115	60 - 137	3	50
Methane	7.69	8.22		ug/L		107	48 - 174	1	50

Lab Sample ID: MB 200-55461/3
Matrix: Water
Analysis Batch: 55461

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			05/13/13 13:43	1

Lab Sample ID: LCS 200-55461/2
Matrix: Water
Analysis Batch: 55461

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	5660		ug/L		113	70 - 130

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 480-117356/1-A
Matrix: Water
Analysis Batch: 117627

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117356

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/08/13 10:20	05/08/13 18:45	1
Magnesium	ND		0.20	0.043	mg/L		05/08/13 10:20	05/08/13 18:45	1
Manganese	ND		0.0030	0.00040	mg/L		05/08/13 10:20	05/08/13 18:45	1
Potassium	ND		0.50	0.10	mg/L		05/08/13 10:20	05/08/13 18:45	1
Sodium	0.389	J	1.0	0.32	mg/L		05/08/13 10:20	05/08/13 18:45	1

Lab Sample ID: LCS 480-117356/2-A
Matrix: Water
Analysis Batch: 117627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117356

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.72		mg/L		97	80 - 120
Magnesium	10.0	10.02		mg/L		100	80 - 120
Manganese	0.200	0.203		mg/L		102	80 - 120
Potassium	10.0	10.08		mg/L		101	80 - 120
Sodium	10.0	10.40		mg/L		104	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-117482/52
Matrix: Water
Analysis Batch: 117482

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			05/09/13 04:53	1
Sulfate	ND		2.0	0.35	mg/L			05/09/13 04:53	1

Lab Sample ID: LCS 480-117482/51
Matrix: Water
Analysis Batch: 117482

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	19.85		mg/L		99	90 - 110
Sulfate	20.0	18.88		mg/L		94	90 - 110

Lab Sample ID: MB 480-117722/4
Matrix: Water
Analysis Batch: 117722

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			05/09/13 16:16	1
Sulfate	ND		2.0	0.35	mg/L			05/09/13 16:16	1

Lab Sample ID: LCS 480-117722/3
Matrix: Water
Analysis Batch: 117722

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	20.26		mg/L		101	90 - 110
Sulfate	20.0	21.20		mg/L		106	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-117465/123
Matrix: Water
Analysis Batch: 117465

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			05/08/13 12:51	1

Lab Sample ID: MB 480-117465/75
Matrix: Water
Analysis Batch: 117465

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			05/08/13 12:04	1

Lab Sample ID: LCS 480-117465/124
Matrix: Water
Analysis Batch: 117465

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	0.996		mg/L		100	90 - 110

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-117465/76
Matrix: Water
Analysis Batch: 117465

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

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-117289/3
Matrix: Water
Analysis Batch: 117289

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			05/07/13 21:02	1

Lab Sample ID: LCS 480-117289/4
Matrix: Water
Analysis Batch: 117289

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.49		mg/L		99	90 - 110

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-118207/11
Matrix: Water
Analysis Batch: 118207

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			05/11/13 23:50	1

Lab Sample ID: MB 480-118207/3
Matrix: Water
Analysis Batch: 118207

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			05/11/13 16:01	1

Lab Sample ID: LCS 480-118207/12
Matrix: Water
Analysis Batch: 118207

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	57.97		mg/L		97	90 - 110

Lab Sample ID: LCS 480-118207/4
Matrix: Water
Analysis Batch: 118207

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	57.34		mg/L		96	90 - 110

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

Lab Sample ID: MB 480-118411/3
Matrix: Water
Analysis Batch: 118411

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			05/13/13 19:25	1

Lab Sample ID: LCS 480-118411/4
Matrix: Water
Analysis Batch: 118411

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	63.89		mg/L		106	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-117748/6
Matrix: Water
Analysis Batch: 117748

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			05/09/13 12:14	1

Lab Sample ID: LCS 480-117748/7
Matrix: Water
Analysis Batch: 117748

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	94.39		mg/L		94	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-117788/3
Matrix: Water
Analysis Batch: 117788

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			05/09/13 18:30	1

Lab Sample ID: LCS 480-117788/4
Matrix: Water
Analysis Batch: 117788

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	0.726		mg/L		97	90 - 110

Lab Sample ID: 480-37789-1 MS
Matrix: Water
Analysis Batch: 117788

Client Sample ID: MW-7-6 050713
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND		0.500	0.576	F	mg/L		115	90 - 110

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: 480-37789-2 DU
Matrix: Water
Analysis Batch: 117788

Client Sample ID: MW-7-C-2-050713
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfide	ND		ND		mg/L		NC	20

Lab Sample ID: MB 480-118178/3
Matrix: Water
Analysis Batch: 118178

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			05/13/13 04:00	1

Lab Sample ID: LCS 480-118178/4
Matrix: Water
Analysis Batch: 118178

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

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

Lab Sample ID: 480-37789-4 MS
Matrix: Water
Analysis Batch: 118178

Client Sample ID: MW-7-4-050713
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND		0.500	0.495		mg/L		99	90 - 110

Lab Sample ID: 480-37789-3 DU
Matrix: Water
Analysis Batch: 118178

Client Sample ID: MW-7-5-050713
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfide	ND		ND		mg/L		NC	20

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography

Lab Sample ID: MB 480-117667/4
Matrix: Water
Analysis Batch: 117667

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/09/13 12:07	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 12:07	1
Lactic acid	ND		1.0	0.14	mg/L			05/09/13 12:07	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 12:07	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 12:07	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 12:07	1

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-117667/3
Matrix: Water
Analysis Batch: 117667

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	9.68		mg/L		97	80 - 120
Formic-acid	10.0	9.77		mg/L		98	80 - 120
Lactic acid	10.0	10.47		mg/L		105	80 - 120
n-Butyric Acid	10.0	9.42		mg/L		94	80 - 120
Propionic acid	10.0	10.75		mg/L		108	80 - 120
Pyruvic Acid	10.0	10.49		mg/L		105	80 - 120

GC/MS VOA

Analysis Batch: 117585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-1	MW-7-6 050713	Total/NA	Water	8260B	
480-37789-2	MW-7-C-2-050713	Total/NA	Water	8260B	
480-37789-3	MW-7-5-050713	Total/NA	Water	8260B	
480-37789-4	MW-7-4-050713	Total/NA	Water	8260B	
480-37789-5	Trip Blank	Total/NA	Water	8260B	
LCS 480-117585/4	Lab Control Sample	Total/NA	Water	8260B	
MB 480-117585/5	Method Blank	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 55461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-1	MW-7-6 050713	Total/NA	Water	RSK-175	
480-37789-2	MW-7-C-2-050713	Total/NA	Water	RSK-175	
480-37789-3	MW-7-5-050713	Total/NA	Water	RSK-175	
480-37789-4	MW-7-4-050713	Total/NA	Water	RSK-175	
LCS 200-55461/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-55461/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 117312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-1	MW-7-6 050713	Total/NA	Water	RSK-175	
480-37789-1 - DL	MW-7-6 050713	Total/NA	Water	RSK-175	
480-37789-2	MW-7-C-2-050713	Total/NA	Water	RSK-175	
480-37789-3	MW-7-5-050713	Total/NA	Water	RSK-175	
480-37789-4	MW-7-4-050713	Total/NA	Water	RSK-175	
LCS 480-117312/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-117312/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-117312/2	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 117356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-1	MW-7-6 050713	Total/NA	Water	3005A	
480-37789-2	MW-7-C-2-050713	Total/NA	Water	3005A	
480-37789-3	MW-7-5-050713	Total/NA	Water	3005A	
480-37789-4	MW-7-4-050713	Total/NA	Water	3005A	
LCS 480-117356/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-117356/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 117627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-1	MW-7-6 050713	Total/NA	Water	6010B	117356
480-37789-2	MW-7-C-2-050713	Total/NA	Water	6010B	117356
480-37789-3	MW-7-5-050713	Total/NA	Water	6010B	117356
480-37789-4	MW-7-4-050713	Total/NA	Water	6010B	117356
LCS 480-117356/2-A	Lab Control Sample	Total/NA	Water	6010B	117356
MB 480-117356/1-A	Method Blank	Total/NA	Water	6010B	117356

General Chemistry

Analysis Batch: 117289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-3	MW-7-5-050713	Total/NA	Water	353.2	
480-37789-4	MW-7-4-050713	Total/NA	Water	353.2	
LCS 480-117289/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-117289/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 117290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-1	MW-7-6 050713	Total/NA	Water	353.2	
480-37789-2	MW-7-C-2-050713	Total/NA	Water	353.2	
480-37789-3	MW-7-5-050713	Total/NA	Water	353.2	
480-37789-4	MW-7-4-050713	Total/NA	Water	353.2	

Analysis Batch: 117291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-1	MW-7-6 050713	Total/NA	Water	353.2	
480-37789-2	MW-7-C-2-050713	Total/NA	Water	353.2	

Analysis Batch: 117465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-1	MW-7-6 050713	Total/NA	Water	350.1	
480-37789-2	MW-7-C-2-050713	Total/NA	Water	350.1	
480-37789-3	MW-7-5-050713	Total/NA	Water	350.1	
480-37789-4	MW-7-4-050713	Total/NA	Water	350.1	
LCS 480-117465/124	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-117465/76	Lab Control Sample	Total/NA	Water	350.1	
MB 480-117465/123	Method Blank	Total/NA	Water	350.1	
MB 480-117465/75	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 117482

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-4	MW-7-4-050713	Total/NA	Water	300.0	
LCS 480-117482/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-117482/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 117667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-1	MW-7-6 050713	Total/NA	Water	VFA-IC	
480-37789-2	MW-7-C-2-050713	Total/NA	Water	VFA-IC	
480-37789-3	MW-7-5-050713	Total/NA	Water	VFA-IC	
480-37789-4	MW-7-4-050713	Total/NA	Water	VFA-IC	
LCS 480-117667/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-117667/4	Method Blank	Total/NA	Water	VFA-IC	

Analysis Batch: 117722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-1	MW-7-6 050713	Total/NA	Water	300.0	
480-37789-2	MW-7-C-2-050713	Total/NA	Water	300.0	
480-37789-3	MW-7-5-050713	Total/NA	Water	300.0	
480-37789-4	MW-7-4-050713	Total/NA	Water	300.0	
LCS 480-117722/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-117722/4	Method Blank	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 117748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-1	MW-7-6 050713	Total/NA	Water	SM 2320B	
480-37789-2	MW-7-C-2-050713	Total/NA	Water	SM 2320B	
480-37789-3	MW-7-5-050713	Total/NA	Water	SM 2320B	
480-37789-4	MW-7-4-050713	Total/NA	Water	SM 2320B	
LCS 480-117748/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-117748/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 117788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-1	MW-7-6 050713	Total/NA	Water	SM 4500 S2 D	
480-37789-1 MS	MW-7-6 050713	Total/NA	Water	SM 4500 S2 D	
480-37789-2	MW-7-C-2-050713	Total/NA	Water	SM 4500 S2 D	
480-37789-2 DU	MW-7-C-2-050713	Total/NA	Water	SM 4500 S2 D	
LCS 480-117788/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-117788/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 118178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-3	MW-7-5-050713	Total/NA	Water	SM 4500 S2 D	
480-37789-3 DU	MW-7-5-050713	Total/NA	Water	SM 4500 S2 D	
480-37789-4	MW-7-4-050713	Total/NA	Water	SM 4500 S2 D	
480-37789-4 MS	MW-7-4-050713	Total/NA	Water	SM 4500 S2 D	
LCS 480-118178/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-118178/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 118207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-2	MW-7-C-2-050713	Total/NA	Water	9060	
480-37789-3	MW-7-5-050713	Total/NA	Water	9060	
480-37789-4	MW-7-4-050713	Total/NA	Water	9060	
LCS 480-118207/12	Lab Control Sample	Total/NA	Water	9060	
LCS 480-118207/4	Lab Control Sample	Total/NA	Water	9060	
MB 480-118207/11	Method Blank	Total/NA	Water	9060	
MB 480-118207/3	Method Blank	Total/NA	Water	9060	

Analysis Batch: 118411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37789-1	MW-7-6 050713	Total/NA	Water	9060	
LCS 480-118411/4	Lab Control Sample	Total/NA	Water	9060	
MB 480-118411/3	Method Blank	Total/NA	Water	9060	

Client Sample ID: MW-7-6 050713

Lab Sample ID: 480-37789-1

Date Collected: 05/07/13 09:20

Matrix: Water

Date Received: 05/07/13 17:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	117585	05/09/13 18:00	RL	TAL BUF
Total/NA	Analysis	RSK-175		1	55461	05/13/13 15:07	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	117312	05/08/13 13:01	JM	TAL BUF
Total/NA	Analysis	RSK-175	DL	5	117312	05/08/13 14:18	JM	TAL BUF
Total/NA	Prep	3005A			117356	05/08/13 10:20	SS	TAL BUF
Total/NA	Analysis	6010B		1	117627	05/08/13 19:24	LH	TAL BUF
Total/NA	Analysis	353.2		1	117290	05/07/13 20:36	KS	TAL BUF
Total/NA	Analysis	353.2		1	117291	05/07/13 20:36	KS	TAL BUF
Total/NA	Analysis	350.1		1	117465	05/08/13 13:05	SB	TAL BUF
Total/NA	Analysis	VFA-IC		1	117667	05/09/13 18:25	KC	TAL BUF
Total/NA	Analysis	300.0		100	117722	05/09/13 18:17	KC	TAL BUF
Total/NA	Analysis	SM 2320B		1	117748	05/09/13 13:02	EGN	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	117788	05/09/13 18:30	EGN	TAL BUF
Total/NA	Analysis	9060		1	118411	05/13/13 20:26	KC	TAL BUF

Client Sample ID: MW-7-C-2-050713

Lab Sample ID: 480-37789-2

Date Collected: 05/07/13 15:45

Matrix: Water

Date Received: 05/07/13 17:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	117585	05/09/13 18:23	RL	TAL BUF
Total/NA	Analysis	RSK-175		1	55461	05/13/13 15:16	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	117312	05/08/13 13:18	JM	TAL BUF
Total/NA	Prep	3005A			117356	05/08/13 10:20	SS	TAL BUF
Total/NA	Analysis	6010B		1	117627	05/08/13 19:31	LH	TAL BUF
Total/NA	Analysis	353.2		1	117290	05/07/13 20:38	KS	TAL BUF
Total/NA	Analysis	353.2		1	117291	05/07/13 20:38	KS	TAL BUF
Total/NA	Analysis	350.1		1	117465	05/08/13 13:06	SB	TAL BUF
Total/NA	Analysis	VFA-IC		1	117667	05/09/13 18:55	KC	TAL BUF
Total/NA	Analysis	300.0		10	117722	05/09/13 18:27	KC	TAL BUF
Total/NA	Analysis	SM 2320B		1	117748	05/09/13 13:08	EGN	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	117788	05/09/13 18:30	EGN	TAL BUF
Total/NA	Analysis	9060		1	118207	05/11/13 22:26	KC	TAL BUF

Client Sample ID: MW-7-5-050713

Lab Sample ID: 480-37789-3

Date Collected: 05/07/13 12:15

Matrix: Water

Date Received: 05/07/13 17:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		200	117585	05/09/13 18:46	RL	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-37789-1

Client Sample ID: MW-7-5-050713

Lab Sample ID: 480-37789-3

Date Collected: 05/07/13 12:15
Matrix: Water
Date Received: 05/07/13 17:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	55461	05/13/13 15:25	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	117312	05/08/13 13:35	JM	TAL BUF
Total/NA	Prep	3005A			117356	05/08/13 10:20	SS	TAL BUF
Total/NA	Analysis	6010B		1	117627	05/08/13 19:33	LH	TAL BUF
Total/NA	Analysis	353.2		1	117289	05/07/13 21:19	KS	TAL BUF
Total/NA	Analysis	353.2		1	117290	05/07/13 21:19	KS	TAL BUF
Total/NA	Analysis	350.1		1	117465	05/08/13 13:07	SB	TAL BUF
Total/NA	Analysis	VFA-IC		1	117667	05/09/13 19:24	KC	TAL BUF
Total/NA	Analysis	300.0		100	117722	05/09/13 18:38	KC	TAL BUF
Total/NA	Analysis	SM 2320B		1	117748	05/09/13 13:26	EGN	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118178	05/13/13 04:00	LAW	TAL BUF
Total/NA	Analysis	9060		1	118207	05/12/13 00:46	KC	TAL BUF

Client Sample ID: MW-7-4-050713

Lab Sample ID: 480-37789-4

Date Collected: 05/07/13 16:30
Matrix: Water
Date Received: 05/07/13 17:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	117585	05/09/13 19:09	RL	TAL BUF
Total/NA	Analysis	RSK-175		1	55461	05/13/13 15:34	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	117312	05/08/13 13:52	JM	TAL BUF
Total/NA	Prep	3005A			117356	05/08/13 10:20	SS	TAL BUF
Total/NA	Analysis	6010B		1	117627	05/08/13 19:36	LH	TAL BUF
Total/NA	Analysis	353.2		1	117289	05/07/13 21:20	KS	TAL BUF
Total/NA	Analysis	353.2		1	117290	05/07/13 21:20	KS	TAL BUF
Total/NA	Analysis	350.1		1	117465	05/08/13 13:08	SB	TAL BUF
Total/NA	Analysis	300.0		1	117482	05/09/13 08:47	KC	TAL BUF
Total/NA	Analysis	VFA-IC		1	117667	05/09/13 19:53	KC	TAL BUF
Total/NA	Analysis	300.0		5	117722	05/09/13 18:48	KC	TAL BUF
Total/NA	Analysis	SM 2320B		1	117748	05/09/13 13:33	EGN	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118178	05/13/13 04:00	LAW	TAL BUF
Total/NA	Analysis	9060		1	118207	05/12/13 01:15	KC	TAL BUF

Client Sample ID: Trip Blank

Lab Sample ID: 480-37789-5

Date Collected: 05/07/13 00:00
Matrix: Water
Date Received: 05/07/13 17:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	117585	05/09/13 19:31	RL	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-37789-1

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: 480-37789-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAP	9	1169CA	09-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-14
Georgia	State Program	4	956	06-30-13
Georgia	State Program	4	956	03-31-14
Illinois	NELAP	5	200003	09-30-13
Iowa	State Program	7	374	03-15-15
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-13
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13 *
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-13
New Hampshire	NELAP	1	2337	11-17-13
New Jersey	NELAP	2	NY455	06-30-13
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAP	10	NY200003	06-09-13
Pennsylvania	NELAP	3	68-00281	07-31-13
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-13
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	09-30-13
Wisconsin	State Program	5	998310390	08-31-13

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	09-30-13
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-13
L-A-B	DoD ELAP		L2336	10-26-13
Louisiana	NELAP	6	176292	06-30-13
Maine	State Program	1	VT00008	04-17-13 *
Minnesota	NELAP	5	050-999-436	12-31-13
New Hampshire	NELAP	1	2006	12-18-13
New Jersey	NELAP	2	VT972	06-30-13
New York	NELAP	2	10391	04-01-14
Pennsylvania	NELAP	3	68-00489	04-30-14

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

Certification Summary

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

TestAmerica Job ID: 480-37789-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
USDA	Federal		P330-11-00093	02-17-14
Vermont	State Program	1	VT-4000	12-31-13
Virginia	NELAP	3	460209	12-14-13

Method Summary

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

TestAmerica Job ID: 480-37789-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010B	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
9060	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	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.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

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: 480-37789-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-37789-1	MW-7-6 050713	Water	05/07/13 09:20	05/07/13 17:42
480-37789-2	MW-7-C-2-050713	Water	05/07/13 15:45	05/07/13 17:42
480-37789-3	MW-7-5-050713	Water	05/07/13 12:15	05/07/13 17:42
480-37789-4	MW-7-4-050713	Water	05/07/13 16:30	05/07/13 17:42
480-37789-5	Trip Blank	Water	05/07/13 00:00	05/07/13 17:42

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days): 3 Weeks			
State, Zip: NY, 14203				
Phone: (716) 685-2300	PO #: 4047065			
Email: christopher.boron@gza.com	WO #: 58507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site: Bldg 7 RCP Site 9-30-138	SSOW#: 256015			

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N			
MW-7-6-050713	5/7/13	920	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X			
MW-7-C-2-050713		1545		Water																
MW-7-5-050713		1215																		
MW-7-4-050713		1630																		
Trip Blank											X									

480-37789 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	Thomas Bohlen	5/7/13 1742			5/7/13 1742	TA
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: 4.8 ICE #1

5/14/2013

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: 480-9980.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-37789-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/17/2013			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel)	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-7-6 050713 (480-37789-1)	5/7/13	09:20 Eastern		Water			X	3	
MW-7-C-2-050713 (480-37789-2)	5/7/13	15:45 Eastern		Water			X	3	
MW-7-5-050713 (480-37789-3)	5/7/13	12:15 Eastern		Water			X	3	
MW-7-4-050713 (480-37789-4)	5/7/13	16:30 Eastern		Water			X	3	

480-37789 Chain of Custody

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:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	5-6-13 1600			5/9/13 1045	
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:

5/14/2013


ORIGIN ID: DKKA (716) 691-2600
KEN KINECKI
TESTAMERICA
10 HAZELWOOD DR
AMHERST, NY 14228
UNITED STATES US
SHIP DATE: 08MAY13
ACTWGT: 12.0 LB MAN
CAD: 735603/CAFE2608
DIMS: 18x15x10 IN
BILL RECIPIENT
TO MARK PHILLIPS
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
REF: BURLINGTON
DEPT: SAMPLE CONTROL
FedEx
Express
THU - 09 MAY 3:00P
STANDARD OVERNIGHT
TRK# 0201 4485 0264 3582
ZF BTVA
05403
VT - US BTV
Part # 154254-354 RIT2 02/13

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-37789-1

Login Number: 37789

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
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: 480-37789-1

Login Number: 37789
List Number: 1
Creator: Marion, Greg T

List Source: TestAmerica Burlington
List Creation: 05/09/13 04:09 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	964242
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.6ºC IR GUN ID 181/C=0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-37910-1

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

Melissa Deyo

Authorized for release by:
5/17/2013 8:39:03 AM

Melissa Deyo, Project Manager I
melissa.deyo@testamericainc.com

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 7
Surrogate Summary 12
QC Sample Results 13
QC Association Summary 19
Lab Chronicle 22
Certification Summary 25
Method Summary 27
Sample Summary 28
Chain of Custody 29
Receipt Checklists 32

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
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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)
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)

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

TestAmerica Job ID: 480-37910-1

Job ID: 480-37910-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-37910-1

Receipt
The samples were received on 5/8/2013 7:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.3º C.

GC/MS VOA
Method 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-A-6-050813 (480-37910-1), MW-7-7-050813 (480-37910-2) and GW-DUPLICATE-050813 (480-37910-4). Elevated reporting limits (RLs) are provided.

Method 8260B: The following volatile sample was analyzed with headspace in the sample vial due to multiple injections and/or limited volume: TRIP BLANK (480-37910-5).

No other analytical or quality issues were noted.

IC
Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-A-6-050813 (480-37910-1), MW-7-7-050813 (480-37910-2), MW-7-P-1-050813 (480-37910-3) and GW-DUPLICATE-050813 (480-37910-4). Elevated reporting limits (RLs) are provided.

Method VFA-IC: The matrix spike (MS) recovery for batch 117667 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

GC VOA
Method RSK-175: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-A-6-050813 (480-37910-1 DL), MW-7-7-050813 (480-37910-2 DL), MW-7-P-1-050813 (480-37910-3 DL) and GW-DUPLICATE-050813 (480-37910-4 DL). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 480-37910-1

Client Sample ID: MW-7-A-6-050813 — Lab Sample ID: 480-37910-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	25000		2000	1600	ug/L	2000		8260B	Total/NA
Tetrachloroethene	130000		2000	720	ug/L	2000		8260B	Total/NA
Trichloroethene	25000		2000	920	ug/L	2000		8260B	Total/NA
Ethane	8.1		7.5	0.49	ug/L	1		RSK-175	Total/NA
Ethene	81		7.0	0.52	ug/L	1		RSK-175	Total/NA
Methane - DL	1100		80	4.4	ug/L	20		RSK-175	Total/NA
Iron	0.45		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	116		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	1.0		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	3.1		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	274		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	813		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	81.2		10.0	1.7	mg/L	5		300.0	Total/NA
Ammonia	0.047		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	8.1		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	459		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Acetic acid	0.20	J	1.0	0.15	mg/L	1		VFA-IC	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	19000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-7-7-050813 — Lab Sample ID: 480-37910-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	4400		2000	1600	ug/L	2000		8260B	Total/NA
Tetrachloroethene	120000		2000	720	ug/L	2000		8260B	Total/NA
Trichloroethene	2300		2000	920	ug/L	2000		8260B	Total/NA
Ethane	27		7.5	0.49	ug/L	1		RSK-175	Total/NA
Ethene	65		7.0	0.52	ug/L	1		RSK-175	Total/NA
Methane - DL	250		80	4.4	ug/L	20		RSK-175	Total/NA
Iron	0.37		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	122		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.013		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	32.9		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	910		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	1870		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	399		20.0	3.5	mg/L	10		300.0	Total/NA
Ammonia	1.4		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.11		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	11.4		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	89.7		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Sulfide	0.44		0.10	0.052	mg/L	1		SM 4500 S2 D	Total/NA
Acetic acid	4.1		1.0	0.15	mg/L	1		VFA-IC	Total/NA

Client Sample ID: MW-7-P-1-050813 — Lab Sample ID: 480-37910-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.1		1.0	0.81	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	2.3		1.0	0.90	ug/L	1		8260B	Total/NA
Trichloroethene	0.74	J	1.0	0.46	ug/L	1		8260B	Total/NA
Vinyl chloride	11		1.0	0.90	ug/L	1		8260B	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: 480-37910-1

Client Sample ID: MW-7-P-1-050813 (Continued)

Lab Sample ID: 480-37910-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethane	54		7.5	0.49	ug/L	1		RSK-175	Total/NA
Ethene	10		7.0	0.52	ug/L	1		RSK-175	Total/NA
Methane - DL	2800		80	4.4	ug/L	20		RSK-175	Total/NA
Iron	62.5		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	384		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	9.2		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	33.6		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	423		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	4610		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	85.5		20.0	3.5	mg/L	10		300.0	Total/NA
Ammonia	136		2.0	0.90	mg/L	100		350.1	Total/NA
Total Organic Carbon	2.6		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	264		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Lactic acid	0.16	J	1.0	0.14	mg/L	1		VFA-IC	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	30000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: GW-DUPLICATE-050813

Lab Sample ID: 480-37910-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	26000		2000	1600	ug/L	2000		8260B	Total/NA
Tetrachloroethene	140000		2000	720	ug/L	2000		8260B	Total/NA
Trichloroethene	28000		2000	920	ug/L	2000		8260B	Total/NA
Ethane	23		7.5	0.49	ug/L	1		RSK-175	Total/NA
Ethene	200		7.0	0.52	ug/L	1		RSK-175	Total/NA
Methane - DL	980		80	4.4	ug/L	20		RSK-175	Total/NA
Iron	0.46		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	119		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	1.1		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	3.2		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	283		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	813		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	81.6		10.0	1.7	mg/L	5		300.0	Total/NA
Ammonia	0.065		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	8.3		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	458		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Acetic acid	0.21	J	1.0	0.15	mg/L	1		VFA-IC	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: 480-37910-5

No Detections.

This Detection Summary does not include radiochemical test results.

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

TestAmerica Job ID: 480-37910-1

Client Sample ID: MW-7-A-6-050813
Date Collected: 05/08/13 11:15
Date Received: 05/08/13 19:20

Lab Sample ID: 480-37910-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	25000		2000	1600	ug/L			05/15/13 10:21	2000
Tetrachloroethene	130000		2000	720	ug/L			05/15/13 10:21	2000
trans-1,2-Dichloroethene	ND		2000	1800	ug/L			05/15/13 10:21	2000
Trichloroethene	25000		2000	920	ug/L			05/15/13 10:21	2000
Vinyl chloride	ND		2000	1800	ug/L			05/15/13 10:21	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*66 - 137*		*05/15/13 10:21*	*2000*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*05/15/13 10:21*	*2000*
Toluene-d8 (Surr)	*101*		*71 - 126*		*05/15/13 10:21*	*2000*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	8.1		7.5	0.49	ug/L			05/09/13 09:34	1
Ethene	81		7.0	0.52	ug/L			05/09/13 09:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	19000		1000	1000	ug/L			05/15/13 13:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	1100		80	4.4	ug/L			05/09/13 11:22	20

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.45		0.050	0.019	mg/L		05/09/13 10:55	05/09/13 20:11	1
Magnesium	116		0.20	0.043	mg/L		05/09/13 10:55	05/09/13 20:11	1
Manganese	1.0		0.0030	0.00040	mg/L		05/09/13 10:55	05/09/13 20:11	1
Potassium	3.1		0.50	0.10	mg/L		05/09/13 10:55	05/09/13 20:11	1
Sodium	274		1.0	0.32	mg/L		05/09/13 10:55	05/09/13 20:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	813		10.0	5.6	mg/L			05/10/13 14:15	20
Sulfate	81.2		10.0	1.7	mg/L			05/10/13 02:34	5
Ammonia	0.047		0.020	0.0090	mg/L			05/10/13 13:21	1
Nitrate	ND		0.050	0.020	mg/L			05/09/13 10:26	1
Nitrite	ND		0.050	0.020	mg/L			05/09/13 10:26	1
Total Organic Carbon	8.1		1.0	0.43	mg/L			05/12/13 06:29	1
Total Alkalinity	459		5.0	0.79	mg/L			05/09/13 13:46	1
Sulfide	ND		0.10	0.052	mg/L			05/13/13 04:00	1
Acetic acid	0.20	J	1.0	0.15	mg/L			05/09/13 20:22	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 20:22	1
Lactic acid	ND		1.0	0.14	mg/L			05/09/13 20:22	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 20:22	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 20:22	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 20:22	1

Client Sample ID: MW-7-7-050813

Lab Sample ID: 480-37910-2

Date Collected: 05/08/13 15:15

Matrix: Water

Date Received: 05/08/13 19:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**4400**		2000	1600	ug/L			05/15/13 10:45	2000
Tetrachloroethene	**120000**		2000	720	ug/L			05/15/13 10:45	2000
trans-1,2-Dichloroethene	ND		2000	1800	ug/L			05/15/13 10:45	2000
Trichloroethene	**2300**		2000	920	ug/L			05/15/13 10:45	2000
Vinyl chloride	ND		2000	1800	ug/L			05/15/13 10:45	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*66 - 137*		*05/15/13 10:45*	*2000*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/15/13 10:45*	*2000*
Toluene-d8 (Surr)	*99*		*71 - 126*		*05/15/13 10:45*	*2000*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**27**		7.5	0.49	ug/L			05/09/13 09:52	1
Ethene	**65**		7.0	0.52	ug/L			05/09/13 09:52	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			05/15/13 13:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**250**		80	4.4	ug/L			05/09/13 11:39	20

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.37**		0.050	0.019	mg/L		05/09/13 10:55	05/09/13 20:13	1
Magnesium	**122**		0.20	0.043	mg/L		05/09/13 10:55	05/09/13 20:13	1
Manganese	**0.013**		0.0030	0.00040	mg/L		05/09/13 10:55	05/09/13 20:13	1
Potassium	**32.9**		0.50	0.10	mg/L		05/09/13 10:55	05/09/13 20:13	1
Sodium	**910**		1.0	0.32	mg/L		05/09/13 10:55	05/09/13 20:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1870**		25.0	14.1	mg/L			05/10/13 14:25	50
Sulfate	**399**		20.0	3.5	mg/L			05/10/13 02:44	10
Ammonia	**1.4**		0.020	0.0090	mg/L			05/10/13 13:22	1
Nitrate	**0.11**		0.050	0.020	mg/L			05/09/13 11:21	1
Nitrite	ND		0.050	0.020	mg/L			05/09/13 11:21	1
Total Organic Carbon	**11.4**		1.0	0.43	mg/L			05/12/13 06:59	1
Total Alkalinity	**89.7**		5.0	0.79	mg/L			05/09/13 13:51	1
Sulfide	**0.44**		0.10	0.052	mg/L			05/13/13 04:00	1
Acetic acid	**4.1**		1.0	0.15	mg/L			05/09/13 21:20	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 21:20	1
Lactic acid	ND		1.0	0.14	mg/L			05/09/13 21:20	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 21:20	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 21:20	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 21:20	1

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

TestAmerica Job ID: 480-37910-1

Client Sample ID: MW-7-P-1-050813
Date Collected: 05/08/13 18:15
Date Received: 05/08/13 19:20

Lab Sample ID: 480-37910-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.1		1.0	0.81	ug/L			05/15/13 11:08	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/15/13 11:08	1
trans-1,2-Dichloroethene	2.3		1.0	0.90	ug/L			05/15/13 11:08	1
Trichloroethene	0.74	J	1.0	0.46	ug/L			05/15/13 11:08	1
Vinyl chloride	11		1.0	0.90	ug/L			05/15/13 11:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*66 - 137*		*05/15/13 11:08*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*05/15/13 11:08*	*1*
Toluene-d8 (Surr)	*100*		*71 - 126*		*05/15/13 11:08*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	54		7.5	0.49	ug/L			05/09/13 10:09	1
Ethene	10		7.0	0.52	ug/L			05/09/13 10:09	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	30000		1000	1000	ug/L			05/15/13 13:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	2800		80	4.4	ug/L			05/09/13 11:56	20

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	62.5		0.050	0.019	mg/L		05/09/13 10:55	05/09/13 20:16	1
Magnesium	384		0.20	0.043	mg/L		05/09/13 10:55	05/09/13 20:16	1
Manganese	9.2		0.0030	0.00040	mg/L		05/09/13 10:55	05/09/13 20:16	1
Potassium	33.6		0.50	0.10	mg/L		05/09/13 10:55	05/09/13 20:16	1
Sodium	423		1.0	0.32	mg/L		05/09/13 10:55	05/09/13 20:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4610		25.0	14.1	mg/L			05/10/13 02:54	50
Sulfate	85.5		20.0	3.5	mg/L			05/10/13 14:35	10
Ammonia	136		2.0	0.90	mg/L			05/14/13 15:47	100
Nitrate	ND		0.050	0.020	mg/L			05/09/13 10:28	1
Nitrite	ND		0.050	0.020	mg/L			05/09/13 10:28	1
Total Organic Carbon	2.6		1.0	0.43	mg/L			05/12/13 07:27	1
Total Alkalinity	264		5.0	0.79	mg/L			05/09/13 13:58	1
Sulfide	ND		0.10	0.052	mg/L			05/13/13 04:00	1
Acetic acid	ND		1.0	0.15	mg/L			05/09/13 16:00	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 16:00	1
Lactic acid	0.16	J	1.0	0.14	mg/L			05/09/13 16:00	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 16:00	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 16:00	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 16:00	1

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

TestAmerica Job ID: 480-37910-1

Client Sample ID: GW-DUPLICATE-050813
Date Collected: 05/08/13 00:00
Date Received: 05/08/13 19:20

Lab Sample ID: 480-37910-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	26000		2000	1600	ug/L			05/16/13 02:39	2000
Tetrachloroethene	140000		2000	720	ug/L			05/16/13 02:39	2000
trans-1,2-Dichloroethene	ND		2000	1800	ug/L			05/16/13 02:39	2000
Trichloroethene	28000		2000	920	ug/L			05/16/13 02:39	2000
Vinyl chloride	ND		2000	1800	ug/L			05/16/13 02:39	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*66 - 137*		*05/16/13 02:39*	*2000*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/16/13 02:39*	*2000*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/16/13 02:39*	*2000*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	23		7.5	0.49	ug/L			05/09/13 10:26	1
Ethene	200		7.0	0.52	ug/L			05/09/13 10:26	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	21000		1000	1000	ug/L			05/15/13 13:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	980		80	4.4	ug/L			05/09/13 12:13	20

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.46		0.050	0.019	mg/L		05/09/13 10:55	05/09/13 20:19	1
Magnesium	119		0.20	0.043	mg/L		05/09/13 10:55	05/09/13 20:19	1
Manganese	1.1		0.0030	0.00040	mg/L		05/09/13 10:55	05/09/13 20:19	1
Potassium	3.2		0.50	0.10	mg/L		05/09/13 10:55	05/09/13 20:19	1
Sodium	283		1.0	0.32	mg/L		05/09/13 10:55	05/09/13 20:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	813		10.0	5.6	mg/L			05/10/13 14:45	20
Sulfate	81.6		10.0	1.7	mg/L			05/10/13 03:04	5
Ammonia	0.065		0.020	0.0090	mg/L			05/10/13 13:27	1
Nitrate	0.17		0.050	0.020	mg/L			05/09/13 11:22	1
Nitrite	ND		0.050	0.020	mg/L			05/09/13 11:22	1
Total Organic Carbon	8.3		1.0	0.43	mg/L			05/12/13 08:24	1
Total Alkalinity	458		5.0	0.79	mg/L			05/09/13 14:05	1
Sulfide	ND		0.10	0.052	mg/L			05/13/13 04:00	1
Acetic acid	0.21	J	1.0	0.15	mg/L			05/09/13 20:51	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 20:51	1
Lactic acid	ND		1.0	0.14	mg/L			05/09/13 20:51	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 20:51	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 20:51	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 20:51	1

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

TestAmerica Job ID: 480-37910-1

Client Sample ID: TRIP BLANK
Date Collected: 05/08/13 00:00
Date Received: 05/08/13 19:20

Lab Sample ID: 480-37910-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/15/13 23:30	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/15/13 23:30	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/15/13 23:30	1
Trichloroethene	ND		1.0	0.46	ug/L			05/15/13 23:30	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/15/13 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*66 - 137*		*05/15/13 23:30*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*05/15/13 23:30*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/15/13 23:30*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-37910-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		12DCE	BFB	TOL
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)
480-37910-1	MW-7-A-6-050813	116	101	101
480-37910-2	MW-7-7-050813	116	102	99
480-37910-3	MW-7-P-1-050813	115	104	100
480-37910-4	GW-DUPLICATE-050813	116	102	102
480-37910-5	TRIP BLANK	117	105	102
LCS 480-118646/4	Lab Control Sample	111	105	104
LCS 480-118862/5	Lab Control Sample	113	106	104
MB 480-118646/5	Method Blank	115	106	102
MB 480-118862/6	Method Blank	111	105	101

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-118646/5
Matrix: Water
Analysis Batch: 118646

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			05/15/13 09:33	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/15/13 09:33	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/15/13 09:33	1
Trichloroethene	ND		1.0	0.46	ug/L			05/15/13 09:33	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/15/13 09:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*66 - 137*		*05/15/13 09:33*	*1*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*05/15/13 09:33*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/15/13 09:33*	*1*

Lab Sample ID: LCS 480-118646/4
Matrix: Water
Analysis Batch: 118646

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	23.6		ug/L		94	74 - 124
Tetrachloroethene	25.0	22.9		ug/L		91	74 - 122
trans-1,2-Dichloroethene	25.0	23.0		ug/L		92	73 - 127
Trichloroethene	25.0	23.7		ug/L		95	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*66 - 137*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*
Toluene-d8 (Surr)	*104*		*71 - 126*

Lab Sample ID: MB 480-118862/6
Matrix: Water
Analysis Batch: 118862

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			05/15/13 22:05	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/15/13 22:05	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/15/13 22:05	1
Trichloroethene	ND		1.0	0.46	ug/L			05/15/13 22:05	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/15/13 22:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*66 - 137*		*05/15/13 22:05*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*05/15/13 22:05*	*1*
Toluene-d8 (Surr)	*101*		*71 - 126*		*05/15/13 22:05*	*1*

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

Lab Sample ID: LCS 480-118862/5
Matrix: Water
Analysis Batch: 118862

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	23.3		ug/L		93	74 - 122
trans-1,2-Dichloroethene	25.0	23.5		ug/L		94	73 - 127
Trichloroethene	25.0	23.9		ug/L		96	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*113*		*66 - 137*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*
Toluene-d8 (Surr)	*104*		*71 - 126*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-117577/2
Matrix: Water
Analysis Batch: 117577

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	0.49	ug/L			05/09/13 08:11	1
Ethene	ND		7.0	0.52	ug/L			05/09/13 08:11	1
Methane	ND		4.0	0.22	ug/L			05/09/13 08:11	1

Lab Sample ID: LCS 480-117577/3
Matrix: Water
Analysis Batch: 117577

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.4	15.8		ug/L		110	67 - 128
Ethene	13.5	15.0		ug/L		111	60 - 137
Methane	7.69	7.88		ug/L		102	48 - 174

Lab Sample ID: LCSD 480-117577/4
Matrix: Water
Analysis Batch: 117577

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	14.4	14.8		ug/L		103	67 - 128	7	50
Ethene	13.5	13.9		ug/L		103	60 - 137	7	50
Methane	7.69	7.10		ug/L		92	48 - 174	10	50

Lab Sample ID: MB 200-55564/3
Matrix: Water
Analysis Batch: 55564

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			05/15/13 12:05	1

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

Lab Sample ID: LCS 200-55564/2
Matrix: Water
Analysis Batch: 55564

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	4460		ug/L		89	70 - 130

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 480-117614/1-A
Matrix: Water
Analysis Batch: 117865

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117614

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/09/13 10:55	05/09/13 19:37	1
Magnesium	ND		0.20	0.043	mg/L		05/09/13 10:55	05/09/13 19:37	1
Manganese	ND		0.0030	0.00040	mg/L		05/09/13 10:55	05/09/13 19:37	1
Potassium	ND		0.50	0.10	mg/L		05/09/13 10:55	05/09/13 19:37	1
Sodium	ND		1.0	0.32	mg/L		05/09/13 10:55	05/09/13 19:37	1

Lab Sample ID: LCS 480-117614/2-A
Matrix: Water
Analysis Batch: 117865

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117614

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.91		mg/L		99	80 - 120
Magnesium	10.0	10.27		mg/L		103	80 - 120
Manganese	0.200	0.209		mg/L		104	80 - 120
Potassium	10.0	10.08		mg/L		101	80 - 120
Sodium	10.0	10.21		mg/L		102	80 - 120

Lab Sample ID: LCSD 480-117614/3-A
Matrix: Water
Analysis Batch: 117865

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117614

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	10.0	9.98		mg/L		100	80 - 120	1	20
Magnesium	10.0	10.33		mg/L		103	80 - 120	1	20
Manganese	0.200	0.209		mg/L		105	80 - 120	0	20
Potassium	10.0	10.18		mg/L		102	80 - 120	1	20
Sodium	10.0	10.23		mg/L		102	80 - 120	0	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-117729/52
Matrix: Water
Analysis Batch: 117729

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			05/10/13 00:22	1
Sulfate	ND		2.0	0.35	mg/L			05/10/13 00:22	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-117729/51
Matrix: Water
Analysis Batch: 117729

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.66		mg/L		103	90 - 110
Sulfate	20.0	20.85		mg/L		104	90 - 110

Lab Sample ID: MB 480-117941/4
Matrix: Water
Analysis Batch: 117941

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			05/10/13 12:13	1
Sulfate	ND		2.0	0.35	mg/L			05/10/13 12:13	1

Lab Sample ID: LCS 480-117941/3
Matrix: Water
Analysis Batch: 117941

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.79		mg/L		99	90 - 110
Sulfate	20.0	20.10		mg/L		100	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-118582/51
Matrix: Water
Analysis Batch: 118582

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			05/14/13 15:34	1

Lab Sample ID: LCS 480-118582/52
Matrix: Water
Analysis Batch: 118582

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 480-117691/3
Matrix: Water
Analysis Batch: 117691

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			05/09/13 11:19	1

Method: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: LCS 480-117691/4
Matrix: Water
Analysis Batch: 117691

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.55		mg/L		103	90 - 110

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-118207/11
Matrix: Water
Analysis Batch: 118207

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			05/11/13 23:50	1

Lab Sample ID: LCS 480-118207/12
Matrix: Water
Analysis Batch: 118207

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	57.97		mg/L		97	90 - 110

Lab Sample ID: 480-37910-4 MS
Matrix: Water
Analysis Batch: 118207

Client Sample ID: GW-DUPLICATE-050813
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	8.3		20.3	26.50		mg/L		89	54 - 131

Lab Sample ID: 480-37910-3 DU
Matrix: Water
Analysis Batch: 118207

Client Sample ID: MW-7-P-1-050813
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	2.6		2.65		mg/L		1	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-117748/6
Matrix: Water
Analysis Batch: 117748

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			05/09/13 12:14	1

Lab Sample ID: LCS 480-117748/7
Matrix: Water
Analysis Batch: 117748

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	94.39		mg/L		94	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-118178/3
Matrix: Water
Analysis Batch: 118178

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			05/13/13 04:00	1

Lab Sample ID: LCS 480-118178/4
Matrix: Water
Analysis Batch: 118178

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

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

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography

Lab Sample ID: MB 480-117667/4
Matrix: Water
Analysis Batch: 117667

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/09/13 12:07	1
Formic-acid	ND		1.0	0.11	mg/L			05/09/13 12:07	1
Lactic acid	ND		1.0	0.14	mg/L			05/09/13 12:07	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/09/13 12:07	1
Propionic acid	ND		1.0	0.17	mg/L			05/09/13 12:07	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/09/13 12:07	1

Lab Sample ID: LCS 480-117667/3
Matrix: Water
Analysis Batch: 117667

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	9.68		mg/L		97	80 - 120
Formic-acid	10.0	9.77		mg/L		98	80 - 120
Lactic acid	10.0	10.47		mg/L		105	80 - 120
n-Butyric Acid	10.0	9.42		mg/L		94	80 - 120
Propionic acid	10.0	10.75		mg/L		108	80 - 120
Pyruvic Acid	10.0	10.49		mg/L		105	80 - 120

Lab Sample ID: 480-37910-2 MS
Matrix: Water
Analysis Batch: 117667

Client Sample ID: MW-7-7-050813
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	4.1		10.0	14.45		mg/L		103	80 - 120
Formic-acid	ND		10.0	10.18		mg/L		102	80 - 120
Lactic acid	ND		10.0	10.36		mg/L		104	80 - 120
n-Butyric Acid	ND		10.0	9.41		mg/L		94	80 - 120
Propionic acid	ND		10.0	11.56		mg/L		116	80 - 120
Pyruvic Acid	ND		10.0	6.34	F	mg/L		63	80 - 120

GC/MS VOA

Analysis Batch: 118646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	8260B	
480-37910-2	MW-7-7-050813	Total/NA	Water	8260B	
480-37910-3	MW-7-P-1-050813	Total/NA	Water	8260B	
LCS 480-118646/4	Lab Control Sample	Total/NA	Water	8260B	
MB 480-118646/5	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 118862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	8260B	
480-37910-5	TRIP BLANK	Total/NA	Water	8260B	
LCS 480-118862/5	Lab Control Sample	Total/NA	Water	8260B	
MB 480-118862/6	Method Blank	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 55564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	RSK-175	
480-37910-2	MW-7-7-050813	Total/NA	Water	RSK-175	
480-37910-3	MW-7-P-1-050813	Total/NA	Water	RSK-175	
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	RSK-175	
LCS 200-55564/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-55564/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 117577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	RSK-175	
480-37910-1 - DL	MW-7-A-6-050813	Total/NA	Water	RSK-175	
480-37910-2 - DL	MW-7-7-050813	Total/NA	Water	RSK-175	
480-37910-2	MW-7-7-050813	Total/NA	Water	RSK-175	
480-37910-3 - DL	MW-7-P-1-050813	Total/NA	Water	RSK-175	
480-37910-3	MW-7-P-1-050813	Total/NA	Water	RSK-175	
480-37910-4 - DL	GW-DUPLICATE-050813	Total/NA	Water	RSK-175	
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	RSK-175	
LCS 480-117577/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-117577/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-117577/2	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 117614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	3005A	
480-37910-2	MW-7-7-050813	Total/NA	Water	3005A	
480-37910-3	MW-7-P-1-050813	Total/NA	Water	3005A	
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	3005A	
LCS 480-117614/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-117614/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	
MB 480-117614/1-A	Method Blank	Total/NA	Water	3005A	

Metals (Continued)

Analysis Batch: 117865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	6010B	117614
480-37910-2	MW-7-7-050813	Total/NA	Water	6010B	117614
480-37910-3	MW-7-P-1-050813	Total/NA	Water	6010B	117614
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	6010B	117614
LCS 480-117614/2-A	Lab Control Sample	Total/NA	Water	6010B	117614
LCSD 480-117614/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	117614
MB 480-117614/1-A	Method Blank	Total/NA	Water	6010B	117614

General Chemistry

Analysis Batch: 117667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	VFA-IC	
480-37910-2	MW-7-7-050813	Total/NA	Water	VFA-IC	
480-37910-2 MS	MW-7-7-050813	Total/NA	Water	VFA-IC	
480-37910-3	MW-7-P-1-050813	Total/NA	Water	VFA-IC	
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	VFA-IC	
LCS 480-117667/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-117667/4	Method Blank	Total/NA	Water	VFA-IC	

Analysis Batch: 117691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-2	MW-7-7-050813	Total/NA	Water	353.2	
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	353.2	
LCS 480-117691/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-117691/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 117729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	300.0	
480-37910-2	MW-7-7-050813	Total/NA	Water	300.0	
480-37910-3	MW-7-P-1-050813	Total/NA	Water	300.0	
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	300.0	
LCS 480-117729/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-117729/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 117748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	SM 2320B	
480-37910-2	MW-7-7-050813	Total/NA	Water	SM 2320B	
480-37910-3	MW-7-P-1-050813	Total/NA	Water	SM 2320B	
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	SM 2320B	
LCS 480-117748/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-117748/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 117769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	353.2	
480-37910-2	MW-7-7-050813	Total/NA	Water	353.2	
480-37910-3	MW-7-P-1-050813	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 117769 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	353.2	

Analysis Batch: 117770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	353.2	
480-37910-3	MW-7-P-1-050813	Total/NA	Water	353.2	

Analysis Batch: 117941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	300.0	
480-37910-2	MW-7-7-050813	Total/NA	Water	300.0	
480-37910-3	MW-7-P-1-050813	Total/NA	Water	300.0	
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	300.0	
LCS 480-117941/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-117941/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 118018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	350.1	
480-37910-2	MW-7-7-050813	Total/NA	Water	350.1	
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	350.1	

Analysis Batch: 118178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	SM 4500 S2 D	
480-37910-2	MW-7-7-050813	Total/NA	Water	SM 4500 S2 D	
480-37910-3	MW-7-P-1-050813	Total/NA	Water	SM 4500 S2 D	
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	SM 4500 S2 D	
LCS 480-118178/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-118178/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 118207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-1	MW-7-A-6-050813	Total/NA	Water	9060	
480-37910-2	MW-7-7-050813	Total/NA	Water	9060	
480-37910-3	MW-7-P-1-050813	Total/NA	Water	9060	
480-37910-3 DU	MW-7-P-1-050813	Total/NA	Water	9060	
480-37910-4	GW-DUPLICATE-050813	Total/NA	Water	9060	
480-37910-4 MS	GW-DUPLICATE-050813	Total/NA	Water	9060	
LCS 480-118207/12	Lab Control Sample	Total/NA	Water	9060	
MB 480-118207/11	Method Blank	Total/NA	Water	9060	

Analysis Batch: 118582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-37910-3	MW-7-P-1-050813	Total/NA	Water	350.1	
LCS 480-118582/52	Lab Control Sample	Total/NA	Water	350.1	
MB 480-118582/51	Method Blank	Total/NA	Water	350.1	

Client Sample ID: MW-7-A-6-050813

Lab Sample ID: 480-37910-1

Date Collected: 05/08/13 11:15

Matrix: Water

Date Received: 05/08/13 19:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2000	118646	05/15/13 10:21	RL	TAL BUF
Total/NA	Analysis	RSK-175		1	55564	05/15/13 13:17	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	117577	05/09/13 09:34	JM	TAL BUF
Total/NA	Analysis	RSK-175	DL	20	117577	05/09/13 11:22	JM	TAL BUF
Total/NA	Prep	3005A			117614	05/09/13 10:55	JM	TAL BUF
Total/NA	Analysis	6010B		1	117865	05/09/13 20:11	AH	TAL BUF
Total/NA	Analysis	VFA-IC		1	117667	05/09/13 20:22	KC	TAL BUF
Total/NA	Analysis	300.0		5	117729	05/10/13 02:34	KC	TAL BUF
Total/NA	Analysis	SM 2320B		1	117748	05/09/13 13:46	EGN	TAL BUF
Total/NA	Analysis	353.2		1	117769	05/09/13 10:26	EGN	TAL BUF
Total/NA	Analysis	353.2		1	117770	05/09/13 10:26	EGN	TAL BUF
Total/NA	Analysis	300.0		20	117941	05/10/13 14:15	KC	TAL BUF
Total/NA	Analysis	350.1		1	118018	05/10/13 13:21	SB	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118178	05/13/13 04:00	LAW	TAL BUF
Total/NA	Analysis	9060		1	118207	05/12/13 06:29	KC	TAL BUF

Client Sample ID: MW-7-7-050813

Lab Sample ID: 480-37910-2

Date Collected: 05/08/13 15:15

Matrix: Water

Date Received: 05/08/13 19:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2000	118646	05/15/13 10:45	RL	TAL BUF
Total/NA	Analysis	RSK-175		1	55564	05/15/13 13:26	NA	TAL BUR
Total/NA	Analysis	RSK-175	DL	20	117577	05/09/13 11:39	JM	TAL BUF
Total/NA	Analysis	RSK-175		1	117577	05/09/13 09:52	JM	TAL BUF
Total/NA	Prep	3005A			117614	05/09/13 10:55	JM	TAL BUF
Total/NA	Analysis	6010B		1	117865	05/09/13 20:13	AH	TAL BUF
Total/NA	Analysis	VFA-IC		1	117667	05/09/13 21:20	KC	TAL BUF
Total/NA	Analysis	353.2		1	117691	05/09/13 11:21	EGN	TAL BUF
Total/NA	Analysis	300.0		10	117729	05/10/13 02:44	KC	TAL BUF
Total/NA	Analysis	SM 2320B		1	117748	05/09/13 13:51	EGN	TAL BUF
Total/NA	Analysis	353.2		1	117769	05/09/13 11:21	EGN	TAL BUF
Total/NA	Analysis	300.0		50	117941	05/10/13 14:25	KC	TAL BUF
Total/NA	Analysis	350.1		1	118018	05/10/13 13:22	SB	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118178	05/13/13 04:00	LAW	TAL BUF
Total/NA	Analysis	9060		1	118207	05/12/13 06:59	KC	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-37910-1

Client Sample ID: MW-7-P-1-050813

Lab Sample ID: 480-37910-3

Date Collected: 05/08/13 18:15
Matrix: Water
Date Received: 05/08/13 19:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	118646	05/15/13 11:08	RL	TAL BUF
Total/NA	Analysis	RSK-175		1	55564	05/15/13 13:36	NA	TAL BUR
Total/NA	Analysis	RSK-175	DL	20	117577	05/09/13 11:56	JM	TAL BUF
Total/NA	Analysis	RSK-175		1	117577	05/09/13 10:09	JM	TAL BUF
Total/NA	Prep	3005A			117614	05/09/13 10:55	JM	TAL BUF
Total/NA	Analysis	6010B		1	117865	05/09/13 20:16	AH	TAL BUF
Total/NA	Analysis	VFA-IC		1	117667	05/09/13 16:00	KC	TAL BUF
Total/NA	Analysis	300.0		50	117729	05/10/13 02:54	KC	TAL BUF
Total/NA	Analysis	SM 2320B		1	117748	05/09/13 13:58	EGN	TAL BUF
Total/NA	Analysis	353.2		1	117769	05/09/13 10:28	EGN	TAL BUF
Total/NA	Analysis	353.2		1	117770	05/09/13 10:28	EGN	TAL BUF
Total/NA	Analysis	300.0		10	117941	05/10/13 14:35	KC	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118178	05/13/13 04:00	LAW	TAL BUF
Total/NA	Analysis	9060		1	118207	05/12/13 07:27	KC	TAL BUF
Total/NA	Analysis	350.1		100	118582	05/14/13 15:47	SB	TAL BUF

Client Sample ID: GW-DUPLICATE-050813

Lab Sample ID: 480-37910-4

Date Collected: 05/08/13 00:00
Matrix: Water
Date Received: 05/08/13 19:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2000	118862	05/16/13 02:39	NQN	TAL BUF
Total/NA	Analysis	RSK-175		1	55564	05/15/13 13:45	NA	TAL BUR
Total/NA	Analysis	RSK-175	DL	20	117577	05/09/13 12:13	JM	TAL BUF
Total/NA	Analysis	RSK-175		1	117577	05/09/13 10:26	JM	TAL BUF
Total/NA	Prep	3005A			117614	05/09/13 10:55	JM	TAL BUF
Total/NA	Analysis	6010B		1	117865	05/09/13 20:19	AH	TAL BUF
Total/NA	Analysis	VFA-IC		1	117667	05/09/13 20:51	KC	TAL BUF
Total/NA	Analysis	353.2		1	117691	05/09/13 11:22	EGN	TAL BUF
Total/NA	Analysis	300.0		5	117729	05/10/13 03:04	KC	TAL BUF
Total/NA	Analysis	SM 2320B		1	117748	05/09/13 14:05	EGN	TAL BUF
Total/NA	Analysis	353.2		1	117769	05/09/13 11:22	EGN	TAL BUF
Total/NA	Analysis	300.0		20	117941	05/10/13 14:45	KC	TAL BUF
Total/NA	Analysis	350.1		1	118018	05/10/13 13:27	SB	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118178	05/13/13 04:00	LAW	TAL BUF
Total/NA	Analysis	9060		1	118207	05/12/13 08:24	KC	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-37910-1

Client Sample ID: TRIP BLANK
Date Collected: 05/08/13 00:00
Date Received: 05/08/13 19:20

Lab Sample ID: 480-37910-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	118862	05/15/13 23:30	NQN	TAL BUF

Laboratory References:

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

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

Certification Summary

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

TestAmerica Job ID: 480-37910-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAP	9	1169CA	09-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-14
Georgia	State Program	4	956	06-30-13
Georgia	State Program	4	956	03-31-14
Illinois	NELAP	5	200003	09-30-13
Iowa	State Program	7	374	03-15-15
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-13
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13 *
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-13
New Hampshire	NELAP	1	2337	11-17-13
New Jersey	NELAP	2	NY455	06-30-13
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAP	10	NY200003	06-09-13
Pennsylvania	NELAP	3	68-00281	07-31-13
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-13
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	09-30-13
Wisconsin	State Program	5	998310390	08-31-13

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	09-30-13
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-13
L-A-B	DoD ELAP		L2336	10-26-13
Louisiana	NELAP	6	176292	06-30-13
Minnesota	NELAP	5	050-999-436	12-31-13
New Hampshire	NELAP	1	2006	12-18-13
New Jersey	NELAP	2	VT972	06-30-13
New York	NELAP	2	10391	04-01-14
Pennsylvania	NELAP	3	68-00489	04-30-14
USDA	Federal		P330-11-00093	02-17-14

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

Certification Summary

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

TestAmerica Job ID: 480-37910-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Vermont	State Program	1	VT-4000	12-31-13
Virginia	NELAP	3	460209	12-14-13

Method Summary

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

TestAmerica Job ID: 480-37910-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010B	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
9060	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	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.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

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: 480-37910-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-37910-1	MW-7-A-6-050813	Water	05/08/13 11:15	05/08/13 19:20
480-37910-2	MW-7-7-050813	Water	05/08/13 15:15	05/08/13 19:20
480-37910-3	MW-7-P-1-050813	Water	05/08/13 18:15	05/08/13 19:20
480-37910-4	GW-DUPLICATE-050813	Water	05/08/13 00:00	05/08/13 19:20
480-37910-5	TRIP BLANK	Water	05/08/13 00:00	05/08/13 19:20

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24

Address: 535 Washington Street 11th Floor	Due Date Requested:	Analysis Requested
City: Buffalo	TAT Requested (days): 3 Weeks	
State, Zip: NY, 14203		
Phone: (716) 685-2300	PO #: 4047065	
Email: christopher.boron@gza.com	WO #: 58507	
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014	
Site: Bldg 7 BCP Site 9-32-138	SSOW#: 256015	

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N			
MW-7-A-6-050813	5/8/13	1115	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X			
MW-7-7-050813	"	1515	"	Water	"	"	"	"	"	"	"	"	"	"	"	"	"			
MW-7-A-1-050813	"	1815	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"			
GW-Duplicate-050813	↓	-	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓			
Trip Blank											X									

480-37910 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
Thomas Bohlen	5/8/13 1920			5/8/13 1920	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: 4.3 ICE#1

5/17/2013

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: 480-10002.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-37910-1

Analysis Requested

Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/20/2013
City: South Burlington	TAT Requested (days):
State, Zip: VT, 05403	
Phone: 802-660-1990(Tel)	PO #:
Email	WO #:
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014
Site:	SSOW#:

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-A-6-050813 (480-37910-1)	5/8/13	11:15 Eastern		Water			X	3	
MW-7-7-050813 (480-37910-2)	5/8/13	15:15 Eastern		Water			X	3	
MW-7-P-1-050813 (480-37910-3)	5/8/13	18:15 Eastern		Water			X	3	
GW-DUPLICATE-050813 (480-37910-4)	5/8/13	Eastern		Water			X	3	

480-37910 Chain of Custody

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: 5-9-13 1600	Company: TA Buffalo	Received by:	Date/Time: 5/10/13 1030	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: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

5/17/2013

ORIGIN ID: DKKA (716) 691-2600
KEN KINECKI
TESTAMERICA
10 HAZELWOOD DR

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 09MAY13
ACTWGT: 11.0 LB MAN
CAD: 735603/CAFE2608
DIMS: 19x15x10 IN

BILL RECIPIENT

TO MARK PHILLIPS
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF: BURLINGTON
DEPT: SAMPLE CONTROL

FedEx Express

FRI - 10 MAY 3:00P
STANDARD OVERNIGHT

TRK# 0201 4485 0264 3711

ZF BTVA

05403
VT-US BTV

Custody Seal

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-37910-1

Login Number: 37910

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
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: 480-37910-1

Login Number: 37910
List Number: 1
Creator: Gagne, Eric

List Source: TestAmerica Burlington
List Creation: 05/10/13 02:18 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	708594
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 IR GUN ID 181. CF 0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	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: 480-38016-1

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

Melissa Deyo

Authorized for release by:
5/17/2013 3:10:08 PM

Melissa Deyo, Project Manager I
melissa.deyo@testamericainc.com

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
Surrogate Summary 7
QC Sample Results 8
QC Association Summary 13
Lab Chronicle 15
Certification Summary 16
Method Summary 18
Sample Summary 19
Chain of Custody 20
Receipt Checklists 23

Definitions/Glossary

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

TestAmerica Job ID: 480-38016-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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)
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)

Job ID: 480-38016-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-38016-1

Receipt
The sample was received on 5/9/2013 6:40 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.8º C.

GC/MS VOA
Method 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-8-050913 (480-38016-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

IC
Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-7-8-050913 (480-38016-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 480-38016-1

Client Sample ID: MW-7-8-050913

Lab Sample ID: 480-38016-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	280		4.0	3.2	ug/L	4		8260B	Total/NA
Tetrachloroethene	110		4.0	1.4	ug/L	4		8260B	Total/NA
Trichloroethene	66		4.0	1.8	ug/L	4		8260B	Total/NA
Ethane	5.6	J	7.5	0.49	ug/L	1		RSK-175	Total/NA
Ethene	0.88	J	7.0	0.52	ug/L	1		RSK-175	Total/NA
Methane	44		4.0	0.22	ug/L	1		RSK-175	Total/NA
Iron	3.0		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	239		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.21		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	25.9		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	976		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	2450		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	116		10.0	1.7	mg/L	5		300.0	Total/NA
Ammonia	0.096		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	0.90	J	1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	120		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	2200		1000	1000	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

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

TestAmerica Job ID: 480-38016-1

Client Sample ID: MW-7-8-050913
Date Collected: 05/09/13 08:20
Date Received: 05/09/13 18:40

Lab Sample ID: 480-38016-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	280		4.0	3.2	ug/L			05/16/13 11:41	4
Tetrachloroethene	110		4.0	1.4	ug/L			05/16/13 11:41	4
trans-1,2-Dichloroethene	ND		4.0	3.6	ug/L			05/16/13 11:41	4
Trichloroethene	66		4.0	1.8	ug/L			05/16/13 11:41	4
Vinyl chloride	ND		4.0	3.6	ug/L			05/16/13 11:41	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*05/16/13 11:41*	*4*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*05/16/13 11:41*	*4*
Toluene-d8 (Surr)	*104*		*71 - 126*		*05/16/13 11:41*	*4*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	5.6	J	7.5	0.49	ug/L			05/10/13 10:12	1
Ethene	0.88	J	7.0	0.52	ug/L			05/10/13 10:12	1
Methane	44		4.0	0.22	ug/L			05/10/13 10:12	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	2200		1000	1000	ug/L			05/15/13 13:55	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	3.0		0.050	0.019	mg/L		05/10/13 11:45	05/10/13 21:24	1
Magnesium	239		0.20	0.043	mg/L		05/10/13 11:45	05/10/13 21:24	1
Manganese	0.21		0.0030	0.00040	mg/L		05/10/13 11:45	05/10/13 21:24	1
Potassium	25.9		0.50	0.10	mg/L		05/10/13 11:45	05/10/13 21:24	1
Sodium	976		1.0	0.32	mg/L		05/10/13 11:45	05/10/13 21:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2450		25.0	14.1	mg/L			05/13/13 22:50	50
Sulfate	116		10.0	1.7	mg/L			05/10/13 22:41	5
Ammonia	0.096		0.020	0.0090	mg/L			05/10/13 14:58	1
Nitrate	ND		0.050	0.020	mg/L			05/09/13 22:23	1
Nitrite	ND		0.050	0.020	mg/L			05/09/13 22:23	1
Total Organic Carbon	0.90	J	1.0	0.43	mg/L			05/11/13 21:49	1
Total Alkalinity	120		5.0	0.79	mg/L			05/14/13 11:26	1
Sulfide	ND		0.10	0.052	mg/L			05/14/13 12:36	1
Acetic acid	ND		1.0	0.15	mg/L			05/13/13 17:13	1
Formic-acid	ND		1.0	0.11	mg/L			05/13/13 17:13	1
Lactic acid	ND		1.0	0.14	mg/L			05/13/13 17:13	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/13/13 17:13	1
Propionic acid	ND		1.0	0.17	mg/L			05/13/13 17:13	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/13/13 17:13	1

Surrogate Summary

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

TestAmerica Job ID: 480-38016-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)								
		12DCE	BFB	TOL						
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)						
480-38016-1	MW-7-8-050913	99	100	104						
LCS 480-118925/4	Lab Control Sample	97	105	104						
MB 480-118925/5	Method Blank	97	102	105						

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-118925/5
Matrix: Water
Analysis Batch: 118925

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			05/16/13 10:57	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/16/13 10:57	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/16/13 10:57	1
Trichloroethene	ND		1.0	0.46	ug/L			05/16/13 10:57	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/16/13 10:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*66 - 137*		*05/16/13 10:57*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/16/13 10:57*	*1*
Toluene-d8 (Surr)	*105*		*71 - 126*		*05/16/13 10:57*	*1*

Lab Sample ID: LCS 480-118925/4
Matrix: Water
Analysis Batch: 118925

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	29.2		ug/L		117	74 - 124
Tetrachloroethene	25.0	28.5		ug/L		114	74 - 122
trans-1,2-Dichloroethene	25.0	27.3		ug/L		109	73 - 127
Trichloroethene	25.0	26.9		ug/L		108	74 - 123

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

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-117834/2
Matrix: Water
Analysis Batch: 117834

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	0.49	ug/L			05/10/13 06:12	1
Ethene	ND		7.0	0.52	ug/L			05/10/13 06:12	1
Methane	ND		4.0	0.22	ug/L			05/10/13 06:12	1

Lab Sample ID: LCS 480-117834/3
Matrix: Water
Analysis Batch: 117834

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.4	16.9		ug/L		117	67 - 128
Ethene	13.5	15.8		ug/L		118	60 - 137
Methane	7.69	8.69		ug/L		113	48 - 174

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

Lab Sample ID: LCSD 480-117834/4
Matrix: Water
Analysis Batch: 117834

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	14.4	15.7		ug/L		109	67 - 128	7	50
Ethene	13.5	14.8		ug/L		110	60 - 137	7	50
Methane	7.69	7.87		ug/L		102	48 - 174	10	50

Lab Sample ID: MB 200-55564/3
Matrix: Water
Analysis Batch: 55564

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			05/15/13 12:05	1

Lab Sample ID: LCS 200-55564/2
Matrix: Water
Analysis Batch: 55564

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	4460		ug/L		89	70 - 130

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 480-117913/1-A
Matrix: Water
Analysis Batch: 118227

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117913

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	ND		0.20	0.043	mg/L		05/10/13 11:45	05/10/13 20:23	1
Potassium	ND		0.50	0.10	mg/L		05/10/13 11:45	05/10/13 20:23	1
Sodium	ND		1.0	0.32	mg/L		05/10/13 11:45	05/10/13 20:23	1

Lab Sample ID: MB 480-117913/1-A
Matrix: Water
Analysis Batch: 118938

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117913

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/10/13 11:45	05/15/13 13:34	1
Manganese	ND		0.0030	0.00040	mg/L		05/10/13 11:45	05/15/13 13:34	1

Lab Sample ID: LCS 480-117913/2-A
Matrix: Water
Analysis Batch: 118227

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117913

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Magnesium	10.0	10.43		mg/L		104	80 - 120
Potassium	10.0	10.22		mg/L		102	80 - 120
Sodium	10.0	10.18		mg/L		102	80 - 120

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

Lab Sample ID: LCS 480-117913/2-A
Matrix: Water
Analysis Batch: 118938

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117913

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.32		mg/L		103	80 - 120
Manganese	0.200	0.201		mg/L		101	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-117945/52
Matrix: Water
Analysis Batch: 117945

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			05/10/13 20:20	1
Sulfate	ND		2.0	0.35	mg/L			05/10/13 20:20	1

Lab Sample ID: LCS 480-117945/51
Matrix: Water
Analysis Batch: 117945

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	19.91		mg/L		100	90 - 110
Sulfate	20.0	20.42		mg/L		102	90 - 110

Lab Sample ID: MB 480-118280/28
Matrix: Water
Analysis Batch: 118280

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			05/13/13 22:20	1
Sulfate	ND		2.0	0.35	mg/L			05/13/13 22:20	1

Lab Sample ID: LCS 480-118280/27
Matrix: Water
Analysis Batch: 118280

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	19.27		mg/L		96	90 - 110
Sulfate	20.0	19.68		mg/L		98	90 - 110

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-118205/3
Matrix: Water
Analysis Batch: 118205

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			05/11/13 18:50	1

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

Lab Sample ID: LCS 480-118205/4
Matrix: Water
Analysis Batch: 118205

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	63.94		mg/L		107	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-118529/6
Matrix: Water
Analysis Batch: 118529

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			05/14/13 10:31	1

Lab Sample ID: LCS 480-118529/7
Matrix: Water
Analysis Batch: 118529

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	95.02		mg/L		95	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-118546/3
Matrix: Water
Analysis Batch: 118546

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			05/14/13 12:21	1

Lab Sample ID: LCS 480-118546/4
Matrix: Water
Analysis Batch: 118546

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	0.749		mg/L		100	90 - 110

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography

Lab Sample ID: MB 480-118269/4
Matrix: Water
Analysis Batch: 118269

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/13/13 14:47	1
Formic-acid	ND		1.0	0.11	mg/L			05/13/13 14:47	1
Lactic acid	ND		1.0	0.14	mg/L			05/13/13 14:47	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/13/13 14:47	1
Propionic acid	ND		1.0	0.17	mg/L			05/13/13 14:47	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/13/13 14:47	1

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

TestAmerica Job ID: 480-38016-1

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-118269/3
Matrix: Water
Analysis Batch: 118269

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	10.06		mg/L		101	80 - 120
Formic-acid	10.0	9.92		mg/L		99	80 - 120
Lactic acid	10.0	9.89		mg/L		99	80 - 120
n-Butyric Acid	10.0	9.62		mg/L		96	80 - 120
Propionic acid	10.0	10.22		mg/L		102	80 - 120
Pyruvic Acid	10.0	9.58		mg/L		96	80 - 120

QC Association Summary

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

TestAmerica Job ID: 480-38016-1

GC/MS VOA

Analysis Batch: 118925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	8260B	
LCS 480-118925/4	Lab Control Sample	Total/NA	Water	8260B	
MB 480-118925/5	Method Blank	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 55564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	RSK-175	
LCS 200-55564/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-55564/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 117834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	RSK-175	
LCS 480-117834/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-117834/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-117834/2	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 117913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	3005A	
LCS 480-117913/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-117913/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 118227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	6010B	117913
LCS 480-117913/2-A	Lab Control Sample	Total/NA	Water	6010B	117913
MB 480-117913/1-A	Method Blank	Total/NA	Water	6010B	117913

Analysis Batch: 118938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-117913/2-A	Lab Control Sample	Total/NA	Water	6010B	117913
MB 480-117913/1-A	Method Blank	Total/NA	Water	6010B	117913

General Chemistry

Analysis Batch: 117812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	353.2	

Analysis Batch: 117813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 117945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	300.0	
LCS 480-117945/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-117945/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 118018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	350.1	

Analysis Batch: 118205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	9060	
LCS 480-118205/4	Lab Control Sample	Total/NA	Water	9060	
MB 480-118205/3	Method Blank	Total/NA	Water	9060	

Analysis Batch: 118269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	VFA-IC	
LCS 480-118269/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-118269/4	Method Blank	Total/NA	Water	VFA-IC	

Analysis Batch: 118280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	300.0	
LCS 480-118280/27	Lab Control Sample	Total/NA	Water	300.0	
MB 480-118280/28	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 118529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	SM 2320B	
LCS 480-118529/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-118529/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 118546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38016-1	MW-7-8-050913	Total/NA	Water	SM 4500 S2 D	
LCS 480-118546/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-118546/3	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: 480-38016-1

Client Sample ID: MW-7-8-050913
Date Collected: 05/09/13 08:20
Date Received: 05/09/13 18:40

Lab Sample ID: 480-38016-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		4	118925	05/16/13 11:41	RL	TAL BUF
Total/NA	Analysis	RSK-175		1	55564	05/15/13 13:55	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	117834	05/10/13 10:12	JM	TAL BUF
Total/NA	Prep	3005A			117913	05/10/13 11:45	SS	TAL BUF
Total/NA	Analysis	6010B		1	118227	05/10/13 21:24	LH	TAL BUF
Total/NA	Analysis	353.2		1	117812	05/09/13 22:23	NH	TAL BUF
Total/NA	Analysis	353.2		1	117813	05/09/13 22:23	NH	TAL BUF
Total/NA	Analysis	300.0		5	117945	05/10/13 22:41	KAC	TAL BUF
Total/NA	Analysis	350.1		1	118018	05/10/13 14:58	SB	TAL BUF
Total/NA	Analysis	9060		1	118205	05/11/13 21:49	KAC	TAL BUF
Total/NA	Analysis	VFA-IC		1	118269	05/13/13 17:13	KC	TAL BUF
Total/NA	Analysis	300.0		50	118280	05/13/13 22:50	KAC	TAL BUF
Total/NA	Analysis	SM 2320B		1	118529	05/14/13 11:26	EGN	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118546	05/14/13 12:36	KJ	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: 480-38016-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAP	9	1169CA	09-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-14
Georgia	State Program	4	956	06-30-13
Georgia	State Program	4	956	03-31-14
Illinois	NELAP	5	200003	09-30-13
Iowa	State Program	7	374	03-15-15
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-13
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13 *
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-13
New Hampshire	NELAP	1	2337	11-17-13
New Jersey	NELAP	2	NY455	06-30-13
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAP	10	NY200003	06-09-13
Pennsylvania	NELAP	3	68-00281	07-31-13
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-13
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	09-30-13
Wisconsin	State Program	5	998310390	08-31-13

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	09-30-13
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-13
L-A-B	DoD ELAP		L2336	10-26-13
Louisiana	NELAP	6	176292	06-30-13
Minnesota	NELAP	5	050-999-436	12-31-13
New Hampshire	NELAP	1	2006	12-18-13
New Jersey	NELAP	2	VT972	06-30-13
New York	NELAP	2	10391	04-01-14
Pennsylvania	NELAP	3	68-00489	04-30-14
USDA	Federal		P330-11-00093	02-17-14

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

Certification Summary

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

TestAmerica Job ID: 480-38016-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Vermont	State Program	1	VT-4000	12-31-13
Virginia	NELAP	3	460209	12-14-13

Method Summary

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

TestAmerica Job ID: 480-38016-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010B	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
9060	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	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.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

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: 480-38016-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-38016-1	MW-7-8-050913	Water	05/09/13 08:20	05/09/13 18:40

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days): 3 Weeks			
State, Zip: NY, 14203				
Phone: (716) 685-2300	PO #: 4047065			
Email: christopher.boron@gza.com	WO #: 58507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site: Bldg BCP Site 9-32-138	SSOW#: 256015			

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N			
MW-7-8-050913	5/9/13	820	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X			
				Water																

480-38016 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
1	Thomas Bohlen	5/9/13 1840			5/9/13 1840	TA
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: 4.8 ICE #1

5/17/2013

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: 480-10035.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-38016-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/21/2013			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel)	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-7-8-050913 (480-38016-1)	5/9/13	08:20 Eastern		Water			X	3	

480-38016 Chain of Custody

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	[signature]	5-10-13	TA Buffalo	[signature]	5/13/13 1000	TA BUF
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: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

5/17/2013


ORIGIN ID: DKKA (716) 691-2600
KEN KINECKI
TESTAMERICA
10 HAZELWOOD DR
AMHERST, NY 14228
UNITED STATES US
SHIP DATE: 10MAY13
ACTWGT: 18.0 LB MAN
CAD: 735603/CAFE2608
DIMS: 19x15x10 IN
BILL RECIPIENT
TO MARK PHILLIPS
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
REF: BURLINGTON
DEPT: SAMPLE CONTROL
FedEx
Express
TRK# 0201 4485 0264 3777
MON - 13 MAY 3:00P
STANDARD OVERNIGHT
KS BTVA
05403
VT-US
BTV
Part # 154254-354 RIT2 02/13

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-38016-1

Login Number: 38016

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
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: 480-38016-1

Login Number: 38016
List Number: 1
Creator: Gagne, Eric

List Source: TestAmerica Burlington
List Creation: 05/13/13 10:34 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	709021
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.4ºC IR GUN ID 181. CF 0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	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: 480-38017-1

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

Melissa Deyo

Authorized for release by:
5/23/2013 11:47:05 AM

Melissa Deyo, Project Manager I
melissa.deyo@testamericainc.com

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 7
Surrogate Summary 11
QC Sample Results 12
QC Association Summary 20
Lab Chronicle 23
Certification Summary 25
Method Summary 27
Sample Summary 28
Chain of Custody 29
Receipt Checklists 32

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 4 times greater than 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.
F	MS or MSD exceeds the control limits
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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)
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)

Job ID: 480-38017-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-38017-1

Receipt
The samples were received on 5/9/2013 6:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.8º C.

GC/MS VOA
Method 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-10-2-050913 (480-38017-1) and BLDG-10-MW-1-050913 (480-38017-3). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

IC
Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-10-2-050913 (480-38017-1), MW-10-3-050913 (480-38017-2) and BLDG-10-MW-1-050913 (480-38017-3). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
Method SM 4500 S2 D: The matrix spike (MS) recovery for batch 118546 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 480-38017-1

Client Sample ID: MW-10-2-050913 — Lab Sample ID: 480-38017-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2600		40	32	ug/L	40		8260B	Total/NA
Tetrachloroethene	150		40	14	ug/L	40		8260B	Total/NA
Trichloroethene	450		40	18	ug/L	40		8260B	Total/NA
Vinyl chloride	60		40	36	ug/L	40		8260B	Total/NA
Ethane	2.8	J	7.5	0.49	ug/L	1		RSK-175	Total/NA
Ethene	2.1	J	7.0	0.52	ug/L	1		RSK-175	Total/NA
Methane	38		4.0	0.22	ug/L	1		RSK-175	Total/NA
Iron	0.35		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	76.3		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.13		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	9.6		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	1130		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	2010		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	226		10.0	1.7	mg/L	5		300.0	Total/NA
Ammonia	0.44		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.077		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.3		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	310		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	7800		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-10-3-050913 — Lab Sample ID: 480-38017-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	38		1.0	0.81	ug/L	1		8260B	Total/NA
Tetrachloroethene	24		1.0	0.36	ug/L	1		8260B	Total/NA
Trichloroethene	24		1.0	0.46	ug/L	1		8260B	Total/NA
Vinyl chloride	1.4		1.0	0.90	ug/L	1		8260B	Total/NA
Iron	0.038	J	0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	22.1		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.00054	J	0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	2.9		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	64.1		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	87.8		0.50	0.28	mg/L	1		300.0	Total/NA
Sulfate	118		4.0	0.70	mg/L	2		300.0	Total/NA
Ammonia	0.015	J	0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	1.3		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	0.71	J	1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	145		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	1100		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: BLDG-10-MW-1-050913 — Lab Sample ID: 480-38017-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	180000		2000	720	ug/L	2000		8260B	Total/NA
Trichloroethene	3000		2000	920	ug/L	2000		8260B	Total/NA
Ethane	0.94	J	7.5	0.49	ug/L	1		RSK-175	Total/NA
Ethene	6.3	J	7.0	0.52	ug/L	1		RSK-175	Total/NA
Methane	9.6		4.0	0.22	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample ID: BLDG-10-MW-1-050913 (Continued)

Lab Sample ID: 480-38017-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	1.2		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	87.0		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.35		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	5.4		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	89.9		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	386		5.0	2.8	mg/L	10		300.0	Total/NA
Sulfate	252		20.0	3.5	mg/L	10		300.0	Total/NA
Ammonia	0.18		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	4.2		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	334		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Acetic acid	1.6		1.0	0.15	mg/L	1		VFA-IC	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	16000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-38017-4

No Detections.

This Detection Summary does not include radiochemical test results.

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

TestAmerica Job ID: 480-38017-1

Client Sample ID: MW-10-2-050913
Date Collected: 05/09/13 12:30
Date Received: 05/09/13 18:40

Lab Sample ID: 480-38017-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	2600		40	32	ug/L			05/17/13 12:09	40
Tetrachloroethene	150		40	14	ug/L			05/17/13 12:09	40
trans-1,2-Dichloroethene	ND		40	36	ug/L			05/17/13 12:09	40
Trichloroethene	450		40	18	ug/L			05/17/13 12:09	40
Vinyl chloride	60		40	36	ug/L			05/17/13 12:09	40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*05/17/13 12:09*	*40*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*05/17/13 12:09*	*40*
Toluene-d8 (Surr)	*105*		*71 - 126*		*05/17/13 12:09*	*40*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	2.8	J	7.5	0.49	ug/L			05/10/13 12:13	1
Ethene	2.1	J	7.0	0.52	ug/L			05/10/13 12:13	1
Methane	38		4.0	0.22	ug/L			05/10/13 12:13	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	7800		1000	1000	ug/L			05/15/13 14:05	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.35		0.050	0.019	mg/L		05/10/13 11:45	05/10/13 21:02	1
Magnesium	76.3		0.20	0.043	mg/L		05/10/13 11:45	05/10/13 21:02	1
Manganese	0.13		0.0030	0.00040	mg/L		05/10/13 11:45	05/10/13 21:02	1
Potassium	9.6		0.50	0.10	mg/L		05/10/13 11:45	05/10/13 21:02	1
Sodium	1130		1.0	0.32	mg/L		05/10/13 11:45	05/10/13 21:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2010		25.0	14.1	mg/L			05/13/13 23:00	50
Sulfate	226		10.0	1.7	mg/L			05/10/13 22:52	5
Ammonia	0.44		0.020	0.0090	mg/L			05/10/13 14:59	1
Nitrate	0.077		0.050	0.020	mg/L			05/09/13 23:57	1
Nitrite	ND		0.050	0.020	mg/L			05/09/13 23:57	1
Total Organic Carbon	1.3		1.0	0.43	mg/L			05/11/13 23:20	1
Total Alkalinity	310		5.0	0.79	mg/L			05/14/13 11:07	1
Sulfide	ND		0.10	0.052	mg/L			05/14/13 12:38	1
Acetic acid	ND		1.0	0.15	mg/L			05/13/13 17:42	1
Formic-acid	ND		1.0	0.11	mg/L			05/13/13 17:42	1
Lactic acid	ND		1.0	0.14	mg/L			05/13/13 17:42	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/13/13 17:42	1
Propionic acid	ND		1.0	0.17	mg/L			05/13/13 17:42	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/13/13 17:42	1

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

TestAmerica Job ID: 480-38017-1

Client Sample ID: MW-10-3-050913
Date Collected: 05/09/13 15:45
Date Received: 05/09/13 18:40

Lab Sample ID: 480-38017-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	38		1.0	0.81	ug/L			05/17/13 12:31	1
Tetrachloroethene	24		1.0	0.36	ug/L			05/17/13 12:31	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 12:31	1
Trichloroethene	24		1.0	0.46	ug/L			05/17/13 12:31	1
Vinyl chloride	1.4		1.0	0.90	ug/L			05/17/13 12:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*		*05/17/13 12:31*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*05/17/13 12:31*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/17/13 12:31*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	0.49	ug/L			05/10/13 12:30	1
Ethene	ND		7.0	0.52	ug/L			05/10/13 12:30	1
Methane	ND		4.0	0.22	ug/L			05/10/13 12:30	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	1100		1000	1000	ug/L			05/15/13 14:13	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.038	J	0.050	0.019	mg/L		05/10/13 11:45	05/10/13 21:19	1
Magnesium	22.1		0.20	0.043	mg/L		05/10/13 11:45	05/10/13 21:19	1
Manganese	0.00054	J	0.0030	0.00040	mg/L		05/10/13 11:45	05/10/13 21:19	1
Potassium	2.9		0.50	0.10	mg/L		05/10/13 11:45	05/10/13 21:19	1
Sodium	64.1		1.0	0.32	mg/L		05/10/13 11:45	05/10/13 21:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	87.8		0.50	0.28	mg/L			05/10/13 23:02	1
Sulfate	118		4.0	0.70	mg/L			05/13/13 23:10	2
Ammonia	0.015	J	0.020	0.0090	mg/L			05/10/13 15:04	1
Nitrate	1.3		0.050	0.020	mg/L			05/09/13 00:00	1
Nitrite	ND		0.050	0.020	mg/L			05/10/13 00:00	1
Total Organic Carbon	0.71	J	1.0	0.43	mg/L			05/11/13 23:51	1
Total Alkalinity	145		5.0	0.79	mg/L			05/14/13 11:13	1
Sulfide	ND		0.10	0.052	mg/L			05/14/13 12:41	1
Acetic acid	ND		1.0	0.15	mg/L			05/13/13 18:11	1
Formic-acid	ND		1.0	0.11	mg/L			05/13/13 18:11	1
Lactic acid	ND		1.0	0.14	mg/L			05/13/13 18:11	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/13/13 18:11	1
Propionic acid	ND		1.0	0.17	mg/L			05/13/13 18:11	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/13/13 18:11	1

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

TestAmerica Job ID: 480-38017-1

Client Sample ID: BLDG-10-MW-1-050913
Date Collected: 05/09/13 17:45
Date Received: 05/09/13 18:40

Lab Sample ID: 480-38017-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		2000	1600	ug/L			05/17/13 12:53	2000
Tetrachloroethene	**180000**		2000	720	ug/L			05/17/13 12:53	2000
trans-1,2-Dichloroethene	ND		2000	1800	ug/L			05/17/13 12:53	2000
Trichloroethene	**3000**		2000	920	ug/L			05/17/13 12:53	2000
Vinyl chloride	ND		2000	1800	ug/L			05/17/13 12:53	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*		*05/17/13 12:53*	*2000*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*05/17/13 12:53*	*2000*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/17/13 12:53*	*2000*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**0.94**	**J**	7.5	0.49	ug/L			05/10/13 12:47	1
Ethene	**6.3**	**J**	7.0	0.52	ug/L			05/10/13 12:47	1
Methane	**9.6**		4.0	0.22	ug/L			05/10/13 12:47	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**16000**		1000	1000	ug/L			05/15/13 14:22	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1.2**		0.050	0.019	mg/L		05/10/13 11:45	05/10/13 21:21	1
Magnesium	**87.0**		0.20	0.043	mg/L		05/10/13 11:45	05/10/13 21:21	1
Manganese	**0.35**		0.0030	0.00040	mg/L		05/10/13 11:45	05/10/13 21:21	1
Potassium	**5.4**		0.50	0.10	mg/L		05/10/13 11:45	05/10/13 21:21	1
Sodium	**89.9**		1.0	0.32	mg/L		05/10/13 11:45	05/10/13 21:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**386**		5.0	2.8	mg/L			05/13/13 23:21	10
Sulfate	**252**		20.0	3.5	mg/L			05/13/13 23:21	10
Ammonia	**0.18**		0.020	0.0090	mg/L			05/10/13 15:05	1
Nitrate	ND		0.050	0.020	mg/L			05/09/13 22:31	1
Nitrite	ND		0.050	0.020	mg/L			05/09/13 22:31	1
Total Organic Carbon	**4.2**		1.0	0.43	mg/L			05/12/13 00:22	1
Total Alkalinity	**334**		5.0	0.79	mg/L			05/14/13 11:20	1
Sulfide	ND		0.10	0.052	mg/L			05/14/13 12:51	1
Acetic acid	**1.6**		1.0	0.15	mg/L			05/20/13 18:22	1
Formic-acid	ND		1.0	0.11	mg/L			05/20/13 18:22	1
Lactic acid	ND		1.0	0.14	mg/L			05/20/13 18:22	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/20/13 18:22	1
Propionic acid	ND		1.0	0.17	mg/L			05/20/13 18:22	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/20/13 18:22	1

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

TestAmerica Job ID: 480-38017-1

Client Sample ID: TRIP BLANK
Date Collected: 05/09/13 00:00
Date Received: 05/09/13 18:40

Lab Sample ID: 480-38017-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/17/13 13:15	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 13:15	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 13:15	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 13:15	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 13:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*05/17/13 13:15*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/17/13 13:15*	*1*
Toluene-d8 (Surr)	*105*		*71 - 126*		*05/17/13 13:15*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-38017-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
		12DCE	BFB	TOL						
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)						
480-38017-1	MW-10-2-050913	99	101	105						
480-38017-2	MW-10-3-050913	98	99	103						
480-38017-3	BLDG-10-MW-1-050913	100	101	102						
480-38017-4	TRIP BLANK	99	102	105						
LCS 480-119163/4	Lab Control Sample	97	105	105						
MB 480-119163/5	Method Blank	99	102	105						

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-119163/5
Matrix: Water
Analysis Batch: 119163

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			05/17/13 11:00	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 11:00	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 11:00	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 11:00	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 11:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*05/17/13 11:00*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/17/13 11:00*	*1*
Toluene-d8 (Surr)	*105*		*71 - 126*		*05/17/13 11:00*	*1*

Lab Sample ID: LCS 480-119163/4
Matrix: Water
Analysis Batch: 119163

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	28.0		ug/L		112	74 - 124
Tetrachloroethene	25.0	28.0		ug/L		112	74 - 122
trans-1,2-Dichloroethene	25.0	25.3		ug/L		101	73 - 127
Trichloroethene	25.0	25.8		ug/L		103	74 - 123

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

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-117834/2
Matrix: Water
Analysis Batch: 117834

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	0.49	ug/L			05/10/13 06:12	1
Ethene	ND		7.0	0.52	ug/L			05/10/13 06:12	1
Methane	ND		4.0	0.22	ug/L			05/10/13 06:12	1

Lab Sample ID: LCS 480-117834/3
Matrix: Water
Analysis Batch: 117834

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.4	16.9		ug/L		117	67 - 128
Ethene	13.5	15.8		ug/L		118	60 - 137
Methane	7.69	8.69		ug/L		113	48 - 174

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

Lab Sample ID: LCSD 480-117834/4
Matrix: Water
Analysis Batch: 117834

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	14.4	15.7		ug/L		109	67 - 128	7	50
Ethene	13.5	14.8		ug/L		110	60 - 137	7	50
Methane	7.69	7.87		ug/L		102	48 - 174	10	50

Lab Sample ID: MB 200-55564/3
Matrix: Water
Analysis Batch: 55564

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			05/15/13 12:05	1

Lab Sample ID: LCS 200-55564/2
Matrix: Water
Analysis Batch: 55564

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	4460		ug/L		89	70 - 130

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 480-117913/1-A
Matrix: Water
Analysis Batch: 118227

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117913

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	ND		0.20	0.043	mg/L		05/10/13 11:45	05/10/13 20:23	1
Potassium	ND		0.50	0.10	mg/L		05/10/13 11:45	05/10/13 20:23	1
Sodium	ND		1.0	0.32	mg/L		05/10/13 11:45	05/10/13 20:23	1

Lab Sample ID: MB 480-117913/1-A
Matrix: Water
Analysis Batch: 118938

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117913

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/10/13 11:45	05/15/13 13:34	1
Manganese	ND		0.0030	0.00040	mg/L		05/10/13 11:45	05/15/13 13:34	1

Lab Sample ID: LCS 480-117913/2-A
Matrix: Water
Analysis Batch: 118227

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117913

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Magnesium	10.0	10.43		mg/L		104	80 - 120
Potassium	10.0	10.22		mg/L		102	80 - 120
Sodium	10.0	10.18		mg/L		102	80 - 120

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

Lab Sample ID: LCS 480-117913/2-A
Matrix: Water
Analysis Batch: 118938

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117913

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.32		mg/L		103	80 - 120
Manganese	0.200	0.201		mg/L		101	80 - 120

Lab Sample ID: 480-38017-1 MS
Matrix: Water
Analysis Batch: 118227

Client Sample ID: MW-10-2-050913
Prep Type: Total/NA
Prep Batch: 117913

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.35		10.0	10.19		mg/L		98	75 - 125
Magnesium	76.3		10.0	86.77	4	mg/L		105	75 - 125
Manganese	0.13		0.200	0.341		mg/L		107	75 - 125
Potassium	9.6		10.0	20.54		mg/L		110	75 - 125
Sodium	1130		10.0	1155	4	mg/L		232	75 - 125

Lab Sample ID: 480-38017-1 MSD
Matrix: Water
Analysis Batch: 118227

Client Sample ID: MW-10-2-050913
Prep Type: Total/NA
Prep Batch: 117913

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	0.35		10.0	10.30		mg/L		100	75 - 125	1	20
Magnesium	76.3		10.0	86.48	4	mg/L		102	75 - 125	0	20
Manganese	0.13		0.200	0.343		mg/L		108	75 - 125	1	20
Potassium	9.6		10.0	20.57		mg/L		110	75 - 125	0	20
Sodium	1130		10.0	1146	4	mg/L		143	75 - 125	1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-117945/52
Matrix: Water
Analysis Batch: 117945

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			05/10/13 20:20	1
Sulfate	ND		2.0	0.35	mg/L			05/10/13 20:20	1

Lab Sample ID: LCS 480-117945/51
Matrix: Water
Analysis Batch: 117945

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	19.91		mg/L		100	90 - 110
Sulfate	20.0	20.42		mg/L		102	90 - 110

Lab Sample ID: MB 480-118280/28
Matrix: Water
Analysis Batch: 118280

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			05/13/13 22:20	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 480-118280/28
Matrix: Water
Analysis Batch: 118280

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0	0.35	mg/L			05/13/13 22:20	1

Lab Sample ID: LCS 480-118280/27
Matrix: Water
Analysis Batch: 118280

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	19.27		mg/L		96	90 - 110
Sulfate	20.0	19.68		mg/L		98	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-118018/123
Matrix: Water
Analysis Batch: 118018

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			05/10/13 15:02	1

Lab Sample ID: MB 480-118018/147
Matrix: Water
Analysis Batch: 118018

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			05/10/13 15:26	1

Lab Sample ID: MB 480-118018/51
Matrix: Water
Analysis Batch: 118018

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.0200		0.020	0.0090	mg/L			05/10/13 13:48	1

Lab Sample ID: MB 480-118018/99
Matrix: Water
Analysis Batch: 118018

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			05/10/13 14:39	1

Lab Sample ID: LCS 480-118018/100
Matrix: Water
Analysis Batch: 118018

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	0.982		mg/L		98	90 - 110

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-118018/124
Matrix: Water
Analysis Batch: 118018

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	0.979		mg/L		98	90 - 110

Lab Sample ID: LCS 480-118018/148
Matrix: Water
Analysis Batch: 118018

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	0.969		mg/L		97	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-117819/27
Matrix: Water
Analysis Batch: 117819

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			05/09/13 23:20	1

Lab Sample ID: MB 480-117819/3
Matrix: Water
Analysis Batch: 117819

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			05/09/13 22:54	1

Lab Sample ID: MB 480-117819/51
Matrix: Water
Analysis Batch: 117819

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			05/09/13 23:47	1

Lab Sample ID: LCS 480-117819/28
Matrix: Water
Analysis Batch: 117819

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.59	^	mg/L		106	90 - 110

Lab Sample ID: LCS 480-117819/4
Matrix: Water
Analysis Batch: 117819

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.59		mg/L		106	90 - 110

Method: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: LCS 480-117819/52
Matrix: Water
Analysis Batch: 117819

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	1.56		mg/L		104	90 - 110

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-118205/3
Matrix: Water
Analysis Batch: 118205

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			05/11/13 18:50	1

Lab Sample ID: LCS 480-118205/4
Matrix: Water
Analysis Batch: 118205

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	63.94		mg/L		107	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-118529/6
Matrix: Water
Analysis Batch: 118529

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			05/14/13 10:31	1

Lab Sample ID: LCS 480-118529/7
Matrix: Water
Analysis Batch: 118529

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	95.02		mg/L		95	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-118546/3
Matrix: Water
Analysis Batch: 118546

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			05/14/13 12:21	1

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: LCS 480-118546/4
Matrix: Water
Analysis Batch: 118546

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	0.749		mg/L		100	90 - 110

Lab Sample ID: 480-38017-2 MS
Matrix: Water
Analysis Batch: 118546

Client Sample ID: MW-10-3-050913
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND		0.500	0.445	F	mg/L		89	90 - 110

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography

Lab Sample ID: MB 480-118269/4
Matrix: Water
Analysis Batch: 118269

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/13/13 14:47	1
Formic-acid	ND		1.0	0.11	mg/L			05/13/13 14:47	1
Lactic acid	ND		1.0	0.14	mg/L			05/13/13 14:47	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/13/13 14:47	1
Propionic acid	ND		1.0	0.17	mg/L			05/13/13 14:47	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/13/13 14:47	1

Lab Sample ID: LCS 480-118269/3
Matrix: Water
Analysis Batch: 118269

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	10.06		mg/L		101	80 - 120
Formic-acid	10.0	9.92		mg/L		99	80 - 120
Lactic acid	10.0	9.89		mg/L		99	80 - 120
n-Butyric Acid	10.0	9.62		mg/L		96	80 - 120
Propionic acid	10.0	10.22		mg/L		102	80 - 120
Pyruvic Acid	10.0	9.58		mg/L		96	80 - 120

Lab Sample ID: 480-38017-2 MS
Matrix: Water
Analysis Batch: 118269

Client Sample ID: MW-10-3-050913
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	ND		10.0	9.12		mg/L		91	80 - 120
Formic-acid	ND		10.0	9.00		mg/L		90	80 - 120
Lactic acid	ND		10.0	10.21		mg/L		102	80 - 120
n-Butyric Acid	ND		10.0	8.83		mg/L		88	80 - 120
Propionic acid	ND		10.0	9.48		mg/L		95	80 - 120
Pyruvic Acid	ND		10.0	8.69		mg/L		87	80 - 120

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography (Continued)

Lab Sample ID: MB 480-119572/4
Matrix: Water
Analysis Batch: 119572

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/20/13 14:29	1
Formic-acid	ND		1.0	0.11	mg/L			05/20/13 14:29	1
Lactic acid	ND		1.0	0.14	mg/L			05/20/13 14:29	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/20/13 14:29	1
Propionic acid	ND		1.0	0.17	mg/L			05/20/13 14:29	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/20/13 14:29	1

Lab Sample ID: LCS 480-119572/3
Matrix: Water
Analysis Batch: 119572

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	10.20		mg/L		102	80 - 120
Formic-acid	10.0	10.11		mg/L		101	80 - 120
Lactic acid	10.0	9.73		mg/L		97	80 - 120
n-Butyric Acid	10.0	10.25		mg/L		103	80 - 120
Propionic acid	10.0	10.40		mg/L		104	80 - 120
Pyruvic Acid	10.0	10.10		mg/L		101	80 - 120

GC/MS VOA

Analysis Batch: 119163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	8260B	
480-38017-2	MW-10-3-050913	Total/NA	Water	8260B	
480-38017-3	BLDG-10-MW-1-050913	Total/NA	Water	8260B	
480-38017-4	TRIP BLANK	Total/NA	Water	8260B	
LCS 480-119163/4	Lab Control Sample	Total/NA	Water	8260B	
MB 480-119163/5	Method Blank	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 55564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	RSK-175	
480-38017-2	MW-10-3-050913	Total/NA	Water	RSK-175	
480-38017-3	BLDG-10-MW-1-050913	Total/NA	Water	RSK-175	
LCS 200-55564/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-55564/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 117834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	RSK-175	
480-38017-2	MW-10-3-050913	Total/NA	Water	RSK-175	
480-38017-3	BLDG-10-MW-1-050913	Total/NA	Water	RSK-175	
LCS 480-117834/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-117834/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-117834/2	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 117913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	3005A	
480-38017-1 MS	MW-10-2-050913	Total/NA	Water	3005A	
480-38017-1 MSD	MW-10-2-050913	Total/NA	Water	3005A	
480-38017-2	MW-10-3-050913	Total/NA	Water	3005A	
480-38017-3	BLDG-10-MW-1-050913	Total/NA	Water	3005A	
LCS 480-117913/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-117913/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 118227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	6010B	117913
480-38017-1 MS	MW-10-2-050913	Total/NA	Water	6010B	117913
480-38017-1 MSD	MW-10-2-050913	Total/NA	Water	6010B	117913
480-38017-2	MW-10-3-050913	Total/NA	Water	6010B	117913
480-38017-3	BLDG-10-MW-1-050913	Total/NA	Water	6010B	117913
LCS 480-117913/2-A	Lab Control Sample	Total/NA	Water	6010B	117913
MB 480-117913/1-A	Method Blank	Total/NA	Water	6010B	117913

Metals (Continued)

Analysis Batch: 118938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-117913/2-A	Lab Control Sample	Total/NA	Water	6010B	117913
MB 480-117913/1-A	Method Blank	Total/NA	Water	6010B	117913

General Chemistry

Analysis Batch: 117812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	353.2	
480-38017-2	MW-10-3-050913	Total/NA	Water	353.2	
480-38017-3	BLDG-10-MW-1-050913	Total/NA	Water	353.2	

Analysis Batch: 117813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-3	BLDG-10-MW-1-050913	Total/NA	Water	353.2	

Analysis Batch: 117819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	353.2	
480-38017-2	MW-10-3-050913	Total/NA	Water	353.2	
LCS 480-117819/28	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-117819/4	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-117819/52	Lab Control Sample	Total/NA	Water	353.2	
MB 480-117819/27	Method Blank	Total/NA	Water	353.2	
MB 480-117819/3	Method Blank	Total/NA	Water	353.2	
MB 480-117819/51	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 117945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	300.0	
480-38017-2	MW-10-3-050913	Total/NA	Water	300.0	
LCS 480-117945/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-117945/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 118018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	350.1	
480-38017-2	MW-10-3-050913	Total/NA	Water	350.1	
480-38017-3	BLDG-10-MW-1-050913	Total/NA	Water	350.1	
LCS 480-118018/100	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-118018/124	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-118018/148	Lab Control Sample	Total/NA	Water	350.1	
MB 480-118018/123	Method Blank	Total/NA	Water	350.1	
MB 480-118018/147	Method Blank	Total/NA	Water	350.1	
MB 480-118018/51	Method Blank	Total/NA	Water	350.1	
MB 480-118018/99	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 118205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	9060	
480-38017-2	MW-10-3-050913	Total/NA	Water	9060	

General Chemistry (Continued)

Analysis Batch: 118205 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-3	BLDG-10-MW-1-050913	Total/NA	Water	9060	
LCS 480-118205/4	Lab Control Sample	Total/NA	Water	9060	
MB 480-118205/3	Method Blank	Total/NA	Water	9060	

Analysis Batch: 118269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	VFA-IC	
480-38017-2	MW-10-3-050913	Total/NA	Water	VFA-IC	
480-38017-2 MS	MW-10-3-050913	Total/NA	Water	VFA-IC	
LCS 480-118269/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-118269/4	Method Blank	Total/NA	Water	VFA-IC	

Analysis Batch: 118280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	300.0	
480-38017-2	MW-10-3-050913	Total/NA	Water	300.0	
480-38017-3	BLDG-10-MW-1-050913	Total/NA	Water	300.0	
LCS 480-118280/27	Lab Control Sample	Total/NA	Water	300.0	
MB 480-118280/28	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 118529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	SM 2320B	
480-38017-2	MW-10-3-050913	Total/NA	Water	SM 2320B	
480-38017-3	BLDG-10-MW-1-050913	Total/NA	Water	SM 2320B	
LCS 480-118529/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-118529/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 118546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-1	MW-10-2-050913	Total/NA	Water	SM 4500 S2 D	
480-38017-2	MW-10-3-050913	Total/NA	Water	SM 4500 S2 D	
480-38017-2 MS	MW-10-3-050913	Total/NA	Water	SM 4500 S2 D	
480-38017-3	BLDG-10-MW-1-050913	Total/NA	Water	SM 4500 S2 D	
LCS 480-118546/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-118546/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 119572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38017-3	BLDG-10-MW-1-050913	Total/NA	Water	VFA-IC	
LCS 480-119572/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-119572/4	Method Blank	Total/NA	Water	VFA-IC	

Client Sample ID: MW-10-2-050913

Lab Sample ID: 480-38017-1

Date Collected: 05/09/13 12:30

Matrix: Water

Date Received: 05/09/13 18:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		40	119163	05/17/13 12:09	RL	TAL BUF
Total/NA	Analysis	RSK-175		1	55564	05/15/13 14:05	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	117834	05/10/13 12:13	JM	TAL BUF
Total/NA	Prep	3005A			117913	05/10/13 11:45	SS	TAL BUF
Total/NA	Analysis	6010B		1	118227	05/10/13 21:02	LH	TAL BUF
Total/NA	Analysis	353.2		1	117812	05/09/13 23:57	NH	TAL BUF
Total/NA	Analysis	353.2		1	117819	05/09/13 23:57	NH	TAL BUF
Total/NA	Analysis	300.0		5	117945	05/10/13 22:52	KAC	TAL BUF
Total/NA	Analysis	350.1		1	118018	05/10/13 14:59	SB	TAL BUF
Total/NA	Analysis	9060		1	118205	05/11/13 23:20	KAC	TAL BUF
Total/NA	Analysis	VFA-IC		1	118269	05/13/13 17:42	KC	TAL BUF
Total/NA	Analysis	300.0		50	118280	05/13/13 23:00	KAC	TAL BUF
Total/NA	Analysis	SM 2320B		1	118529	05/14/13 11:07	EGN	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118546	05/14/13 12:38	KJ	TAL BUF

Client Sample ID: MW-10-3-050913

Lab Sample ID: 480-38017-2

Date Collected: 05/09/13 15:45

Matrix: Water

Date Received: 05/09/13 18:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119163	05/17/13 12:31	RL	TAL BUF
Total/NA	Analysis	RSK-175		1	55564	05/15/13 14:13	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	117834	05/10/13 12:30	JM	TAL BUF
Total/NA	Prep	3005A			117913	05/10/13 11:45	SS	TAL BUF
Total/NA	Analysis	6010B		1	118227	05/10/13 21:19	LH	TAL BUF
Total/NA	Analysis	353.2		1	117812	05/09/13 00:00	NH	TAL BUF
Total/NA	Analysis	353.2		1	117819	05/10/13 00:00	NH	TAL BUF
Total/NA	Analysis	300.0		1	117945	05/10/13 23:02	KAC	TAL BUF
Total/NA	Analysis	350.1		1	118018	05/10/13 15:04	SB	TAL BUF
Total/NA	Analysis	9060		1	118205	05/11/13 23:51	KAC	TAL BUF
Total/NA	Analysis	VFA-IC		1	118269	05/13/13 18:11	KC	TAL BUF
Total/NA	Analysis	300.0		2	118280	05/13/13 23:10	KAC	TAL BUF
Total/NA	Analysis	SM 2320B		1	118529	05/14/13 11:13	EGN	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118546	05/14/13 12:41	KJ	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-38017-1

Client Sample ID: BLDG-10-MW-1-050913

Lab Sample ID: 480-38017-3

Date Collected: 05/09/13 17:45
Matrix: Water
Date Received: 05/09/13 18:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2000	119163	05/17/13 12:53	RL	TAL BUF
Total/NA	Analysis	RSK-175		1	55564	05/15/13 14:22	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	117834	05/10/13 12:47	JM	TAL BUF
Total/NA	Prep	3005A			117913	05/10/13 11:45	SS	TAL BUF
Total/NA	Analysis	6010B		1	118227	05/10/13 21:21	LH	TAL BUF
Total/NA	Analysis	353.2		1	117812	05/09/13 22:31	NH	TAL BUF
Total/NA	Analysis	353.2		1	117813	05/09/13 22:31	NH	TAL BUF
Total/NA	Analysis	350.1		1	118018	05/10/13 15:05	SB	TAL BUF
Total/NA	Analysis	9060		1	118205	05/12/13 00:22	KAC	TAL BUF
Total/NA	Analysis	300.0		10	118280	05/13/13 23:21	KAC	TAL BUF
Total/NA	Analysis	SM 2320B		1	118529	05/14/13 11:20	EGN	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118546	05/14/13 12:51	KJ	TAL BUF
Total/NA	Analysis	VFA-IC		1	119572	05/20/13 18:22	KC	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-38017-4

Date Collected: 05/09/13 00:00
Matrix: Water
Date Received: 05/09/13 18:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119163	05/17/13 13:15	RL	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: 480-38017-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAP	9	1169CA	09-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-14
Georgia	State Program	4	956	06-30-13
Georgia	State Program	4	956	03-31-14
Illinois	NELAP	5	200003	09-30-13
Iowa	State Program	7	374	03-15-15
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-13
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13 *
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-13
New Hampshire	NELAP	1	2337	11-17-13
New Jersey	NELAP	2	NY455	06-30-13
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAP	10	NY200003	06-09-13
Pennsylvania	NELAP	3	68-00281	07-31-13
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-13
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	09-30-13
Wisconsin	State Program	5	998310390	08-31-13

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	09-30-13
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-13
L-A-B	DoD ELAP		L2336	10-26-13
Louisiana	NELAP	6	176292	06-30-13
Minnesota	NELAP	5	050-999-436	12-31-13
New Hampshire	NELAP	1	2006	12-18-13
New Jersey	NELAP	2	VT972	06-30-13
New York	NELAP	2	10391	04-01-14
Pennsylvania	NELAP	3	68-00489	04-30-14
USDA	Federal		P330-11-00093	02-17-14

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

Certification Summary

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

TestAmerica Job ID: 480-38017-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Vermont	State Program	1	VT-4000	12-31-13
Virginia	NELAP	3	460209	12-14-13

Method Summary

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

TestAmerica Job ID: 480-38017-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010B	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
9060	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	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.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

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: 480-38017-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-38017-1	MW-10-2-050913	Water	05/09/13 12:30	05/09/13 18:40
480-38017-2	MW-10-3-050913	Water	05/09/13 15:45	05/09/13 18:40
480-38017-3	BLDG-10-MW-1-050913	Water	05/09/13 17:45	05/09/13 18:40
480-38017-4	TRIP BLANK	Water	05/09/13 00:00	05/09/13 18:40

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page of
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days): 3 Weeks			
State, Zip: NY, 14203				
Phone: (716) 685-2300	PO #: 4047065			
Email: christopher.boron@gza.com	WO #: 58507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site: Bldg10- BCP Site 9-32-140	SSOW#: 256015			

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	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N			
MW-10-2-050913	5/9/13	1230	G	Water	N	N	0	X	X	X	X	X	X	X	X	X	X			
MW-10-3-050913		1545		Water																
BLDG-10-MW-1-050913		1745																		
Trip Blank											X									

480-38017 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
Thomas Bohlen	5/9/13 1840			5/9/13 1840	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:
		4.8 ICE #1

Page 29 of 33

5/23/2013

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. 480-10036.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Analysis Requested		Job #: 480-38017-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/21/2013			Preservation Codes:
City: South Burlington	TAT Requested (days):			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)
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel)	PO #:			Other:
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

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-10-2-050913 (480-38017-1)	5/9/13	12:30 Eastern		Water			X	3	
MW-10-3-050913 (480-38017-2)	5/9/13	15:45 Eastern		Water			X	3	
BLDG-10-MW-1-050913 (480-38017-3)	5/9/13	17:45 Eastern		Water			X	3	

480-38017 Chain of Custody

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: 5-10-13 1600	Company: TA Buffalo	Received by: Date/Time: 5/13/13 1000 Company: TA Buf
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

5/23/2013


ORIGIN ID: DKKA (716) 691-2600
KEN KINECKI
TESTAMERICA
10 HAZELWOOD DR

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 10MAY13
ACTWGT: 18.0 LB MAN
CAD: 735603/CAFE2608
DIMS: 19x15x10 IN

BILL RECIPIENT

TO MARK PHILLIPS
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
DEPT: SAMPLE CONTROL

REF: BURLINGTON

FedEx Express

MON - 13 MAY 3:00P
STANDARD OVERNIGHT

TRK# 0201 4485 0264 3777

KS BTVA

05403
VT-US BTV

Part # 154254-354 FIT2 02/13

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-38017-1

Login Number: 38017

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
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: 480-38017-1

Login Number: 38017
List Number: 1
Creator: Gagne, Eric

List Source: TestAmerica Burlington
List Creation: 05/13/13 10:41 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	709021
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.4ºC IR GUN ID 181. CF 0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	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: 480-38110-1

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

Melissa Deyo

Authorized for release by:
5/22/2013 4:31:24 PM

Melissa Deyo, Project Manager I
melissa.deyo@testamericainc.com

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
Surrogate Summary 8
QC Sample Results 9
QC Association Summary 15
Lab Chronicle 17
Certification Summary 18
Method Summary 20
Sample Summary 21
Chain of Custody 22
Receipt Checklists 25

Definitions/Glossary

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

TestAmerica Job ID: 480-38110-1

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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)
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)

Job ID: 480-38110-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-38110-1

Receipt
The samples were received on 5/10/2013 5:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.3º C.

GC/MS VOA
No analytical or quality issues were noted.

IC
Method 300.0: The following sample were diluted to bring the concentration of target analytes within the calibration range: MW-9-101-A-051013 (480-38110-1). Elevated reporting limits (RLs) are provided.

Method 300.0: The method blank for batch 119048 contained Sulfate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No other analytical or quality issues were noted.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 480-38110-1

Client Sample ID: MW-9-101-A-051013 — Lab Sample ID: 480-38110-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	11		1.0	0.36	ug/L	1		8260B	Total/NA
Trichloroethene	1.7		1.0	0.46	ug/L	1		8260B	Total/NA
Iron	0.057		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	147		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.015		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	24.8		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	1290		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	2180		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	1000		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	0.019	J	0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	5.0		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	2.6		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	210		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	5700		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-38110-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-9-101-A-051013

Lab Sample ID: 480-38110-1

Date Collected: 05/10/13 10:20

Matrix: Water

Date Received: 05/10/13 17:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/16/13 12:24	1
Tetrachloroethene	**11**		1.0	0.36	ug/L			05/16/13 12:24	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/16/13 12:24	1
Trichloroethene	**1.7**		1.0	0.46	ug/L			05/16/13 12:24	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/16/13 12:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*66 - 137*		*05/16/13 12:24*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/16/13 12:24*	*1*
Toluene-d8 (Surr)	*101*		*71 - 126*		*05/16/13 12:24*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	0.49	ug/L			05/13/13 08:43	1
Ethene	ND		7.0	0.52	ug/L			05/13/13 08:43	1
Methane	ND		4.0	0.22	ug/L			05/13/13 08:43	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**5700**		1000	1000	ug/L			05/15/13 15:38	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.057**		0.050	0.019	mg/L		05/11/13 10:10	05/14/13 16:33	1
Magnesium	**147**		0.20	0.043	mg/L		05/11/13 10:10	05/14/13 16:33	1
Manganese	**0.015**		0.0030	0.00040	mg/L		05/11/13 10:10	05/14/13 16:33	1
Potassium	**24.8**		0.50	0.10	mg/L		05/11/13 10:10	05/14/13 16:33	1
Sodium	**1290**		1.0	0.32	mg/L		05/11/13 10:10	05/14/13 16:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2180**		25.0	14.1	mg/L			05/16/13 19:01	50
Sulfate	**1000**		40.0	7.0	mg/L			05/15/13 15:20	20
Ammonia	**0.019**	**J**	0.020	0.0090	mg/L			05/13/13 16:48	1
Nitrate	**5.0**		0.050	0.020	mg/L			05/10/13 20:59	1
Nitrite	ND		0.050	0.020	mg/L			05/10/13 20:59	1
Total Organic Carbon	**2.6**		1.0	0.43	mg/L			05/13/13 22:28	1
Total Alkalinity	**210**		5.0	0.79	mg/L			05/15/13 04:39	1
Sulfide	ND		0.10	0.052	mg/L			05/14/13 12:53	1
Acetic acid	ND		1.0	0.15	mg/L			05/13/13 20:08	1
Formic-acid	ND		1.0	0.11	mg/L			05/13/13 20:08	1
Lactic acid	ND		1.0	0.14	mg/L			05/13/13 20:08	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/13/13 20:08	1
Propionic acid	ND		1.0	0.17	mg/L			05/13/13 20:08	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/13/13 20:08	1

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

TestAmerica Job ID: 480-38110-1

Client Sample ID: TRIP BLANK
Date Collected: 05/10/13 00:00
Date Received: 05/10/13 17:40

Lab Sample ID: 480-38110-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/16/13 12:52	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/16/13 12:52	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/16/13 12:52	1
Trichloroethene	ND		1.0	0.46	ug/L			05/16/13 12:52	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/16/13 12:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/16/13 12:52*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*05/16/13 12:52*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/16/13 12:52*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-38110-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)		
		12DCE	BFB	TOL
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)
480-38110-1	MW-9-101-A-051013	107	98	101
480-38110-2	TRIP BLANK	101	101	102
LCS 480-118983/3	Lab Control Sample	103	100	102
LCSD 480-118983/6	Lab Control Sample Dup	105	99	102
MB 480-118983/5	Method Blank	102	99	102

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

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

TestAmerica Job ID: 480-38110-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-118983/5
Matrix: Water
Analysis Batch: 118983

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			05/16/13 11:29	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/16/13 11:29	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/16/13 11:29	1
Trichloroethene	ND		1.0	0.46	ug/L			05/16/13 11:29	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/16/13 11:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/16/13 11:29*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*05/16/13 11:29*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/16/13 11:29*	*1*

Lab Sample ID: LCS 480-118983/3
Matrix: Water
Analysis Batch: 118983

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	24.2		ug/L		97	74 - 124		
Tetrachloroethene			25.0	26.8		ug/L		107	74 - 122		
trans-1,2-Dichloroethene			25.0	24.7		ug/L		99	73 - 127		
Trichloroethene			25.0	24.7		ug/L		99	74 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*
Toluene-d8 (Surr)	*102*		*71 - 126*

Lab Sample ID: LCSD 480-118983/6
Matrix: Water
Analysis Batch: 118983

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	23.5		ug/L		94	74 - 124	3	15
Tetrachloroethene			25.0	26.1		ug/L		104	74 - 122	3	20
trans-1,2-Dichloroethene			25.0	23.8		ug/L		95	73 - 127	3	20
Trichloroethene			25.0	23.5		ug/L		94	74 - 123	5	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*66 - 137*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Toluene-d8 (Surr)	*102*		*71 - 126*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-118175/2
Matrix: Water
Analysis Batch: 118175

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	0.49	ug/L			05/13/13 07:02	1
Ethene	ND		7.0	0.52	ug/L			05/13/13 07:02	1
Methane	ND		4.0	0.22	ug/L			05/13/13 07:02	1

Lab Sample ID: LCS 480-118175/3
Matrix: Water
Analysis Batch: 118175

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.4	14.6		ug/L		101	67 - 128
Ethene	13.5	14.0		ug/L		104	60 - 137
Methane	7.69	7.30		ug/L		95	48 - 174

Lab Sample ID: LCSD 480-118175/4
Matrix: Water
Analysis Batch: 118175

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	14.4	13.6		ug/L		94	67 - 128	7	50
Ethene	13.5	12.9		ug/L		96	60 - 137	8	50
Methane	7.69	6.73		ug/L		88	48 - 174	8	50

Lab Sample ID: MB 200-55564/3
Matrix: Water
Analysis Batch: 55564

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			05/15/13 12:05	1

Lab Sample ID: LCS 200-55564/2
Matrix: Water
Analysis Batch: 55564

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	4460		ug/L		89	70 - 130

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 480-118080/1-A
Matrix: Water
Analysis Batch: 118704

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 118080

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/11/13 10:10	05/14/13 15:22	1
Magnesium	ND		0.20	0.043	mg/L		05/11/13 10:10	05/14/13 15:22	1
Manganese	ND		0.0030	0.00040	mg/L		05/11/13 10:10	05/14/13 15:22	1
Potassium	ND		0.50	0.10	mg/L		05/11/13 10:10	05/14/13 15:22	1
Sodium	ND		1.0	0.32	mg/L		05/11/13 10:10	05/14/13 15:22	1

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

Lab Sample ID: LCS 480-118080/2-A
Matrix: Water
Analysis Batch: 118704

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118080

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.70		mg/L		107	80 - 120
Magnesium	10.0	10.62		mg/L		106	80 - 120
Manganese	0.200	0.214		mg/L		107	80 - 120
Potassium	10.0	10.54		mg/L		105	80 - 120
Sodium	10.0	10.21		mg/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-118750/4
Matrix: Water
Analysis Batch: 118750

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			05/15/13 14:29	1
Sulfate	ND		2.0	0.35	mg/L			05/15/13 14:29	1

Lab Sample ID: LCS 480-118750/3
Matrix: Water
Analysis Batch: 118750

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	19.89		mg/L		99	90 - 110
Sulfate	20.0	20.93		mg/L		105	90 - 110

Lab Sample ID: MB 480-119048/4
Matrix: Water
Analysis Batch: 119048

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			05/16/13 18:47	1
Sulfate	0.864	J	2.0	0.35	mg/L			05/16/13 18:47	1

Lab Sample ID: LCS 480-119048/3
Matrix: Water
Analysis Batch: 119048

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	19.77		mg/L		99	90 - 110
Sulfate	20.0	19.50		mg/L		97	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-118347/75
Matrix: Water
Analysis Batch: 118347

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			05/13/13 16:34	1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-118347/76
Matrix: Water
Analysis Batch: 118347

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	0.968		mg/L		97	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-118053/3
Matrix: Water
Analysis Batch: 118053

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			05/10/13 20:39	1

Lab Sample ID: LCS 480-118053/4
Matrix: Water
Analysis Batch: 118053

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	1.56		mg/L		104	90 - 110

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-118411/3
Matrix: Water
Analysis Batch: 118411

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			05/13/13 19:25	1

Lab Sample ID: LCS 480-118411/4
Matrix: Water
Analysis Batch: 118411

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	63.89		mg/L		106	90 - 110

Lab Sample ID: 480-38110-1 DU
Matrix: Water
Analysis Batch: 118411

Client Sample ID: MW-9-101-A-051013
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	2.6		2.69		mg/L		2	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-118636/6
Matrix: Water
Analysis Batch: 118636

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			05/15/13 04:02	1

Lab Sample ID: LCS 480-118636/7
Matrix: Water
Analysis Batch: 118636

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	94.40		mg/L		94	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-118546/3
Matrix: Water
Analysis Batch: 118546

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			05/14/13 12:21	1

Lab Sample ID: LCS 480-118546/4
Matrix: Water
Analysis Batch: 118546

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	0.749		mg/L		100	90 - 110

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography

Lab Sample ID: MB 480-118269/4
Matrix: Water
Analysis Batch: 118269

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/13/13 14:47	1
Formic-acid	ND		1.0	0.11	mg/L			05/13/13 14:47	1
Lactic acid	ND		1.0	0.14	mg/L			05/13/13 14:47	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/13/13 14:47	1
Propionic acid	ND		1.0	0.17	mg/L			05/13/13 14:47	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/13/13 14:47	1

Lab Sample ID: LCS 480-118269/3
Matrix: Water
Analysis Batch: 118269

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	10.06		mg/L		101	80 - 120
Formic-acid	10.0	9.92		mg/L		99	80 - 120
Lactic acid	10.0	9.89		mg/L		99	80 - 120
n-Butyric Acid	10.0	9.62		mg/L		96	80 - 120
Propionic acid	10.0	10.22		mg/L		102	80 - 120

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

TestAmerica Job ID: 480-38110-1

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-118269/3
Matrix: Water
Analysis Batch: 118269

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pyruvic Acid	10.0	9.58		mg/L		96	80 - 120

GC/MS VOA

Analysis Batch: 118983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	8260B	
480-38110-2	TRIP BLANK	Total/NA	Water	8260B	
LCS 480-118983/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 480-118983/6	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 480-118983/5	Method Blank	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 55564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	RSK-175	
LCS 200-55564/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-55564/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 118175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	RSK-175	
LCS 480-118175/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-118175/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-118175/2	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 118080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	3005A	
LCS 480-118080/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-118080/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 118704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	6010B	118080
LCS 480-118080/2-A	Lab Control Sample	Total/NA	Water	6010B	118080
MB 480-118080/1-A	Method Blank	Total/NA	Water	6010B	118080

General Chemistry

Analysis Batch: 118053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	353.2	
LCS 480-118053/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-118053/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 118054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	353.2	

Analysis Batch: 118269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	VFA-IC	

General Chemistry (Continued)

Analysis Batch: 118269 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-118269/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-118269/4	Method Blank	Total/NA	Water	VFA-IC	

Analysis Batch: 118347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	350.1	
LCS 480-118347/76	Lab Control Sample	Total/NA	Water	350.1	
MB 480-118347/75	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 118411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	9060	
480-38110-1 DU	MW-9-101-A-051013	Total/NA	Water	9060	
LCS 480-118411/4	Lab Control Sample	Total/NA	Water	9060	
MB 480-118411/3	Method Blank	Total/NA	Water	9060	

Analysis Batch: 118546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	SM 4500 S2 D	
LCS 480-118546/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-118546/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 118636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	SM 2320B	
LCS 480-118636/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-118636/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 118750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	300.0	
LCS 480-118750/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-118750/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 119048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38110-1	MW-9-101-A-051013	Total/NA	Water	300.0	
LCS 480-119048/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-119048/4	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

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

TestAmerica Job ID: 480-38110-1

Client Sample ID: MW-9-101-A-051013

Lab Sample ID: 480-38110-1

Date Collected: 05/10/13 10:20

Matrix: Water

Date Received: 05/10/13 17:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	118983	05/16/13 12:24	CDC	TAL BUF
Total/NA	Analysis	RSK-175		1	55564	05/15/13 15:38	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	118175	05/13/13 08:43	MN	TAL BUF
Total/NA	Prep	3005A			118080	05/11/13 10:10	SS	TAL BUF
Total/NA	Analysis	6010B		1	118704	05/14/13 16:33	LH	TAL BUF
Total/NA	Analysis	353.2		1	118053	05/10/13 20:59	KS	TAL BUF
Total/NA	Analysis	353.2		1	118054	05/10/13 20:59	KS	TAL BUF
Total/NA	Analysis	VFA-IC		1	118269	05/13/13 20:08	KC	TAL BUF
Total/NA	Analysis	350.1		1	118347	05/13/13 16:48	SB	TAL BUF
Total/NA	Analysis	9060		1	118411	05/13/13 22:28	KC	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118546	05/14/13 12:53	KJ	TAL BUF
Total/NA	Analysis	SM 2320B		1	118636	05/15/13 04:39	LK	TAL BUF
Total/NA	Analysis	300.0		20	118750	05/15/13 15:20	KAC	TAL BUF
Total/NA	Analysis	300.0		50	119048	05/16/13 19:01	KAC	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-38110-2

Date Collected: 05/10/13 00:00

Matrix: Water

Date Received: 05/10/13 17:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	118983	05/16/13 12:52	CDC	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: 480-38110-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAP	9	1169CA	09-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-14
Georgia	State Program	4	956	06-30-13
Georgia	State Program	4	956	03-31-14
Illinois	NELAP	5	200003	09-30-13
Iowa	State Program	7	374	03-15-15
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-13
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13 *
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-13
New Hampshire	NELAP	1	2337	11-17-13
New Jersey	NELAP	2	NY455	06-30-13
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAP	10	NY200003	06-09-13
Pennsylvania	NELAP	3	68-00281	07-31-13
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-13
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	09-30-13
Wisconsin	State Program	5	998310390	08-31-13

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	09-30-13
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-13
L-A-B	DoD ELAP		L2336	10-26-13
Louisiana	NELAP	6	176292	06-30-13
Minnesota	NELAP	5	050-999-436	12-31-13
New Hampshire	NELAP	1	2006	12-18-13
New Jersey	NELAP	2	VT972	06-30-13
New York	NELAP	2	10391	04-01-14
Pennsylvania	NELAP	3	68-00489	04-30-14
USDA	Federal		P330-11-00093	02-17-14

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

Certification Summary

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

TestAmerica Job ID: 480-38110-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Vermont	State Program	1	VT-4000	12-31-13
Virginia	NELAP	3	460209	12-14-13

Method Summary

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

TestAmerica Job ID: 480-38110-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010B	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
9060	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	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.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

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: 480-38110-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-38110-1	MW-9-101-A-051013	Water	05/10/13 10:20	05/10/13 17:40
480-38110-2	TRIP BLANK	Water	05/10/13 00:00	05/10/13 17:40

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days): 3 Weeks			
State, Zip: NY, 14203				
Phone: (716) 685-2300	PO #: 4047065			
Email: christopher.boron@gza.com	WO #: 58507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site: Bldg 10 BCP-SNC 9-32-140	SSOW#: 256015			

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)		RSK_175_CO2 - Carbon dioxide	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX		Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N			
MW-9-101-A-057013	5/10/13	1020	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X			
				Water																
Trip Blank											X									

480-38110 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
1	Thomas Bohlen	5/10/13 1740			5/10/13 1740	TA BUFFALO
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 5.3

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: 480-10074.1
Client Contact: Shipping/Receiving	Phone	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmenca Laboratories, Inc.				Job #: 480-38110-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/22/2013			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel)	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-9-101-A-051013 (480-38110-1)	5/10/13	10:20 Eastern		Water			X	3	

480-38110 Chain of Custody

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:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by:	5-13-13 1600	TA Buffalo		5/14/13 10:15	CHRVO
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.

5/22/2013

ORIGIN ID: DKKA (716) 691-2600
KEN KINECKI
TESTAMERICA
10 HAZELWOOD DR

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 13MAY13
ACTWGT: 17.0 LB MAN
CAD: 735603/CAFE2608
DIMS: 19x15x10 IN

BILL RECIPIENT

TO MARK PHILLIPS
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF: BURLINGTON
DEPT: SAMPLE CONTROL

FedEx Express

TRK# 0201 4485 0264 3870

TUE - 14 MAY 10:30A
PRIORITY OVERNIGHT

ZF BTVA

05403
VT-US BTV

Part # 154254-354 RITZ 04/13

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-38110-1

Login Number: 38110

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
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: 480-38110-1

Login Number: 38110
List Number: 1
Creator: Marion, Greg T

List Source: TestAmerica Burlington
List Creation: 05/14/13 01:28 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	709028
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.0ºC IR GUN ID 181/CF=0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-38111-1

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:
5/21/2013 10:18:02 AM
Rebecca Jones, Project Mgmt. Assistant
rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I
melissa.deyo@testamericainc.com

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
Surrogate Summary 9
QC Sample Results 10
QC Association Summary 18
Lab Chronicle 21
Certification Summary 23
Method Summary 25
Sample Summary 26
Chain of Custody 27
Receipt Checklists 30

Definitions/Glossary

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

TestAmerica Job ID: 480-38111-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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)
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)

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

TestAmerica Job ID: 480-38111-1

Job ID: 480-38111-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-38111-1

Receipt
The samples were received on 5/10/2013 5:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.3º C.

GC/MS VOA
Method(s) 8260B: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: (480-38111-1 MS), (480-38111-1 MSD), MW-8-003-B-051013 (480-38111-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

IC
Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-8-003-B-051013 (480-38111-1). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: (480-38111-1 MS), (480-38111-1 MSD), MW-8-003-B-051013 (480-38111-1), MW-8-1-051013 (480-38111-2). Elevated reporting limits (RLs) are provided.

Method(s) VFA-IC: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 118269 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
Method(s) SM 4500 S2 D: Due to the matrix, the initial volume(s) used for the following sample(s) deviated from the standard procedure: MW-8-1-051013 (480-38111-2). The reporting limits (RLs) have been adjusted proportionately.

No other analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 480-38111-1

Client Sample ID: MW-8-003-B-051013 — Lab Sample ID: 480-38111-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	790		25	20	ug/L	25		8260B	Total/NA
Tetrachloroethene	880		25	9.0	ug/L	25		8260B	Total/NA
Trichloroethene	390		25	12	ug/L	25		8260B	Total/NA
Vinyl chloride	120		25	23	ug/L	25		8260B	Total/NA
Ethane	0.82	J	7.5	0.49	ug/L	1		RSK-175	Total/NA
Ethene	7.4		7.0	0.52	ug/L	1		RSK-175	Total/NA
Methane	55		4.0	0.22	ug/L	1		RSK-175	Total/NA
Iron	0.24		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	39.9		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.54		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	9.0		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	3020		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	4190		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	178		20.0	3.5	mg/L	10		300.0	Total/NA
Ammonia	0.15		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.48		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	2.0		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	187		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	1600		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-8-1-051013 — Lab Sample ID: 480-38111-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethane	13		7.5	0.49	ug/L	1		RSK-175	Total/NA
Methane	110		4.0	0.22	ug/L	1		RSK-175	Total/NA
Iron	0.43		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	130		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.18		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	21.2		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	858		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	1710		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	644		100	17.5	mg/L	50		300.0	Total/NA
Ammonia	1.6		0.20	0.090	mg/L	10		350.1	Total/NA
Total Organic Carbon	0.86	J	1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	318		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Sulfide	0.82		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	14000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-38111-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

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

TestAmerica Job ID: 480-38111-1

Client Sample ID: MW-8-003-B-051013
Date Collected: 05/10/13 13:00
Date Received: 05/10/13 17:40

Lab Sample ID: 480-38111-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	790		25	20	ug/L			05/17/13 14:46	25
Tetrachloroethene	880		25	9.0	ug/L			05/17/13 14:46	25
trans-1,2-Dichloroethene	ND		25	23	ug/L			05/17/13 14:46	25
Trichloroethene	390		25	12	ug/L			05/17/13 14:46	25
Vinyl chloride	120		25	23	ug/L			05/17/13 14:46	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*66 - 137*		*05/17/13 14:46*	*25*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/17/13 14:46*	*25*
Toluene-d8 (Surr)	*100*		*71 - 126*		*05/17/13 14:46*	*25*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.82	J	7.5	0.49	ug/L			05/13/13 09:58	1
Ethene	7.4		7.0	0.52	ug/L			05/13/13 09:58	1
Methane	55		4.0	0.22	ug/L			05/13/13 09:58	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	1600		1000	1000	ug/L			05/15/13 15:49	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.24		0.050	0.019	mg/L		05/11/13 10:10	05/14/13 16:23	1
Magnesium	39.9		0.20	0.043	mg/L		05/11/13 10:10	05/14/13 16:23	1
Manganese	0.54		0.0030	0.00040	mg/L		05/11/13 10:10	05/14/13 16:23	1
Potassium	9.0		0.50	0.10	mg/L		05/11/13 10:10	05/14/13 16:23	1
Sodium	3020		1.0	0.32	mg/L		05/11/13 10:10	05/14/13 16:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4190		50.0	28.2	mg/L			05/15/13 15:30	100
Sulfate	178		20.0	3.5	mg/L			05/14/13 14:42	10
Ammonia	0.15		0.020	0.0090	mg/L			05/13/13 16:49	1
Nitrate	0.48		0.050	0.020	mg/L			05/10/13 21:00	1
Nitrite	ND		0.050	0.020	mg/L			05/10/13 21:00	1
Total Organic Carbon	2.0		1.0	0.43	mg/L			05/13/13 23:29	1
Total Alkalinity	187		5.0	0.79	mg/L			05/15/13 04:14	1
Sulfide	ND		0.10	0.052	mg/L			05/14/13 12:56	1
Acetic acid	ND		1.0	0.15	mg/L			05/13/13 20:37	1
Formic-acid	ND		1.0	0.11	mg/L			05/13/13 20:37	1
Lactic acid	ND		1.0	0.14	mg/L			05/13/13 20:37	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/13/13 20:37	1
Propionic acid	ND		1.0	0.17	mg/L			05/13/13 20:37	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/13/13 20:37	1

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

TestAmerica Job ID: 480-38111-1

Client Sample ID: MW-8-1-051013
Date Collected: 05/10/13 16:40
Date Received: 05/10/13 17:40

Lab Sample ID: 480-38111-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/17/13 15:10	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 15:10	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 15:10	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 15:10	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 15:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*66 - 137*		*05/17/13 15:10*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*05/17/13 15:10*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/17/13 15:10*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**13**		7.5	0.49	ug/L			05/13/13 14:25	1
Ethene	ND		7.0	0.52	ug/L			05/13/13 14:25	1
Methane	**110**		4.0	0.22	ug/L			05/13/13 14:25	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**14000**		1000	1000	ug/L			05/15/13 15:59	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.43**		0.050	0.019	mg/L		05/11/13 10:10	05/14/13 16:26	1
Magnesium	**130**		0.20	0.043	mg/L		05/11/13 10:10	05/14/13 16:26	1
Manganese	**0.18**		0.0030	0.00040	mg/L		05/11/13 10:10	05/14/13 16:26	1
Potassium	**21.2**		0.50	0.10	mg/L		05/11/13 10:10	05/14/13 16:26	1
Sodium	**858**		1.0	0.32	mg/L		05/11/13 10:10	05/14/13 16:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1710**		25.0	14.1	mg/L			05/15/13 16:21	50
Sulfate	**644**		100	17.5	mg/L			05/15/13 16:21	50
Ammonia	**1.6**		0.20	0.090	mg/L			05/13/13 16:50	10
Nitrate	ND		0.050	0.020	mg/L			05/10/13 20:10	1
Nitrite	ND		0.050	0.020	mg/L			05/10/13 20:10	1
Total Organic Carbon	**0.86**	**J**	1.0	0.43	mg/L			05/14/13 03:02	1
Total Alkalinity	**318**		5.0	0.79	mg/L			05/15/13 04:27	1
Sulfide	**0.82**		0.50	0.26	mg/L			05/14/13 13:06	5
Acetic acid	ND		1.0	0.15	mg/L			05/13/13 21:06	1
Formic-acid	ND		1.0	0.11	mg/L			05/13/13 21:06	1
Lactic acid	ND		1.0	0.14	mg/L			05/13/13 21:06	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/13/13 21:06	1
Propionic acid	ND		1.0	0.17	mg/L			05/13/13 21:06	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/13/13 21:06	1

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

TestAmerica Job ID: 480-38111-1

Client Sample ID: TRIP BLANK
Date Collected: 05/10/13 00:00
Date Received: 05/10/13 17:40

Lab Sample ID: 480-38111-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/17/13 15:35	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 15:35	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 15:35	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 15:35	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 15:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*66 - 137*		*05/17/13 15:35*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*05/17/13 15:35*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/17/13 15:35*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-38111-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		12DCE	BFB	TOL
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)
480-38111-1	MW-8-003-B-051013	110	98	100
480-38111-1 MS	MW-8-003-B-051013	114	103	97
480-38111-1 MSD	MW-8-003-B-051013	111	102	97
480-38111-2	MW-8-1-051013	112	97	97
480-38111-3	TRIP BLANK	114	96	96
LCS 480-119249/3	Lab Control Sample	101	102	103
MB 480-119249/4	Method Blank	97	95	100

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-119249/4
Matrix: Water
Analysis Batch: 119249

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			05/17/13 12:52	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 12:52	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 12:52	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 12:52	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 12:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*66 - 137*		*05/17/13 12:52*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*05/17/13 12:52*	*1*
Toluene-d8 (Surr)	*100*		*71 - 126*		*05/17/13 12:52*	*1*

Lab Sample ID: LCS 480-119249/3
Matrix: Water
Analysis Batch: 119249

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	25.5		ug/L		102	74 - 122
trans-1,2-Dichloroethene	25.0	24.5		ug/L		98	73 - 127
Trichloroethene	25.0	24.0		ug/L		96	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*
Toluene-d8 (Surr)	*103*		*71 - 126*

Lab Sample ID: 480-38111-1 MS
Matrix: Water
Analysis Batch: 119249

Client Sample ID: MW-8-003-B-051013
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	790		625	1360		ug/L		91	74 - 124
Tetrachloroethene	880		625	1410		ug/L		84	74 - 122
trans-1,2-Dichloroethene	ND		625	648		ug/L		104	73 - 127
Trichloroethene	390		625	1020		ug/L		101	74 - 123

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*114*		*66 - 137*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*
Toluene-d8 (Surr)	*97*		*71 - 126*

Lab Sample ID: 480-38111-1 MSD
Matrix: Water
Analysis Batch: 119249

Client Sample ID: MW-8-003-B-051013
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	790		625	1320		ug/L		84	74 - 124	3	15

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

Lab Sample ID: 480-38111-1 MSD
Matrix: Water
Analysis Batch: 119249

Client Sample ID: MW-8-003-B-051013
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	880		625	1360		ug/L		77	74 - 122	3	20
trans-1,2-Dichloroethene	ND		625	616		ug/L		99	73 - 127	5	20
Trichloroethene	390		625	984		ug/L		96	74 - 123	3	16

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*66 - 137*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*
Toluene-d8 (Surr)	*97*		*71 - 126*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-118175/2
Matrix: Water
Analysis Batch: 118175

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	0.49	ug/L			05/13/13 07:02	1
Ethene	ND		7.0	0.52	ug/L			05/13/13 07:02	1
Methane	ND		4.0	0.22	ug/L			05/13/13 07:02	1

Lab Sample ID: LCS 480-118175/3
Matrix: Water
Analysis Batch: 118175

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.4	14.6		ug/L		101	67 - 128
Ethene	13.5	14.0		ug/L		104	60 - 137
Methane	7.69	7.30		ug/L		95	48 - 174

Lab Sample ID: LCSD 480-118175/4
Matrix: Water
Analysis Batch: 118175

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	14.4	13.6		ug/L		94	67 - 128	7	50
Ethene	13.5	12.9		ug/L		96	60 - 137	8	50
Methane	7.69	6.73		ug/L		88	48 - 174	8	50

Lab Sample ID: MB 200-55564/3
Matrix: Water
Analysis Batch: 55564

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			05/15/13 12:05	1

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

Lab Sample ID: LCS 200-55564/2
Matrix: Water
Analysis Batch: 55564

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	4460		ug/L		89	70 - 130

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 480-118080/1-A
Matrix: Water
Analysis Batch: 118704

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 118080

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/11/13 10:10	05/14/13 15:22	1
Magnesium	ND		0.20	0.043	mg/L		05/11/13 10:10	05/14/13 15:22	1
Manganese	ND		0.0030	0.00040	mg/L		05/11/13 10:10	05/14/13 15:22	1
Potassium	ND		0.50	0.10	mg/L		05/11/13 10:10	05/14/13 15:22	1
Sodium	ND		1.0	0.32	mg/L		05/11/13 10:10	05/14/13 15:22	1

Lab Sample ID: LCS 480-118080/2-A
Matrix: Water
Analysis Batch: 118704

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118080

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.70		mg/L		107	80 - 120
Magnesium	10.0	10.62		mg/L		106	80 - 120
Manganese	0.200	0.214		mg/L		107	80 - 120
Potassium	10.0	10.54		mg/L		105	80 - 120
Sodium	10.0	10.21		mg/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-118282/76
Matrix: Water
Analysis Batch: 118282

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			05/14/13 12:00	1
Sulfate	ND		2.0	0.35	mg/L			05/14/13 12:00	1

Lab Sample ID: LCS 480-118282/75
Matrix: Water
Analysis Batch: 118282

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	19.38		mg/L		97	90 - 110
Sulfate	20.0	19.56		mg/L		98	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 480-118750/4
Matrix: Water
Analysis Batch: 118750

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			05/15/13 14:29	1
Sulfate	ND		2.0	0.35	mg/L			05/15/13 14:29	1

Lab Sample ID: LCS 480-118750/3
Matrix: Water
Analysis Batch: 118750

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	19.89		mg/L		99	90 - 110
Sulfate	20.0	20.93		mg/L		105	90 - 110

Lab Sample ID: 480-38111-1 MS
Matrix: Water
Analysis Batch: 118750

Client Sample ID: MW-8-003-B-051013
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4190		2500	6680		mg/L		99	90 - 110

Lab Sample ID: 480-38111-1 MSD
Matrix: Water
Analysis Batch: 118750

Client Sample ID: MW-8-003-B-051013
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4190		2500	6780		mg/L		103	90 - 110	1	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-118347/174
Matrix: Water
Analysis Batch: 118347

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			05/13/13 18:25	1

Lab Sample ID: MB 480-118347/75
Matrix: Water
Analysis Batch: 118347

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			05/13/13 16:34	1

Lab Sample ID: LCS 480-118347/175
Matrix: Water
Analysis Batch: 118347

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	0.975		mg/L		97	90 - 110

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-118347/76
Matrix: Water
Analysis Batch: 118347

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	0.968		mg/L		97	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-118053/3
Matrix: Water
Analysis Batch: 118053

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			05/10/13 20:39	1

Lab Sample ID: LCS 480-118053/4
Matrix: Water
Analysis Batch: 118053

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	1.56		mg/L		104	90 - 110

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-118411/3
Matrix: Water
Analysis Batch: 118411

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			05/13/13 19:25	1

Lab Sample ID: LCS 480-118411/4
Matrix: Water
Analysis Batch: 118411

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	63.89		mg/L		106	90 - 110

Lab Sample ID: 480-38111-1 MS
Matrix: Water
Analysis Batch: 118411

Client Sample ID: MW-8-003-B-051013
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2.0		20.3	16.22		mg/L		70	54 - 131

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-118636/6
Matrix: Water
Analysis Batch: 118636

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			05/15/13 04:02	1

Lab Sample ID: LCS 480-118636/7
Matrix: Water
Analysis Batch: 118636

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	94.40		mg/L		94	90 - 110

Lab Sample ID: 480-38111-2 MS
Matrix: Water
Analysis Batch: 118636

Client Sample ID: MW-8-1-051013
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	318		100	378.4		mg/L		61	42 - 116

Lab Sample ID: 480-38111-1 DU
Matrix: Water
Analysis Batch: 118636

Client Sample ID: MW-8-003-B-051013
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	187		188.2		mg/L		0.5	20

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-118546/27
Matrix: Water
Analysis Batch: 118546

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			05/14/13 13:21	1

Lab Sample ID: MB 480-118546/3
Matrix: Water
Analysis Batch: 118546

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			05/14/13 12:21	1

Lab Sample ID: LCS 480-118546/28
Matrix: Water
Analysis Batch: 118546

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	0.751		mg/L		100	90 - 110

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: LCS 480-118546/4
Matrix: Water
Analysis Batch: 118546

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	0.749		mg/L		100	90 - 110

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography

Lab Sample ID: MB 480-118269/4
Matrix: Water
Analysis Batch: 118269

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/13/13 14:47	1
Formic-acid	ND		1.0	0.11	mg/L			05/13/13 14:47	1
Lactic acid	ND		1.0	0.14	mg/L			05/13/13 14:47	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/13/13 14:47	1
Propionic acid	ND		1.0	0.17	mg/L			05/13/13 14:47	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/13/13 14:47	1

Lab Sample ID: LCS 480-118269/3
Matrix: Water
Analysis Batch: 118269

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	10.06		mg/L		101	80 - 120
Formic-acid	10.0	9.92		mg/L		99	80 - 120
Lactic acid	10.0	9.89		mg/L		99	80 - 120
n-Butyric Acid	10.0	9.62		mg/L		96	80 - 120
Propionic acid	10.0	10.22		mg/L		102	80 - 120
Pyruvic Acid	10.0	9.58		mg/L		96	80 - 120

Lab Sample ID: 480-38111-2 MS
Matrix: Water
Analysis Batch: 118269

Client Sample ID: MW-8-1-051013
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	ND		10.0	9.79		mg/L		98	80 - 120
Formic-acid	ND		10.0	10.04		mg/L		100	80 - 120
Lactic acid	ND		10.0	10.00		mg/L		100	80 - 120
n-Butyric Acid	ND		10.0	8.68		mg/L		87	80 - 120
Propionic acid	ND		10.0	9.06		mg/L		91	80 - 120
Pyruvic Acid	ND		10.0	5.87	F	mg/L		59	80 - 120

Lab Sample ID: 480-38111-2 MSD
Matrix: Water
Analysis Batch: 118269

Client Sample ID: MW-8-1-051013
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetic acid	ND		10.0	9.60		mg/L		96	80 - 120	2	20
Formic-acid	ND		10.0	9.96		mg/L		100	80 - 120	1	20
Lactic acid	ND		10.0	9.93		mg/L		99	80 - 120	1	20
n-Butyric Acid	ND		10.0	8.14		mg/L		81	80 - 120	6	20

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

TestAmerica Job ID: 480-38111-1

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography (Continued)

Lab Sample ID: 480-38111-2 MSD
Matrix: Water
Analysis Batch: 118269

Client Sample ID: MW-8-1-051013
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Propionic acid	ND		10.0	8.46		mg/L		85	80 - 120	7	20
Pyruvic Acid	ND		10.0	5.79	F	mg/L		58	80 - 120	1	20

GC/MS VOA

Analysis Batch: 119249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	8260B	
480-38111-1 MS	MW-8-003-B-051013	Total/NA	Water	8260B	
480-38111-1 MSD	MW-8-003-B-051013	Total/NA	Water	8260B	
480-38111-2	MW-8-1-051013	Total/NA	Water	8260B	
480-38111-3	TRIP BLANK	Total/NA	Water	8260B	
LCS 480-119249/3	Lab Control Sample	Total/NA	Water	8260B	
MB 480-119249/4	Method Blank	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 55564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	RSK-175	
480-38111-2	MW-8-1-051013	Total/NA	Water	RSK-175	
LCS 200-55564/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-55564/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 118175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	RSK-175	
480-38111-2	MW-8-1-051013	Total/NA	Water	RSK-175	
LCS 480-118175/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-118175/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-118175/2	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 118080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	3005A	
480-38111-2	MW-8-1-051013	Total/NA	Water	3005A	
LCS 480-118080/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-118080/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 118704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	6010B	118080
480-38111-2	MW-8-1-051013	Total/NA	Water	6010B	118080
LCS 480-118080/2-A	Lab Control Sample	Total/NA	Water	6010B	118080
MB 480-118080/1-A	Method Blank	Total/NA	Water	6010B	118080

General Chemistry

Analysis Batch: 118053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	353.2	
LCS 480-118053/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-118053/3	Method Blank	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 118054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	353.2	
480-38111-2	MW-8-1-051013	Total/NA	Water	353.2	

Analysis Batch: 118055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-2	MW-8-1-051013	Total/NA	Water	353.2	

Analysis Batch: 118269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	VFA-IC	
480-38111-2	MW-8-1-051013	Total/NA	Water	VFA-IC	
480-38111-2 MS	MW-8-1-051013	Total/NA	Water	VFA-IC	
480-38111-2 MSD	MW-8-1-051013	Total/NA	Water	VFA-IC	
LCS 480-118269/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-118269/4	Method Blank	Total/NA	Water	VFA-IC	

Analysis Batch: 118282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	300.0	
LCS 480-118282/75	Lab Control Sample	Total/NA	Water	300.0	
MB 480-118282/76	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 118347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	350.1	
480-38111-2	MW-8-1-051013	Total/NA	Water	350.1	
LCS 480-118347/175	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-118347/76	Lab Control Sample	Total/NA	Water	350.1	
MB 480-118347/174	Method Blank	Total/NA	Water	350.1	
MB 480-118347/75	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 118411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	9060	
480-38111-1 MS	MW-8-003-B-051013	Total/NA	Water	9060	
480-38111-2	MW-8-1-051013	Total/NA	Water	9060	
LCS 480-118411/4	Lab Control Sample	Total/NA	Water	9060	
MB 480-118411/3	Method Blank	Total/NA	Water	9060	

Analysis Batch: 118546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	SM 4500 S2 D	
480-38111-2	MW-8-1-051013	Total/NA	Water	SM 4500 S2 D	
LCS 480-118546/28	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCS 480-118546/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-118546/27	Method Blank	Total/NA	Water	SM 4500 S2 D	
MB 480-118546/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 118636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 118636 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1 DU	MW-8-003-B-051013	Total/NA	Water	SM 2320B	
480-38111-2	MW-8-1-051013	Total/NA	Water	SM 2320B	
480-38111-2 MS	MW-8-1-051013	Total/NA	Water	SM 2320B	
LCS 480-118636/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-118636/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 118750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38111-1	MW-8-003-B-051013	Total/NA	Water	300.0	
480-38111-1 MS	MW-8-003-B-051013	Total/NA	Water	300.0	
480-38111-1 MSD	MW-8-003-B-051013	Total/NA	Water	300.0	
480-38111-2	MW-8-1-051013	Total/NA	Water	300.0	
LCS 480-118750/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-118750/4	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

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

TestAmerica Job ID: 480-38111-1

Client Sample ID: MW-8-003-B-051013

Lab Sample ID: 480-38111-1

Date Collected: 05/10/13 13:00

Matrix: Water

Date Received: 05/10/13 17:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		25	119249	05/17/13 14:46	ND	TAL BUF
Total/NA	Analysis	RSK-175		1	55564	05/15/13 15:49	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	118175	05/13/13 09:58	MN	TAL BUF
Total/NA	Prep	3005A			118080	05/11/13 10:10	SS	TAL BUF
Total/NA	Analysis	6010B		1	118704	05/14/13 16:23	LH	TAL BUF
Total/NA	Analysis	353.2		1	118053	05/10/13 21:00	KS	TAL BUF
Total/NA	Analysis	353.2		1	118054	05/10/13 21:00	KS	TAL BUF
Total/NA	Analysis	VFA-IC		1	118269	05/13/13 20:37	KC	TAL BUF
Total/NA	Analysis	300.0		10	118282	05/14/13 14:42	KC	TAL BUF
Total/NA	Analysis	350.1		1	118347	05/13/13 16:49	SB	TAL BUF
Total/NA	Analysis	9060		1	118411	05/13/13 23:29	KC	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118546	05/14/13 12:56	KJ	TAL BUF
Total/NA	Analysis	SM 2320B		1	118636	05/15/13 04:14	LK	TAL BUF
Total/NA	Analysis	300.0		100	118750	05/15/13 15:30	KAC	TAL BUF

Client Sample ID: MW-8-1-051013

Lab Sample ID: 480-38111-2

Date Collected: 05/10/13 16:40

Matrix: Water

Date Received: 05/10/13 17:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119249	05/17/13 15:10	ND	TAL BUF
Total/NA	Analysis	RSK-175		1	55564	05/15/13 15:59	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	118175	05/13/13 14:25	MN	TAL BUF
Total/NA	Prep	3005A			118080	05/11/13 10:10	SS	TAL BUF
Total/NA	Analysis	6010B		1	118704	05/14/13 16:26	LH	TAL BUF
Total/NA	Analysis	353.2		1	118054	05/10/13 20:10	KS	TAL BUF
Total/NA	Analysis	353.2		1	118055	05/10/13 20:10	KS	TAL BUF
Total/NA	Analysis	VFA-IC		1	118269	05/13/13 21:06	KC	TAL BUF
Total/NA	Analysis	350.1		10	118347	05/13/13 16:50	SB	TAL BUF
Total/NA	Analysis	9060		1	118411	05/14/13 03:02	KC	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		5	118546	05/14/13 13:06	KJ	TAL BUF
Total/NA	Analysis	SM 2320B		1	118636	05/15/13 04:27	LK	TAL BUF
Total/NA	Analysis	300.0		50	118750	05/15/13 16:21	KAC	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-38111-3

Date Collected: 05/10/13 00:00

Matrix: Water

Date Received: 05/10/13 17:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119249	05/17/13 15:35	ND	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-38111-1

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: 480-38111-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAP	9	1169CA	09-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-14
Georgia	State Program	4	956	06-30-13
Georgia	State Program	4	956	03-31-14
Illinois	NELAP	5	200003	09-30-13
Iowa	State Program	7	374	03-15-15
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-13
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13 *
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-13
New Hampshire	NELAP	1	2337	11-17-13
New Jersey	NELAP	2	NY455	06-30-13
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAP	10	NY200003	06-09-13
Pennsylvania	NELAP	3	68-00281	07-31-13
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-13
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	09-30-13
Wisconsin	State Program	5	998310390	08-31-13

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	09-30-13
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-13
L-A-B	DoD ELAP		L2336	10-26-13
Louisiana	NELAP	6	176292	06-30-13
Minnesota	NELAP	5	050-999-436	12-31-13
New Hampshire	NELAP	1	2006	12-18-13
New Jersey	NELAP	2	VT972	06-30-13
New York	NELAP	2	10391	04-01-14
Pennsylvania	NELAP	3	68-00489	04-30-14
USDA	Federal		P330-11-00093	02-17-14

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

Certification Summary

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

TestAmerica Job ID: 480-38111-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Vermont	State Program	1	VT-4000	12-31-13
Virginia	NELAP	3	460209	12-14-13

Method Summary

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

TestAmerica Job ID: 480-38111-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010B	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
9060	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	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.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

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: 480-38111-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-38111-1	MW-8-003-B-051013	Water	05/10/13 13:00	05/10/13 17:40
480-38111-2	MW-8-1-051013	Water	05/10/13 16:40	05/10/13 17:40
480-38111-3	TRIP BLANK	Water	05/10/13 00:00	05/10/13 17:40

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days): 3 Weeks			
State, Zip: NY, 14203				
Phone: (716) 685-2300	PO #: 4047065			
Email: christopher.boron@gza.com	WO #: 58507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site: Bldg 8 BCP Site 9-32-139	SSOW#: 256015			

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)		RSK_175_CO2 - Carbon dioxide	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX		Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N			
MW-8-003-B-057013	5/10/13	1300	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X			
MW-8-1-057013	↓	1640	↓	Water	↓	↓	X	X	X	X	X	X	X	X	X	X	X			
Trip Blank											X									

480-38111 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
1	Thomas Bohlen	5/10/13 1740		Barbara J. Robinson	5/10/13 1740	TA Buffalo
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 5.3

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: 480-10075.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-38111-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/22/2013			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel)	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-8-003-B-051013 (480-38111-1)	5/10/13	13:00 Eastern		Water			X	3	
MW-8-1-051013 (480-38111-2)	5/10/13	16:40 Eastern		Water			X	3	

480-38111 Chain of Custody

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: 5-13-13 1600	Company: TA Buffalo	Received by:	Date/Time: 5/14/13 10:15	Company: TABUF
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:

5/21/2013

ORIGIN ID: DKKA (716) 691-2600
KEN KINECKI
TESTAMERICA
10 HAZELWOOD DR

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 13MAY13
ACTWGT: 17.0 LB MAN
CAD: 735603/CAFE2808
DIMS: 19x15x10 IN

BILL RECIPIENT

TO MARK PHILLIPS
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF: BURLINGTON
DEPT: SAMPLE CONTROL

FedEx Express

TUE - 14 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 0201 4485 0264 3870

ZF BTVA

05403
VT - US BTV

Part # 154254-354 RIT2 04/13

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-38111-1

Login Number: 38111

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
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: 480-38111-1

Login Number: 38111
List Number: 1
Creator: Marion, Greg T

List Source: TestAmerica Burlington
List Creation: 05/14/13 01:37 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	709028
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.0ºC IR GUN ID 181/CF=0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-38201-1

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

Melissa Deyo

Authorized for release by:
5/23/2013 12:01:30 PM

Melissa Deyo, Project Manager I
melissa.deyo@testamericainc.com

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
Surrogate Summary 9
QC Sample Results 10
QC Association Summary 17
Lab Chronicle 20
Certification Summary 22
Method Summary 24
Sample Summary 25
Chain of Custody 26
Receipt Checklists 29

Definitions/Glossary

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

TestAmerica Job ID: 480-38201-1

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
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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)
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)

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

TestAmerica Job ID: 480-38201-1

Job ID: 480-38201-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-38201-1

Receipt
The samples were received on 5/13/2013 5:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8º C.

GC/MS VOA
Method 8260B: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-8-2-051313 (480-38201-2 DL). Elevated reporting limits (RLs) are provided.

Method 8260B: The following volatile sample was analyzed with headspace in the sample vial due to multiple injections and/or limited volume: Trip Blank (480-38201-3).

No other analytical or quality issues were noted.

IC
Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-8-4-051313 (480-38201-1), MW-8-2-051313 (480-38201-2) and (480-38201-2 DU). Elevated reporting limits (RLs) are provided.

Method VFA-IC: The matrix spike (MS) recoveries for batch 119572 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

GC VOA
Method RSK-175: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-8-4-051313 (480-38201-1) and MW-8-2-051313 (480-38201-2). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
Method SM 4500 S2 D: The matrix spike (MS) recovery for batch 118546 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria. (480-38201-2 MS)

No other analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 480-38201-1

Client Sample ID: MW-8-4-051313 — Lab Sample ID: 480-38201-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	43		1.0	0.81	ug/L	1		8260B	Total/NA
Trichloroethene	7.9		1.0	0.46	ug/L	1		8260B	Total/NA
Vinyl chloride	12		1.0	0.90	ug/L	1		8260B	Total/NA
Methane	93		20	1.1	ug/L	5		RSK-175	Total/NA
Iron	1.7		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	260		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	1.9		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	8.1		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	1640		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	3540		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	225		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	0.11		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.021	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	0.84	J	1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	328		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-8-2-051313 — Lab Sample ID: 480-38201-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
trans-1,2-Dichloroethene	77		1.0	0.90	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene - DL	7800		130	100	ug/L	125		8260B	Total/NA
Trichloroethene - DL	200		130	58	ug/L	125		8260B	Total/NA
Vinyl chloride - DL	270		130	110	ug/L	125		8260B	Total/NA
Methane	320		200	11	ug/L	50		RSK-175	Total/NA
Iron	0.19		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	45.4		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.021		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	17.6		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	282		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	318		2.5	1.4	mg/L	5		300.0	Total/NA
Sulfate	222		10.0	1.7	mg/L	5		300.0	Total/NA
Ammonia	0.85		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	1.5		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	381		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Sulfide	0.95		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	9300		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 480-38201-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.96	J	1.0	0.81	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

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

TestAmerica Job ID: 480-38201-1

Client Sample ID: MW-8-4-051313
Date Collected: 05/13/13 12:00
Date Received: 05/13/13 17:25

Lab Sample ID: 480-38201-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**43**		1.0	0.81	ug/L			05/17/13 12:09	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 12:09	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 12:09	1
Trichloroethene	**7.9**		1.0	0.46	ug/L			05/17/13 12:09	1
Vinyl chloride	**12**		1.0	0.90	ug/L			05/17/13 12:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*66 - 137*		*05/17/13 12:09*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/17/13 12:09*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/17/13 12:09*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		38	2.5	ug/L			05/14/13 11:05	5
Ethene	ND		35	2.6	ug/L			05/14/13 11:05	5
Methane	**93**		20	1.1	ug/L			05/14/13 11:05	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**15000**		1000	1000	ug/L			05/17/13 08:41	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1.7**		0.050	0.019	mg/L		05/14/13 08:30	05/14/13 20:25	1
Magnesium	**260**		0.20	0.043	mg/L		05/14/13 08:30	05/14/13 20:25	1
Manganese	**1.9**		0.0030	0.00040	mg/L		05/14/13 08:30	05/14/13 20:25	1
Potassium	**8.1**		0.50	0.10	mg/L		05/14/13 08:30	05/14/13 20:25	1
Sodium	**1640**		1.0	0.32	mg/L		05/14/13 08:30	05/14/13 20:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3540**		50.0	28.2	mg/L			05/15/13 19:33	100
Sulfate	**225**		40.0	7.0	mg/L			05/15/13 04:46	20
Ammonia	**0.11**		0.020	0.0090	mg/L			05/14/13 15:30	1
Nitrate	**0.021**	**J**	0.050	0.020	mg/L			05/14/13 19:44	1
Nitrite	ND		0.050	0.020	mg/L			05/14/13 19:44	1
Total Organic Carbon	**0.84**	**J**	1.0	0.43	mg/L			05/18/13 14:29	1
Total Alkalinity	**328**		5.0	0.79	mg/L			05/16/13 02:07	1
Sulfide	ND		0.10	0.052	mg/L			05/14/13 13:01	1
Acetic acid	ND		1.0	0.15	mg/L			05/20/13 22:44	1
Formic-acid	ND		1.0	0.11	mg/L			05/20/13 22:44	1
Lactic acid	ND		1.0	0.14	mg/L			05/20/13 22:44	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/20/13 22:44	1
Propionic acid	ND		1.0	0.17	mg/L			05/20/13 22:44	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/20/13 22:44	1

Client Sample ID: MW-8-2-051313

Date Collected: 05/13/13 16:30
Date Received: 05/13/13 17:25

Lab Sample ID: 480-38201-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 12:36	1
trans-1,2-Dichloroethene	**77**		1.0	0.90	ug/L			05/17/13 12:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/17/13 12:36*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/17/13 12:36*	*1*
Toluene-d8 (Surr)	*101*		*71 - 126*		*05/17/13 12:36*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**7800**		130	100	ug/L			05/17/13 23:11	125
Trichloroethene	**200**		130	58	ug/L			05/17/13 23:11	125
Vinyl chloride	**270**		130	110	ug/L			05/17/13 23:11	125

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*66 - 137*		*05/17/13 23:11*	*125*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*05/17/13 23:11*	*125*
Toluene-d8 (Surr)	*101*		*71 - 126*		*05/17/13 23:11*	*125*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		380	25	ug/L			05/14/13 10:30	50
Ethene	ND		350	26	ug/L			05/14/13 10:30	50
Methane	**320**		200	11	ug/L			05/14/13 10:30	50

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**9300**		1000	1000	ug/L			05/17/13 08:57	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.19**		0.050	0.019	mg/L		05/14/13 08:30	05/14/13 20:28	1
Magnesium	**45.4**		0.20	0.043	mg/L		05/14/13 08:30	05/14/13 20:28	1
Manganese	**0.021**		0.0030	0.00040	mg/L		05/14/13 08:30	05/14/13 20:28	1
Potassium	**17.6**		0.50	0.10	mg/L		05/14/13 08:30	05/14/13 20:28	1
Sodium	**282**		1.0	0.32	mg/L		05/14/13 08:30	05/14/13 20:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**318**		2.5	1.4	mg/L			05/15/13 19:43	5
Sulfate	**222**		10.0	1.7	mg/L			05/15/13 19:43	5
Ammonia	**0.85**		0.020	0.0090	mg/L			05/14/13 15:31	1
Nitrate	**0.14**		0.050	0.020	mg/L			05/14/13 22:23	1
Nitrite	ND		0.050	0.020	mg/L			05/14/13 22:23	1
Total Organic Carbon	**1.5**		1.0	0.43	mg/L			05/15/13 14:40	1
Total Alkalinity	**381**		5.0	0.79	mg/L			05/16/13 02:26	1
Sulfide	**0.95**		0.10	0.052	mg/L			05/14/13 13:08	1
Acetic acid	ND		1.0	0.15	mg/L			05/20/13 23:14	1
Formic-acid	ND		1.0	0.11	mg/L			05/20/13 23:14	1
Lactic acid	ND		1.0	0.14	mg/L			05/20/13 23:14	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/20/13 23:14	1
Propionic acid	ND		1.0	0.17	mg/L			05/20/13 23:14	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/20/13 23:14	1

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

TestAmerica Job ID: 480-38201-1

Client Sample ID: Trip Blank
Date Collected: 05/13/13 00:00
Date Received: 05/13/13 17:25

Lab Sample ID: 480-38201-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.96	J	1.0	0.81	ug/L			05/17/13 23:39	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 23:39	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 23:39	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 23:39	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*66 - 137*		*05/17/13 23:39*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*05/17/13 23:39*	*1*
Toluene-d8 (Surr)	*101*		*71 - 126*		*05/17/13 23:39*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-38201-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		12DCE	BFB	TOL
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)
480-38201-1	MW-8-4-051313	106	98	102
480-38201-2	MW-8-2-051313	102	98	101
480-38201-2 - DL	MW-8-2-051313	106	96	101
480-38201-3	Trip Blank	108	95	101
LCS 480-119219/3	Lab Control Sample	107	99	101
LCS 480-119373/3	Lab Control Sample	107	99	102
MB 480-119219/4	Method Blank	102	100	103
MB 480-119373/4	Method Blank	104	97	102

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-119219/4
Matrix: Water
Analysis Batch: 119219

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			05/17/13 10:38	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 10:38	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 10:38	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 10:38	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 10:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/17/13 10:38*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*05/17/13 10:38*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/17/13 10:38*	*1*

Lab Sample ID: LCS 480-119219/3
Matrix: Water
Analysis Batch: 119219

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	27.3		ug/L		109	74 - 124
Tetrachloroethene	25.0	28.1		ug/L		112	74 - 122
trans-1,2-Dichloroethene	25.0	27.8		ug/L		111	73 - 127
Trichloroethene	25.0	27.5		ug/L		110	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*66 - 137*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Toluene-d8 (Surr)	*101*		*71 - 126*

Lab Sample ID: MB 480-119373/4
Matrix: Water
Analysis Batch: 119373

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			05/17/13 21:28	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 21:28	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 21:28	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 21:28	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 21:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*05/17/13 21:28*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*05/17/13 21:28*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/17/13 21:28*	*1*

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

Lab Sample ID: LCS 480-119373/3
Matrix: Water
Analysis Batch: 119373

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	26.0		ug/L		104	74 - 124
Tetrachloroethene	25.0	27.6		ug/L		110	74 - 122
trans-1,2-Dichloroethene	25.0	26.2		ug/L		105	73 - 127
Trichloroethene	25.0	26.3		ug/L		105	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*66 - 137*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Toluene-d8 (Surr)	*102*		*71 - 126*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-118423/2
Matrix: Water
Analysis Batch: 118423

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	0.49	ug/L			05/14/13 09:01	1
Ethene	ND		7.0	0.52	ug/L			05/14/13 09:01	1
Methane	ND		4.0	0.22	ug/L			05/14/13 09:01	1

Lab Sample ID: LCS 480-118423/3
Matrix: Water
Analysis Batch: 118423

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.4	16.2		ug/L		112	67 - 128
Ethene	13.5	15.0		ug/L		111	60 - 137
Methane	7.69	8.19		ug/L		106	48 - 174

Lab Sample ID: LCSD 480-118423/4
Matrix: Water
Analysis Batch: 118423

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	14.4	15.3		ug/L		106	67 - 128	6	50
Ethene	13.5	14.3		ug/L		106	60 - 137	5	50
Methane	7.69	7.69		ug/L		100	48 - 174	6	50

Lab Sample ID: MB 200-55617/3
Matrix: Water
Analysis Batch: 55617

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			05/16/13 12:10	1

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

Lab Sample ID: LCS 200-55617/2
Matrix: Water
Analysis Batch: 55617

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	5500		ug/L		110	70 - 130

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 480-118405/1-A
Matrix: Water
Analysis Batch: 118695

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 118405

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/14/13 08:30	05/14/13 19:19	1
Magnesium	ND		0.20	0.043	mg/L		05/14/13 08:30	05/14/13 19:19	1
Manganese	ND		0.0030	0.00040	mg/L		05/14/13 08:30	05/14/13 19:19	1
Potassium	ND		0.50	0.10	mg/L		05/14/13 08:30	05/14/13 19:19	1
Sodium	ND		1.0	0.32	mg/L		05/14/13 08:30	05/14/13 19:19	1

Lab Sample ID: LCS 480-118405/2-A
Matrix: Water
Analysis Batch: 118695

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118405

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.65		mg/L		106	80 - 120
Magnesium	10.0	10.55		mg/L		106	80 - 120
Manganese	0.200	0.211		mg/L		105	80 - 120
Potassium	10.0	10.62		mg/L		106	80 - 120
Sodium	10.0	10.24		mg/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-118519/52
Matrix: Water
Analysis Batch: 118519

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			05/15/13 03:53	1
Sulfate	ND		2.0	0.35	mg/L			05/15/13 03:53	1

Lab Sample ID: LCS 480-118519/51
Matrix: Water
Analysis Batch: 118519

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	20.20		mg/L		101	90 - 110
Sulfate	20.0	18.89		mg/L		94	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 480-118752/28
Matrix: Water
Analysis Batch: 118752

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			05/15/13 18:32	1
Sulfate	ND		2.0	0.35	mg/L			05/15/13 18:32	1

Lab Sample ID: LCS 480-118752/27
Matrix: Water
Analysis Batch: 118752

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	90 - 110
Sulfate	20.0	21.27		mg/L		106	90 - 110

Lab Sample ID: 480-38201-2 DU
Matrix: Water
Analysis Batch: 118752

Client Sample ID: MW-8-2-051313
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	318		316.4		mg/L		0.5	20
Sulfate	222		220.5		mg/L		0.6	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-118582/27
Matrix: Water
Analysis Batch: 118582

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			05/14/13 15:11	1

Lab Sample ID: LCS 480-118582/28
Matrix: Water
Analysis Batch: 118582

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

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-118615/27
Matrix: Water
Analysis Batch: 118615

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/14/13 22:44	1

Method: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: MB 480-118615/3
Matrix: Water
Analysis Batch: 118615

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/14/13 22:17	1

Lab Sample ID: LCS 480-118615/28
Matrix: Water
Analysis Batch: 118615

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.51		mg/L		101	90 - 110

Lab Sample ID: LCS 480-118615/4
Matrix: Water
Analysis Batch: 118615

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.53		mg/L		102	90 - 110

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-119227/3
Matrix: Water
Analysis Batch: 119227

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			05/15/13 13:09	1

Lab Sample ID: LCS 480-119227/4
Matrix: Water
Analysis Batch: 119227

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	60.04		mg/L		100	90 - 110

Lab Sample ID: MB 480-119560/3
Matrix: Water
Analysis Batch: 119560

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			05/18/13 07:28	1

Lab Sample ID: LCS 480-119560/4
Matrix: Water
Analysis Batch: 119560

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	56.31		mg/L		94	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-118898/6
Matrix: Water
Analysis Batch: 118898

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/16/13 01:17	1

Lab Sample ID: LCS 480-118898/7
Matrix: Water
Analysis Batch: 118898

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	95.08		mg/L		95	90 - 110		

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-118546/27
Matrix: Water
Analysis Batch: 118546

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			05/14/13 13:21	1

Lab Sample ID: LCS 480-118546/28
Matrix: Water
Analysis Batch: 118546

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	0.751		mg/L		100	90 - 110		

Lab Sample ID: 480-38201-C-2 MS
Matrix: Water
Analysis Batch: 118546

Client Sample ID: 480-38201-C-2 MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide	0.51		2.50	2.40	F	mg/L		76	90 - 110		

Lab Sample ID: 480-38201-2 DU
Matrix: Water
Analysis Batch: 118546

Client Sample ID: MW-8-2-051313
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfide	0.95			0.957		mg/L				0.3	20

Lab Sample ID: 480-38201-2 DU
Matrix: Water
Analysis Batch: 118546

Client Sample ID: MW-8-2-051313
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfide	0.51			0.516		mg/L				1	20

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography

Lab Sample ID: MB 480-119572/4
Matrix: Water
Analysis Batch: 119572

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/20/13 14:29	1
Formic-acid	ND		1.0	0.11	mg/L			05/20/13 14:29	1
Lactic acid	ND		1.0	0.14	mg/L			05/20/13 14:29	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/20/13 14:29	1
Propionic acid	ND		1.0	0.17	mg/L			05/20/13 14:29	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/20/13 14:29	1

Lab Sample ID: LCS 480-119572/3
Matrix: Water
Analysis Batch: 119572

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	10.20		mg/L		102	80 - 120
Formic-acid	10.0	10.11		mg/L		101	80 - 120
Lactic acid	10.0	9.73		mg/L		97	80 - 120
n-Butyric Acid	10.0	10.25		mg/L		103	80 - 120
Propionic acid	10.0	10.40		mg/L		104	80 - 120
Pyruvic Acid	10.0	10.10		mg/L		101	80 - 120

Lab Sample ID: 480-38201-2 MS
Matrix: Water
Analysis Batch: 119572

Client Sample ID: MW-8-2-051313
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	ND		10.0	9.72		mg/L		97	80 - 120
Formic-acid	ND		10.0	9.45		mg/L		94	80 - 120
Lactic acid	ND		10.0	10.51		mg/L		105	80 - 120
n-Butyric Acid	ND		10.0	7.55	F	mg/L		76	80 - 120
Propionic acid	ND		10.0	7.97		mg/L		80	80 - 120
Pyruvic Acid	ND		10.0	7.27	F	mg/L		73	80 - 120

GC/MS VOA

Analysis Batch: 119219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	8260B	
480-38201-2	MW-8-2-051313	Total/NA	Water	8260B	
LCS 480-119219/3	Lab Control Sample	Total/NA	Water	8260B	
MB 480-119219/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 119373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-2 - DL	MW-8-2-051313	Total/NA	Water	8260B	
480-38201-3	Trip Blank	Total/NA	Water	8260B	
LCS 480-119373/3	Lab Control Sample	Total/NA	Water	8260B	
MB 480-119373/4	Method Blank	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 55617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	RSK-175	
480-38201-2	MW-8-2-051313	Total/NA	Water	RSK-175	
LCS 200-55617/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-55617/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 118423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	RSK-175	
480-38201-2	MW-8-2-051313	Total/NA	Water	RSK-175	
LCS 480-118423/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-118423/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-118423/2	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 118405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	3005A	
480-38201-2	MW-8-2-051313	Total/NA	Water	3005A	
LCS 480-118405/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-118405/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 118695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	6010B	118405
480-38201-2	MW-8-2-051313	Total/NA	Water	6010B	118405
LCS 480-118405/2-A	Lab Control Sample	Total/NA	Water	6010B	118405
MB 480-118405/1-A	Method Blank	Total/NA	Water	6010B	118405

General Chemistry

Analysis Batch: 118519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 118519 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-118519/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-118519/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 118546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	SM 4500 S2 D	
480-38201-2	MW-8-2-051313	Total/NA	Water	SM 4500 S2 D	
480-38201-2 DU	MW-8-2-051313	Total/NA	Water	SM 4500 S2 D	
480-38201-2 DU	MW-8-2-051313	Total/NA	Water	SM 4500 S2 D	
480-38201-C-2 MS	480-38201-C-2 MS	Total/NA	Water	SM 4500 S2 D	
LCS 480-118546/28	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-118546/27	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 118582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	350.1	
480-38201-2	MW-8-2-051313	Total/NA	Water	350.1	
LCS 480-118582/28	Lab Control Sample	Total/NA	Water	350.1	
MB 480-118582/27	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 118615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-2	MW-8-2-051313	Total/NA	Water	353.2	
LCS 480-118615/28	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-118615/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-118615/27	Method Blank	Total/NA	Water	353.2	
MB 480-118615/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 118621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	353.2	
480-38201-2	MW-8-2-051313	Total/NA	Water	353.2	

Analysis Batch: 118623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	353.2	

Analysis Batch: 118752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	300.0	
480-38201-2	MW-8-2-051313	Total/NA	Water	300.0	
480-38201-2 DU	MW-8-2-051313	Total/NA	Water	300.0	
LCS 480-118752/27	Lab Control Sample	Total/NA	Water	300.0	
MB 480-118752/28	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 118898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	SM 2320B	
480-38201-2	MW-8-2-051313	Total/NA	Water	SM 2320B	
LCS 480-118898/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-118898/6	Method Blank	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 119227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-2	MW-8-2-051313	Total/NA	Water	9060	
LCS 480-119227/4	Lab Control Sample	Total/NA	Water	9060	
MB 480-119227/3	Method Blank	Total/NA	Water	9060	

Analysis Batch: 119560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	9060	
LCS 480-119560/4	Lab Control Sample	Total/NA	Water	9060	
MB 480-119560/3	Method Blank	Total/NA	Water	9060	

Analysis Batch: 119572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38201-1	MW-8-4-051313	Total/NA	Water	VFA-IC	
480-38201-2	MW-8-2-051313	Total/NA	Water	VFA-IC	
480-38201-2 MS	MW-8-2-051313	Total/NA	Water	VFA-IC	
LCS 480-119572/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-119572/4	Method Blank	Total/NA	Water	VFA-IC	

Lab Chronicle

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

TestAmerica Job ID: 480-38201-1

Client Sample ID: MW-8-4-051313

Lab Sample ID: 480-38201-1

Date Collected: 05/13/13 12:00

Matrix: Water

Date Received: 05/13/13 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119219	05/17/13 12:09	CDC	TAL BUF
Total/NA	Analysis	RSK-175		1	55617	05/17/13 08:41	NA	TAL BUR
Total/NA	Analysis	RSK-175		5	118423	05/14/13 11:05	MN	TAL BUF
Total/NA	Prep	3005A			118405	05/14/13 08:30	SS	TAL BUF
Total/NA	Analysis	6010B		1	118695	05/14/13 20:25	LH	TAL BUF
Total/NA	Analysis	300.0		20	118519	05/15/13 04:46	KC	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118546	05/14/13 13:01	KJ	TAL BUF
Total/NA	Analysis	350.1		1	118582	05/14/13 15:30	SB	TAL BUF
Total/NA	Analysis	353.2		1	118621	05/14/13 19:44	NH	TAL BUF
Total/NA	Analysis	353.2		1	118623	05/14/13 19:44	NH	TAL BUF
Total/NA	Analysis	300.0		100	118752	05/15/13 19:33	KAC	TAL BUF
Total/NA	Analysis	SM 2320B		1	118898	05/16/13 02:07	LK	TAL BUF
Total/NA	Analysis	9060		1	119560	05/18/13 14:29	KAC	TAL BUF
Total/NA	Analysis	VFA-IC		1	119572	05/20/13 22:44	KC	TAL BUF

Client Sample ID: MW-8-2-051313

Lab Sample ID: 480-38201-2

Date Collected: 05/13/13 16:30

Matrix: Water

Date Received: 05/13/13 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119219	05/17/13 12:36	CDC	TAL BUF
Total/NA	Analysis	8260B	DL	125	119373	05/17/13 23:11	TRB	TAL BUF
Total/NA	Analysis	RSK-175		1	55617	05/17/13 08:57	NA	TAL BUR
Total/NA	Analysis	RSK-175		50	118423	05/14/13 10:30	MN	TAL BUF
Total/NA	Prep	3005A			118405	05/14/13 08:30	SS	TAL BUF
Total/NA	Analysis	6010B		1	118695	05/14/13 20:28	LH	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118546	05/14/13 13:08	KJ	TAL BUF
Total/NA	Analysis	350.1		1	118582	05/14/13 15:31	SB	TAL BUF
Total/NA	Analysis	353.2		1	118615	05/14/13 22:23	NH	TAL BUF
Total/NA	Analysis	353.2		1	118621	05/14/13 22:23	NH	TAL BUF
Total/NA	Analysis	300.0		5	118752	05/15/13 19:43	KAC	TAL BUF
Total/NA	Analysis	SM 2320B		1	118898	05/16/13 02:26	LK	TAL BUF
Total/NA	Analysis	9060		1	119227	05/15/13 14:40	KAC	TAL BUF
Total/NA	Analysis	VFA-IC		1	119572	05/20/13 23:14	KC	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-38201-1

Client Sample ID: Trip Blank

Lab Sample ID: 480-38201-3

Date Collected: 05/13/13 00:00

Matrix: Water

Date Received: 05/13/13 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119373	05/17/13 23:39	TRB	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: 480-38201-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAP	9	1169CA	09-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-14
Georgia	State Program	4	956	06-30-13
Georgia	State Program	4	956	03-31-14
Illinois	NELAP	5	200003	09-30-13
Iowa	State Program	7	374	03-15-15
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-13
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13 *
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-13
New Hampshire	NELAP	1	2337	11-17-13
New Jersey	NELAP	2	NY455	06-30-13
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAP	10	NY200003	06-09-13
Pennsylvania	NELAP	3	68-00281	07-31-13
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-13
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	09-30-13
Wisconsin	State Program	5	998310390	08-31-13

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	09-30-13
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-13
L-A-B	DoD ELAP		L2336	10-26-13
Louisiana	NELAP	6	176292	06-30-13
Minnesota	NELAP	5	050-999-436	12-31-13
New Hampshire	NELAP	1	2006	12-18-13
New Jersey	NELAP	2	VT972	06-30-13
New York	NELAP	2	10391	04-01-14
Pennsylvania	NELAP	3	68-00489	04-30-14
USDA	Federal		P330-11-00093	02-17-14

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

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

TestAmerica Job ID: 480-38201-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Vermont	State Program	1	VT-4000	12-31-13
Virginia	NELAP	3	460209	12-14-13

Method Summary

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

TestAmerica Job ID: 480-38201-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010B	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
9060	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	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.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

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: 480-38201-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-38201-1	MW-8-4-051313	Water	05/13/13 12:00	05/13/13 17:25
480-38201-2	MW-8-2-051313	Water	05/13/13 16:30	05/13/13 17:25
480-38201-3	Trip Blank	Water	05/13/13 00:00	05/13/13 17:25

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days): 3 Weeks			
State, Zip: NY, 14203				
Phone: (716) 685-2300	PO #: 4047065			
Email: christopher.boron@gza.com	WO #: 58507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site: Bldg 8 BCP Site 9-32-139	SSOW#: 256015			

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)		RSK_175_CO2 - Carbon dioxide	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX		Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	S	D	A	A	A	CB	N	N	N				
MW-8-4-057313	5/13/13	1200	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X				
MW-8-2-057313	↓	1630	↓	Water	↓	↓	X	X	X	X	X	X	X	X	X	X	X				
Trip Blank	5/13/13	-	-	-							X										

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
Thomas Bohlen	5/13/13 1725			5/13/13 1725	TA Buffalo
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 1.8

5/23/2013

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 480-10101.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-38201-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/23/2013			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel)	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_176_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-8-4-051313 (480-38201-1)	5/13/13	12:00 Eastern		Water			X	3	
MW-8-2-051313 (480-38201-2)	5/13/13	16:30 Eastern		Water			X	3	

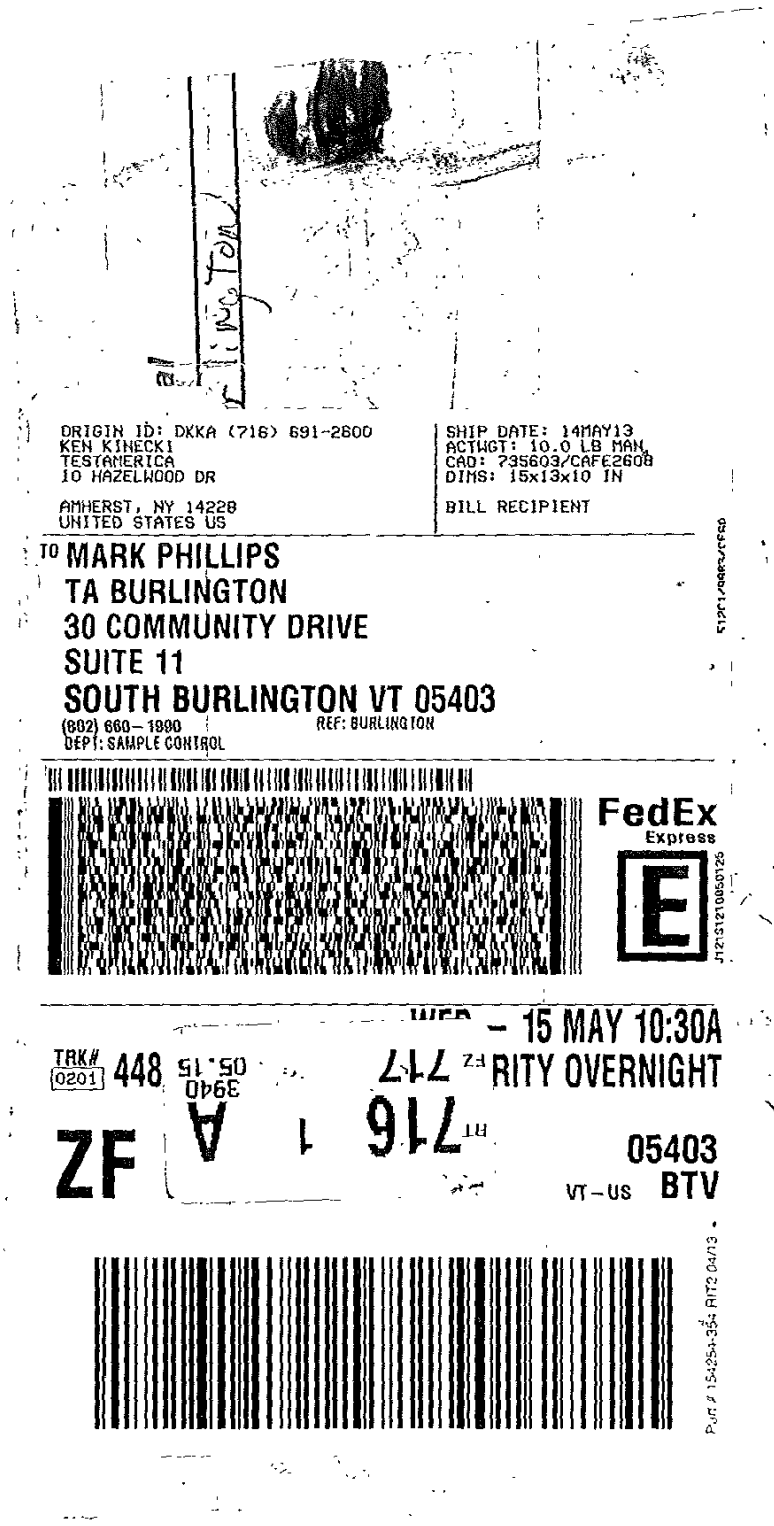
480-38201 Chain of Custody

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	[signature]	5-14-13 ~ 1600	TA Buffalo	[signature]	5/15/13 1030	TA Buf
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) 691-2800
KEN KINECKI
TESTAMERICA
10 HAZELWOOD DR

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 14MAY13
ACTWGT: 10.0 LB MAN
CAD: 735603/CAFE2608
DIMS: 15x13x10 IN

BILL RECIPIENT

TO MARK PHILLIPS
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
DEPT: SAMPLE CONTROL

REF: BURLINGTON

FedEx
Express

TRK# 0201 448

ZF

– 15 MAY 10:30A
RITY OVERNIGHT

05403
VT-US BTV

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-38201-1

Login Number: 38201

List Source: TestAmerica Buffalo

List Number: 1

Creator: Wienke, Robert

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.	False	
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: 480-38201-1

Login Number: 38201
List Number: 1
Creator: Gagne, Eric

List Source: TestAmerica Burlington
List Creation: 05/15/13 02:20 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	709034
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0ºC IR GUN ID 181. CF 0.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	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: 480-38266-1

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:
5/29/2013 12:32:41 PM
Lisa Shaffer, Project Manager I
lisa.shaffer@testamericainc.com

Designee for

Melissa Deyo, Project Manager I
melissa.deyo@testamericainc.com

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 7
Surrogate Summary 12
QC Sample Results 13
QC Association Summary 21
Lab Chronicle 25
Certification Summary 28
Method Summary 30
Sample Summary 31
Chain of Custody 32
Receipt Checklists 33

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

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

General Chemistry

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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)
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)

Job ID: 480-38266-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-38266-1

Receipt
The samples were received on 5/14/2013 4:35 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.3º C.

GC/MS VOA
No analytical or quality issues were noted.

IC
Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-6-F-8-051413 (480-38266-1), MW-6-2-051413 (480-38266-2), MW-6-1-051413 (480-38266-3) and MW-8-3-051413 (480-38266-4). Elevated reporting limits (RLs) are provided.

Method 300.0: The method blank for batch 119048 contained Sulfate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No other analytical or quality issues were noted.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
Method SM 4500 S2 D: The matrix spike (MS) recovery associated with batch 118899 was outside control limits. Matrix interference was suspected. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 480-38266-1

Client Sample ID: MW-6-F-8-051413 — Lab Sample ID: 480-38266-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	4.0		4.0	0.22	ug/L	1		RSK-175	Total/NA
Iron	0.12		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	230		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.59		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	5.2		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	1170		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	2680		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	228		20.0	3.5	mg/L	10		300.0	Total/NA
Total Organic Carbon	1.1		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	394		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	16000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-6-2-051413 — Lab Sample ID: 480-38266-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.23		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	76.1		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	0.60		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	4.4		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	1710		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	3040		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	127		20.0	3.5	mg/L	10		300.0	Total/NA
Ammonia	0.018	J	0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.26		0.050	0.020	mg/L	1		353.2	Total/NA
Nitrite	0.022	J ^	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.7		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	403		5.0	0.79	mg/L	1		SM 2320B	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	19000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-6-1-051413 — Lab Sample ID: 480-38266-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	14		4.0	0.22	ug/L	1		RSK-175	Total/NA
Iron	16.7		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	59.2		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	2.3		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	2.4		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	453		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	968		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	52.8		10.0	1.7	mg/L	5		300.0	Total/NA
Ammonia	0.44		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.048	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	3.9		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	394		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	26000		1000	1000	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: 480-38266-1

Client Sample ID: MW-8-3-051413

Lab Sample ID: 480-38266-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.0		1.0	0.81	ug/L	1		8260B	Total/NA
Tetrachloroethene	0.49	J	1.0	0.36	ug/L	1		8260B	Total/NA
Trichloroethene	0.78	J	1.0	0.46	ug/L	1		8260B	Total/NA
Ethane	9.7		7.5	0.49	ug/L	1		RSK-175	Total/NA
Methane	130		4.0	0.22	ug/L	1		RSK-175	Total/NA
Iron	0.56		0.050	0.019	mg/L	1		6010B	Total/NA
Magnesium	48.4		0.20	0.043	mg/L	1		6010B	Total/NA
Manganese	4.3		0.0030	0.00040	mg/L	1		6010B	Total/NA
Potassium	558		0.50	0.10	mg/L	1		6010B	Total/NA
Sodium	423		1.0	0.32	mg/L	1		6010B	Total/NA
Chloride	1730		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	58.0		10.0	1.7	mg/L	5		300.0	Total/NA
Ammonia	1.9		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.031	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	5.4		1.0	0.43	mg/L	1		9060	Total/NA
Total Alkalinity	380		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: 480-38266-5

No Detections.

This Detection Summary does not include radiochemical test results.

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

TestAmerica Job ID: 480-38266-1

Client Sample ID: MW-6-F-8-051413
Date Collected: 05/14/13 09:10
Date Received: 05/14/13 16:35

Lab Sample ID: 480-38266-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/17/13 22:07	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 22:07	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 22:07	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 22:07	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 22:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*66 - 137*		*05/17/13 22:07*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*05/17/13 22:07*	*1*
Toluene-d8 (Surr)	*101*		*71 - 126*		*05/17/13 22:07*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	0.49	ug/L			05/15/13 01:52	1
Ethene	ND		7.0	0.52	ug/L			05/15/13 01:52	1
Methane	**4.0**		4.0	0.22	ug/L			05/15/13 01:52	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**16000**		1000	1000	ug/L			05/23/13 16:33	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.12**		0.050	0.019	mg/L		05/15/13 11:15	05/15/13 21:33	1
Magnesium	**230**		0.20	0.043	mg/L		05/15/13 11:15	05/15/13 21:33	1
Manganese	**0.59**		0.0030	0.00040	mg/L		05/15/13 11:15	05/15/13 21:33	1
Potassium	**5.2**		0.50	0.10	mg/L		05/15/13 11:15	05/15/13 21:33	1
Sodium	**1170**		1.0	0.32	mg/L		05/15/13 11:15	05/15/13 21:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2680**		25.0	14.1	mg/L			05/16/13 21:31	50
Sulfate	**228**		20.0	3.5	mg/L			05/16/13 01:51	10
Ammonia	ND		0.020	0.0090	mg/L			05/15/13 14:15	1
Nitrate	ND		0.050	0.020	mg/L			05/14/13 21:05	1
Nitrite	ND		0.050	0.020	mg/L			05/14/13 21:05	1
Total Organic Carbon	**1.1**		1.0	0.43	mg/L			05/15/13 19:37	1
Total Alkalinity	**394**		5.0	0.79	mg/L			05/16/13 02:33	1
Sulfide	ND		0.10	0.052	mg/L			05/16/13 01:15	1
Acetic acid	ND		1.0	0.15	mg/L			05/21/13 02:38	1
Formic-acid	ND		1.0	0.11	mg/L			05/21/13 02:38	1
Lactic acid	ND		1.0	0.14	mg/L			05/21/13 02:38	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/21/13 02:38	1
Propionic acid	ND		1.0	0.17	mg/L			05/21/13 02:38	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/21/13 02:38	1

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

TestAmerica Job ID: 480-38266-1

Client Sample ID: MW-6-2-051413
Date Collected: 05/14/13 11:50
Date Received: 05/14/13 16:35

Lab Sample ID: 480-38266-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/17/13 22:35	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 22:35	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 22:35	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 22:35	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 22:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*66 - 137*		*05/17/13 22:35*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/17/13 22:35*	*1*
Toluene-d8 (Surr)	*101*		*71 - 126*		*05/17/13 22:35*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	0.49	ug/L			05/15/13 02:09	1
Ethene	ND		7.0	0.52	ug/L			05/15/13 02:09	1
Methane	ND		4.0	0.22	ug/L			05/15/13 02:09	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**19000**		1000	1000	ug/L			05/23/13 16:41	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.23**		0.050	0.019	mg/L		05/15/13 11:15	05/15/13 21:36	1
Magnesium	**76.1**		0.20	0.043	mg/L		05/15/13 11:15	05/15/13 21:36	1
Manganese	**0.60**		0.0030	0.00040	mg/L		05/15/13 11:15	05/15/13 21:36	1
Potassium	**4.4**		0.50	0.10	mg/L		05/15/13 11:15	05/15/13 21:36	1
Sodium	**1710**		1.0	0.32	mg/L		05/15/13 11:15	05/15/13 21:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3040**		25.0	14.1	mg/L			05/16/13 21:45	50
Sulfate	**127**		20.0	3.5	mg/L			05/16/13 02:04	10
Ammonia	**0.018**	**J**	0.020	0.0090	mg/L			05/15/13 14:16	1
Nitrate	**0.26**		0.050	0.020	mg/L			05/14/13 21:06	1
Nitrite	**0.022**	**J ^**	0.050	0.020	mg/L			05/14/13 23:02	1
Total Organic Carbon	**1.7**		1.0	0.43	mg/L			05/15/13 20:08	1
Total Alkalinity	**403**		5.0	0.79	mg/L			05/16/13 02:40	1
Sulfide	ND		0.10	0.052	mg/L			05/16/13 01:15	1
Acetic acid	ND		1.0	0.15	mg/L			05/21/13 03:07	1
Formic-acid	ND		1.0	0.11	mg/L			05/21/13 03:07	1
Lactic acid	ND		1.0	0.14	mg/L			05/21/13 03:07	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/21/13 03:07	1
Propionic acid	ND		1.0	0.17	mg/L			05/21/13 03:07	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/21/13 03:07	1

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

TestAmerica Job ID: 480-38266-1

Client Sample ID: MW-6-1-051413
Date Collected: 05/14/13 14:10
Date Received: 05/14/13 16:35

Lab Sample ID: 480-38266-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/17/13 14:27	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 14:27	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 14:27	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 14:27	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 14:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*66 - 137*		*05/17/13 14:27*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*05/17/13 14:27*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/17/13 14:27*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	0.49	ug/L			05/15/13 02:26	1
Ethene	ND		7.0	0.52	ug/L			05/15/13 02:26	1
Methane	**14**		4.0	0.22	ug/L			05/15/13 02:26	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**26000**		1000	1000	ug/L			05/23/13 16:52	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**16.7**		0.050	0.019	mg/L		05/15/13 11:15	05/15/13 21:38	1
Magnesium	**59.2**		0.20	0.043	mg/L		05/15/13 11:15	05/15/13 21:38	1
Manganese	**2.3**		0.0030	0.00040	mg/L		05/15/13 11:15	05/15/13 21:38	1
Potassium	**2.4**		0.50	0.10	mg/L		05/15/13 11:15	05/15/13 21:38	1
Sodium	**453**		1.0	0.32	mg/L		05/15/13 11:15	05/15/13 21:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**968**		10.0	5.6	mg/L			05/16/13 21:58	20
Sulfate	**52.8**		10.0	1.7	mg/L			05/16/13 02:18	5
Ammonia	**0.44**		0.020	0.0090	mg/L			05/15/13 14:17	1
Nitrate	**0.048**	**J**	0.050	0.020	mg/L			05/14/13 21:07	1
Nitrite	ND		0.050	0.020	mg/L			05/14/13 21:07	1
Total Organic Carbon	**3.9**		1.0	0.43	mg/L			05/15/13 20:38	1
Total Alkalinity	**394**		5.0	0.79	mg/L			05/16/13 02:47	1
Sulfide	ND		0.10	0.052	mg/L			05/16/13 01:15	1
Acetic acid	ND		1.0	0.15	mg/L			05/21/13 03:36	1
Formic-acid	ND		1.0	0.11	mg/L			05/21/13 03:36	1
Lactic acid	ND		1.0	0.14	mg/L			05/21/13 03:36	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/21/13 03:36	1
Propionic acid	ND		1.0	0.17	mg/L			05/21/13 03:36	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/21/13 03:36	1

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

TestAmerica Job ID: 480-38266-1

Client Sample ID: MW-8-3-051413
Date Collected: 05/14/13 15:15
Date Received: 05/14/13 16:35

Lab Sample ID: 480-38266-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	3.0		1.0	0.81	ug/L			05/17/13 14:54	1
Tetrachloroethene	0.49	J	1.0	0.36	ug/L			05/17/13 14:54	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 14:54	1
Trichloroethene	0.78	J	1.0	0.46	ug/L			05/17/13 14:54	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*66 - 137*		*05/17/13 14:54*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*05/17/13 14:54*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/17/13 14:54*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	9.7		7.5	0.49	ug/L			05/15/13 22:57	1
Ethene	ND		7.0	0.52	ug/L			05/15/13 02:43	1
Methane	130		4.0	0.22	ug/L			05/15/13 02:43	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	21000		1000	1000	ug/L			05/23/13 17:04	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.56		0.050	0.019	mg/L		05/15/13 11:15	05/15/13 21:55	1
Magnesium	48.4		0.20	0.043	mg/L		05/15/13 11:15	05/15/13 21:55	1
Manganese	4.3		0.0030	0.00040	mg/L		05/15/13 11:15	05/15/13 21:55	1
Potassium	558		0.50	0.10	mg/L		05/15/13 11:15	05/15/13 21:55	1
Sodium	423		1.0	0.32	mg/L		05/15/13 11:15	05/15/13 21:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1730		25.0	14.1	mg/L			05/16/13 22:11	50
Sulfate	58.0		10.0	1.7	mg/L			05/16/13 02:32	5
Ammonia	1.9		0.020	0.0090	mg/L			05/15/13 14:18	1
Nitrate	0.031	J	0.050	0.020	mg/L			05/14/13 21:13	1
Nitrite	ND		0.050	0.020	mg/L			05/14/13 21:13	1
Total Organic Carbon	5.4		1.0	0.43	mg/L			05/15/13 21:09	1
Total Alkalinity	380		5.0	0.79	mg/L			05/16/13 02:54	1
Sulfide	ND		0.10	0.052	mg/L			05/16/13 01:15	1
Acetic acid	ND		1.0	0.15	mg/L			05/21/13 04:05	1
Formic-acid	ND		1.0	0.11	mg/L			05/21/13 04:05	1
Lactic acid	ND		1.0	0.14	mg/L			05/21/13 04:05	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/21/13 04:05	1
Propionic acid	ND		1.0	0.17	mg/L			05/21/13 04:05	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/21/13 04:05	1

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

TestAmerica Job ID: 480-38266-1

Client Sample ID: TRIP BLANK
Date Collected: 05/14/13 00:00
Date Received: 05/14/13 16:35

Lab Sample ID: 480-38266-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/17/13 15:22	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 15:22	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 15:22	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 15:22	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/17/13 15:22*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/17/13 15:22*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/17/13 15:22*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-38266-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		12DCE	BFB	TOL
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)
480-38266-1	MW-6-F-8-051413	106	95	101
480-38266-2	MW-6-2-051413	105	98	101
480-38266-3	MW-6-1-051413	106	99	102
480-38266-4	MW-8-3-051413	107	95	102
480-38266-5	TRIP BLANK	101	98	102
LCS 480-119219/3	Lab Control Sample	107	99	101
LCS 480-119373/3	Lab Control Sample	107	99	102
MB 480-119219/4	Method Blank	102	100	103
MB 480-119373/4	Method Blank	104	97	102

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-119219/4
Matrix: Water
Analysis Batch: 119219

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			05/17/13 10:38	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 10:38	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 10:38	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 10:38	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 10:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/17/13 10:38*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*05/17/13 10:38*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/17/13 10:38*	*1*

Lab Sample ID: LCS 480-119219/3
Matrix: Water
Analysis Batch: 119219

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	27.3		ug/L		109	74 - 124
Tetrachloroethene	25.0	28.1		ug/L		112	74 - 122
trans-1,2-Dichloroethene	25.0	27.8		ug/L		111	73 - 127
Trichloroethene	25.0	27.5		ug/L		110	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*66 - 137*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Toluene-d8 (Surr)	*101*		*71 - 126*

Lab Sample ID: MB 480-119373/4
Matrix: Water
Analysis Batch: 119373

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			05/17/13 21:28	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/13 21:28	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/13 21:28	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/13 21:28	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/13 21:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*05/17/13 21:28*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*05/17/13 21:28*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/17/13 21:28*	*1*

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

Lab Sample ID: LCS 480-119373/3
Matrix: Water
Analysis Batch: 119373

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	26.0		ug/L		104	74 - 124
Tetrachloroethene	25.0	27.6		ug/L		110	74 - 122
trans-1,2-Dichloroethene	25.0	26.2		ug/L		105	73 - 127
Trichloroethene	25.0	26.3		ug/L		105	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*66 - 137*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Toluene-d8 (Surr)	*102*		*71 - 126*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-118602/2
Matrix: Water
Analysis Batch: 118602

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	0.49	ug/L			05/14/13 21:22	1
Ethene	ND		7.0	0.52	ug/L			05/14/13 21:22	1
Methane	ND		4.0	0.22	ug/L			05/14/13 21:22	1

Lab Sample ID: LCS 480-118602/3
Matrix: Water
Analysis Batch: 118602

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.4	13.2		ug/L		92	67 - 128
Ethene	13.5	13.2		ug/L		98	60 - 137
Methane	7.69	6.46		ug/L		84	48 - 174

Lab Sample ID: LCSD 480-118602/4
Matrix: Water
Analysis Batch: 118602

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	14.4	13.9		ug/L		96	67 - 128	5	50
Ethene	13.5	13.7		ug/L		102	60 - 137	4	50
Methane	7.69	6.92		ug/L		90	48 - 174	7	50

Lab Sample ID: MB 480-118879/2
Matrix: Water
Analysis Batch: 118879

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	0.49	ug/L			05/15/13 21:33	1
Ethene	ND		7.0	0.52	ug/L			05/15/13 21:33	1
Methane	ND		4.0	0.22	ug/L			05/15/13 21:33	1

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

Lab Sample ID: LCS 480-118879/3
Matrix: Water
Analysis Batch: 118879

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.4	16.1		ug/L		112	67 - 128
Ethene	13.5	15.4		ug/L		114	60 - 137
Methane	7.69	8.10		ug/L		105	48 - 174

Lab Sample ID: LCSD 480-118879/4
Matrix: Water
Analysis Batch: 118879

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	14.4	16.3		ug/L		113	67 - 128	1	50
Ethene	13.5	15.5		ug/L		115	60 - 137	1	50
Methane	7.69	8.34		ug/L		108	48 - 174	3	50

Lab Sample ID: MB 200-55931/3
Matrix: Water
Analysis Batch: 55931

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			05/23/13 15:29	1

Lab Sample ID: LCS 200-55931/2
Matrix: Water
Analysis Batch: 55931

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	3960		ug/L		79	70 - 130

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 480-118679/1-A
Matrix: Water
Analysis Batch: 118957

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 118679

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/15/13 11:15	05/15/13 21:28	1
Magnesium	ND		0.20	0.043	mg/L		05/15/13 11:15	05/15/13 21:28	1
Manganese	ND		0.0030	0.00040	mg/L		05/15/13 11:15	05/15/13 21:28	1
Potassium	ND		0.50	0.10	mg/L		05/15/13 11:15	05/15/13 21:28	1
Sodium	ND		1.0	0.32	mg/L		05/15/13 11:15	05/15/13 21:28	1

Lab Sample ID: LCS 480-118679/2-A
Matrix: Water
Analysis Batch: 118957

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118679

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.90		mg/L		99	80 - 120
Magnesium	10.0	10.27		mg/L		103	80 - 120
Manganese	0.200	0.200		mg/L		100	80 - 120
Potassium	10.0	10.62		mg/L		106	80 - 120

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

Lab Sample ID: LCS 480-118679/2-A
Matrix: Water
Analysis Batch: 118957

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118679

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	10.0	10.61		mg/L		106	80 - 120

Lab Sample ID: 480-38266-3 MS
Matrix: Water
Analysis Batch: 118957

Client Sample ID: MW-6-1-051413
Prep Type: Total/NA
Prep Batch: 118679

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	16.7		10.0	26.19		mg/L		95	75 - 125
Magnesium	59.2		10.0	68.25	4	mg/L		90	75 - 125
Manganese	2.3		0.200	2.46	4	mg/L		74	75 - 125
Potassium	2.4		10.0	13.73		mg/L		113	75 - 125
Sodium	453		10.0	457.6	4	mg/L		46	75 - 125

Lab Sample ID: 480-38266-3 MSD
Matrix: Water
Analysis Batch: 118957

Client Sample ID: MW-6-1-051413
Prep Type: Total/NA
Prep Batch: 118679

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	16.7		10.0	26.28		mg/L		96	75 - 125	0	20
Magnesium	59.2		10.0	68.63	4	mg/L		94	75 - 125	1	20
Manganese	2.3		0.200	2.47	4	mg/L		81	75 - 125	1	20
Potassium	2.4		10.0	13.70		mg/L		113	75 - 125	0	20
Sodium	453		10.0	458.3	4	mg/L		53	75 - 125	0	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-118785/28
Matrix: Water
Analysis Batch: 118785

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			05/15/13 23:10	1
Sulfate	ND		2.0	0.35	mg/L			05/15/13 23:10	1

Lab Sample ID: LCS 480-118785/27
Matrix: Water
Analysis Batch: 118785

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	20.38		mg/L		102	90 - 110
Sulfate	20.0	19.22		mg/L		96	90 - 110

Lab Sample ID: MB 480-119048/4
Matrix: Water
Analysis Batch: 119048

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			05/16/13 18:47	1
Sulfate	0.864	J	2.0	0.35	mg/L			05/16/13 18:47	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-119048/3
Matrix: Water
Analysis Batch: 119048

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	19.77		mg/L		99	90 - 110
Sulfate	20.0	19.50		mg/L		97	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-118820/51
Matrix: Water
Analysis Batch: 118820

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			05/15/13 13:40	1

Lab Sample ID: MB 480-118820/75
Matrix: Water
Analysis Batch: 118820

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			05/15/13 14:03	1

Lab Sample ID: LCS 480-118820/52
Matrix: Water
Analysis Batch: 118820

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 480-118820/76
Matrix: Water
Analysis Batch: 118820

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 480-118615/27
Matrix: Water
Analysis Batch: 118615

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/14/13 22:44	1

Lab Sample ID: MB 480-118615/3
Matrix: Water
Analysis Batch: 118615

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/14/13 22:17	1

Method: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: MB 480-118615/49
Matrix: Water
Analysis Batch: 118615

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/14/13 23:08	1

Lab Sample ID: LCS 480-118615/28
Matrix: Water
Analysis Batch: 118615

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.51		mg/L		101	90 - 110

Lab Sample ID: LCS 480-118615/4
Matrix: Water
Analysis Batch: 118615

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.53		mg/L		102	90 - 110

Lab Sample ID: LCS 480-118615/50
Matrix: Water
Analysis Batch: 118615

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

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-119227/3
Matrix: Water
Analysis Batch: 119227

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			05/15/13 13:09	1

Lab Sample ID: LCS 480-119227/4
Matrix: Water
Analysis Batch: 119227

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	60.04		mg/L		100	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-118898/6
Matrix: Water
Analysis Batch: 118898

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/16/13 01:17	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 480-118898/7
Matrix: Water
Analysis Batch: 118898

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	95.08		mg/L		95	90 - 110		

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-118899/3
Matrix: Water
Analysis Batch: 118899

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			05/16/13 01:15	1

Lab Sample ID: LCS 480-118899/4
Matrix: Water
Analysis Batch: 118899

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	0.704		mg/L		94	90 - 110		

Lab Sample ID: 480-38266-2 MS
Matrix: Water
Analysis Batch: 118899

Client Sample ID: MW-6-2-051413
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide	ND		0.500	0.368	F	mg/L		74	90 - 110		

Lab Sample ID: 480-38266-1 DU
Matrix: Water
Analysis Batch: 118899

Client Sample ID: MW-6-F-8-051413
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfide	ND			ND		mg/L				NC	20

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography

Lab Sample ID: MB 480-119574/28
Matrix: Water
Analysis Batch: 119574

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/21/13 02:08	1
Formic-acid	ND		1.0	0.11	mg/L			05/21/13 02:08	1
Lactic acid	ND		1.0	0.14	mg/L			05/21/13 02:08	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/21/13 02:08	1
Propionic acid	ND		1.0	0.17	mg/L			05/21/13 02:08	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/21/13 02:08	1

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-119574/27
Matrix: Water
Analysis Batch: 119574

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	10.92		mg/L		109	80 - 120
Formic-acid	10.0	10.35		mg/L		104	80 - 120
Lactic acid	10.0	9.44		mg/L		94	80 - 120
n-Butyric Acid	10.0	9.84		mg/L		98	80 - 120
Propionic acid	10.0	10.69		mg/L		107	80 - 120
Pyruvic Acid	10.0	9.86		mg/L		99	80 - 120

GC/MS VOA

Analysis Batch: 119219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-3	MW-6-1-051413	Total/NA	Water	8260B	
480-38266-4	MW-8-3-051413	Total/NA	Water	8260B	
480-38266-5	TRIP BLANK	Total/NA	Water	8260B	
LCS 480-119219/3	Lab Control Sample	Total/NA	Water	8260B	
MB 480-119219/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 119373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	8260B	
480-38266-2	MW-6-2-051413	Total/NA	Water	8260B	
LCS 480-119373/3	Lab Control Sample	Total/NA	Water	8260B	
MB 480-119373/4	Method Blank	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 55931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	RSK-175	
480-38266-2	MW-6-2-051413	Total/NA	Water	RSK-175	
480-38266-3	MW-6-1-051413	Total/NA	Water	RSK-175	
480-38266-4	MW-8-3-051413	Total/NA	Water	RSK-175	
LCS 200-55931/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-55931/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 118602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	RSK-175	
480-38266-2	MW-6-2-051413	Total/NA	Water	RSK-175	
480-38266-3	MW-6-1-051413	Total/NA	Water	RSK-175	
480-38266-4	MW-8-3-051413	Total/NA	Water	RSK-175	
LCS 480-118602/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-118602/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-118602/2	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 118879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-4	MW-8-3-051413	Total/NA	Water	RSK-175	
LCS 480-118879/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-118879/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-118879/2	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 118679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	3005A	
480-38266-2	MW-6-2-051413	Total/NA	Water	3005A	
480-38266-3	MW-6-1-051413	Total/NA	Water	3005A	
480-38266-3 MS	MW-6-1-051413	Total/NA	Water	3005A	
480-38266-3 MSD	MW-6-1-051413	Total/NA	Water	3005A	

Metals (Continued)

Prep Batch: 118679 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-4	MW-8-3-051413	Total/NA	Water	3005A	
LCS 480-118679/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-118679/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 118957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	6010B	118679
480-38266-2	MW-6-2-051413	Total/NA	Water	6010B	118679
480-38266-3	MW-6-1-051413	Total/NA	Water	6010B	118679
480-38266-3 MS	MW-6-1-051413	Total/NA	Water	6010B	118679
480-38266-3 MSD	MW-6-1-051413	Total/NA	Water	6010B	118679
480-38266-4	MW-8-3-051413	Total/NA	Water	6010B	118679
LCS 480-118679/2-A	Lab Control Sample	Total/NA	Water	6010B	118679
MB 480-118679/1-A	Method Blank	Total/NA	Water	6010B	118679

General Chemistry

Analysis Batch: 118615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-2	MW-6-2-051413	Total/NA	Water	353.2	
LCS 480-118615/28	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-118615/4	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-118615/50	Lab Control Sample	Total/NA	Water	353.2	
MB 480-118615/27	Method Blank	Total/NA	Water	353.2	
MB 480-118615/3	Method Blank	Total/NA	Water	353.2	
MB 480-118615/49	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 118621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	353.2	
480-38266-2	MW-6-2-051413	Total/NA	Water	353.2	
480-38266-3	MW-6-1-051413	Total/NA	Water	353.2	
480-38266-4	MW-8-3-051413	Total/NA	Water	353.2	

Analysis Batch: 118623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	353.2	
480-38266-3	MW-6-1-051413	Total/NA	Water	353.2	
480-38266-4	MW-8-3-051413	Total/NA	Water	353.2	

Analysis Batch: 118785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	300.0	
480-38266-2	MW-6-2-051413	Total/NA	Water	300.0	
480-38266-3	MW-6-1-051413	Total/NA	Water	300.0	
480-38266-4	MW-8-3-051413	Total/NA	Water	300.0	
LCS 480-118785/27	Lab Control Sample	Total/NA	Water	300.0	
MB 480-118785/28	Method Blank	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 118820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	350.1	
480-38266-2	MW-6-2-051413	Total/NA	Water	350.1	
480-38266-3	MW-6-1-051413	Total/NA	Water	350.1	
480-38266-4	MW-8-3-051413	Total/NA	Water	350.1	
LCS 480-118820/52	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-118820/76	Lab Control Sample	Total/NA	Water	350.1	
MB 480-118820/51	Method Blank	Total/NA	Water	350.1	
MB 480-118820/75	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 118898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	SM 2320B	
480-38266-2	MW-6-2-051413	Total/NA	Water	SM 2320B	
480-38266-3	MW-6-1-051413	Total/NA	Water	SM 2320B	
480-38266-4	MW-8-3-051413	Total/NA	Water	SM 2320B	
LCS 480-118898/7	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-118898/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 118899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	SM 4500 S2 D	
480-38266-1 DU	MW-6-F-8-051413	Total/NA	Water	SM 4500 S2 D	
480-38266-2	MW-6-2-051413	Total/NA	Water	SM 4500 S2 D	
480-38266-2 MS	MW-6-2-051413	Total/NA	Water	SM 4500 S2 D	
480-38266-3	MW-6-1-051413	Total/NA	Water	SM 4500 S2 D	
480-38266-4	MW-8-3-051413	Total/NA	Water	SM 4500 S2 D	
LCS 480-118899/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-118899/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 119048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	300.0	
480-38266-2	MW-6-2-051413	Total/NA	Water	300.0	
480-38266-3	MW-6-1-051413	Total/NA	Water	300.0	
480-38266-4	MW-8-3-051413	Total/NA	Water	300.0	
LCS 480-119048/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-119048/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 119227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	9060	
480-38266-2	MW-6-2-051413	Total/NA	Water	9060	
480-38266-3	MW-6-1-051413	Total/NA	Water	9060	
480-38266-4	MW-8-3-051413	Total/NA	Water	9060	
LCS 480-119227/4	Lab Control Sample	Total/NA	Water	9060	
MB 480-119227/3	Method Blank	Total/NA	Water	9060	

Analysis Batch: 119574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-1	MW-6-F-8-051413	Total/NA	Water	VFA-IC	
480-38266-2	MW-6-2-051413	Total/NA	Water	VFA-IC	

General Chemistry (Continued)

Analysis Batch: 119574 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-38266-3	MW-6-1-051413	Total/NA	Water	VFA-IC	
480-38266-4	MW-8-3-051413	Total/NA	Water	VFA-IC	
LCS 480-119574/27	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-119574/28	Method Blank	Total/NA	Water	VFA-IC	

Lab Chronicle

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

TestAmerica Job ID: 480-38266-1

Client Sample ID: MW-6-F-8-051413

Lab Sample ID: 480-38266-1

Date Collected: 05/14/13 09:10

Matrix: Water

Date Received: 05/14/13 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119373	05/17/13 22:07	TRB	TAL BUF
Total/NA	Analysis	RSK-175		1	55931	05/23/13 16:33	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	118602	05/15/13 01:52	JM	TAL BUF
Total/NA	Prep	3005A			118679	05/15/13 11:15	SS	TAL BUF
Total/NA	Analysis	6010B		1	118957	05/15/13 21:33	AH	TAL BUF
Total/NA	Analysis	353.2		1	118621	05/14/13 21:05	NH	TAL BUF
Total/NA	Analysis	353.2		1	118623	05/14/13 21:05	NH	TAL BUF
Total/NA	Analysis	300.0		10	118785	05/16/13 01:51	KAC	TAL BUF
Total/NA	Analysis	350.1		1	118820	05/15/13 14:15	SB	TAL BUF
Total/NA	Analysis	SM 2320B		1	118898	05/16/13 02:33	LK	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118899	05/16/13 01:15	LAW	TAL BUF
Total/NA	Analysis	300.0		50	119048	05/16/13 21:31	KAC	TAL BUF
Total/NA	Analysis	9060		1	119227	05/15/13 19:37	KAC	TAL BUF
Total/NA	Analysis	VFA-IC		1	119574	05/21/13 02:38	KC	TAL BUF

Client Sample ID: MW-6-2-051413

Lab Sample ID: 480-38266-2

Date Collected: 05/14/13 11:50

Matrix: Water

Date Received: 05/14/13 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119373	05/17/13 22:35	TRB	TAL BUF
Total/NA	Analysis	RSK-175		1	55931	05/23/13 16:41	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	118602	05/15/13 02:09	JM	TAL BUF
Total/NA	Prep	3005A			118679	05/15/13 11:15	SS	TAL BUF
Total/NA	Analysis	6010B		1	118957	05/15/13 21:36	AH	TAL BUF
Total/NA	Analysis	353.2		1	118615	05/14/13 23:02	NH	TAL BUF
Total/NA	Analysis	353.2		1	118621	05/14/13 21:06	NH	TAL BUF
Total/NA	Analysis	300.0		10	118785	05/16/13 02:04	KAC	TAL BUF
Total/NA	Analysis	350.1		1	118820	05/15/13 14:16	SB	TAL BUF
Total/NA	Analysis	SM 2320B		1	118898	05/16/13 02:40	LK	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118899	05/16/13 01:15	LAW	TAL BUF
Total/NA	Analysis	300.0		50	119048	05/16/13 21:45	KAC	TAL BUF
Total/NA	Analysis	9060		1	119227	05/15/13 20:08	KAC	TAL BUF
Total/NA	Analysis	VFA-IC		1	119574	05/21/13 03:07	KC	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-38266-1

Client Sample ID: MW-6-1-051413

Lab Sample ID: 480-38266-3

Date Collected: 05/14/13 14:10
Matrix: Water
Date Received: 05/14/13 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119219	05/17/13 14:27	CDC	TAL BUF
Total/NA	Analysis	RSK-175		1	55931	05/23/13 16:52	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	118602	05/15/13 02:26	JM	TAL BUF
Total/NA	Prep	3005A			118679	05/15/13 11:15	SS	TAL BUF
Total/NA	Analysis	6010B		1	118957	05/15/13 21:38	AH	TAL BUF
Total/NA	Analysis	353.2		1	118621	05/14/13 21:07	NH	TAL BUF
Total/NA	Analysis	353.2		1	118623	05/14/13 21:07	NH	TAL BUF
Total/NA	Analysis	300.0		5	118785	05/16/13 02:18	KAC	TAL BUF
Total/NA	Analysis	350.1		1	118820	05/15/13 14:17	SB	TAL BUF
Total/NA	Analysis	SM 2320B		1	118898	05/16/13 02:47	LK	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118899	05/16/13 01:15	LAW	TAL BUF
Total/NA	Analysis	300.0		20	119048	05/16/13 21:58	KAC	TAL BUF
Total/NA	Analysis	9060		1	119227	05/15/13 20:38	KAC	TAL BUF
Total/NA	Analysis	VFA-IC		1	119574	05/21/13 03:36	KC	TAL BUF

Client Sample ID: MW-8-3-051413

Lab Sample ID: 480-38266-4

Date Collected: 05/14/13 15:15
Matrix: Water
Date Received: 05/14/13 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119219	05/17/13 14:54	CDC	TAL BUF
Total/NA	Analysis	RSK-175		1	55931	05/23/13 17:04	NA	TAL BUR
Total/NA	Analysis	RSK-175		1	118602	05/15/13 02:43	JM	TAL BUF
Total/NA	Analysis	RSK-175		1	118879	05/15/13 22:57	JM	TAL BUF
Total/NA	Prep	3005A			118679	05/15/13 11:15	SS	TAL BUF
Total/NA	Analysis	6010B		1	118957	05/15/13 21:55	AH	TAL BUF
Total/NA	Analysis	353.2		1	118621	05/14/13 21:13	NH	TAL BUF
Total/NA	Analysis	353.2		1	118623	05/14/13 21:13	NH	TAL BUF
Total/NA	Analysis	300.0		5	118785	05/16/13 02:32	KAC	TAL BUF
Total/NA	Analysis	350.1		1	118820	05/15/13 14:18	SB	TAL BUF
Total/NA	Analysis	SM 2320B		1	118898	05/16/13 02:54	LK	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	118899	05/16/13 01:15	LAW	TAL BUF
Total/NA	Analysis	300.0		50	119048	05/16/13 22:11	KAC	TAL BUF
Total/NA	Analysis	9060		1	119227	05/15/13 21:09	KAC	TAL BUF
Total/NA	Analysis	VFA-IC		1	119574	05/21/13 04:05	KC	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-38266-1

Client Sample ID: TRIP BLANK
Date Collected: 05/14/13 00:00
Date Received: 05/14/13 16:35

Lab Sample ID: 480-38266-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119219	05/17/13 15:22	CDC	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: 480-38266-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13
California	NELAP	9	1169CA	09-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-13
Georgia	State Program	4	N/A	03-31-14
Georgia	State Program	4	956	06-30-13
Georgia	State Program	4	956	03-31-14
Illinois	NELAP	5	200003	09-30-13
Iowa	State Program	7	374	03-15-15
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-13
Maine	State Program	1	NY00044	12-04-13
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-13
Michigan	State Program	5	9937	04-01-13 *
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-13
New Hampshire	NELAP	1	2337	11-17-13
New Jersey	NELAP	2	NY455	06-30-13
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-13
Oregon	NELAP	10	NY200003	06-09-13
Pennsylvania	NELAP	3	68-00281	07-31-13
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-13
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-13
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	09-30-13
Wisconsin	State Program	5	998310390	08-31-13

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	09-30-13
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-13
L-A-B	DoD ELAP		L2336	10-26-13
Louisiana	NELAP	6	176292	06-30-13
Minnesota	NELAP	5	050-999-436	12-31-13
New Hampshire	NELAP	1	2006	12-18-13
New Jersey	NELAP	2	VT972	06-30-13
New York	NELAP	2	10391	04-01-14
Pennsylvania	NELAP	3	68-00489	04-30-14
USDA	Federal		P330-11-00093	02-17-14

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

Certification Summary

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

TestAmerica Job ID: 480-38266-1

Laboratory: TestAmerica Burlington (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Vermont	State Program	1	VT-4000	12-31-13
Virginia	NELAP	3	460209	12-14-13

Method Summary

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

TestAmerica Job ID: 480-38266-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010B	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
9060	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	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.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

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: 480-38266-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-38266-1	MW-6-F-8-051413	Water	05/14/13 09:10	05/14/13 16:35
480-38266-2	MW-6-2-051413	Water	05/14/13 11:50	05/14/13 16:35
480-38266-3	MW-6-1-051413	Water	05/14/13 14:10	05/14/13 16:35
480-38266-4	MW-8-3-051413	Water	05/14/13 15:15	05/14/13 16:35
480-38266-5	TRIP BLANK	Water	05/14/13 00:00	05/14/13 16:35

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: Thomas Bohlen	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Christopher Boron	Phone: (716) 844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.				GZA Job #: 21.0056546.00 Task 24
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days): 3 Weeks			
State, Zip: NY, 14203				
Phone: (716) 685-2300	PO #: 4047065			
Email: christopher.boron@gza.com	WO #: 58507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site: Bldg 8 BCP Site 9-32-139	SSOW#: 256015			

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)	RSK_175_CO2 - Carbon dioxide	VFA_IC - Volatile Fatty Acids	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg, K & Na	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)	AM20GAX	Total Number of containers	Special Instructions/Note:
			Preservation Code:			N	N	S	D	A	A	A	CB	N	N	N			
MW-6-F-8-051413	5/14/13	910	G	Water	N	X	X	X	X	X	X	X	X	X	X	X			
MW-6-2-051413		1150		Water															
MW-6-1-051413		1410																	
MW-8-3-051413		1515																	
Trip Blank										X									

480-38266 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
Thomas Bohlen	5/14/13 1635			5/14/13 16:35	FA BUFFALO
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 4.3

5/29/2013

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-38266-1

Login Number: 38266

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
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: 480-38266-1

Login Number: 38266
List Number: 1
Creator: Gagne, Eric

List Source: TestAmerica Burlington
List Creation: 05/16/13 01:38 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	709054
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	0.6ºC IR GUN ID 181. CF 0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	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: 480-46903-1
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:
10/15/2013 9:55:07 AM
Rebecca Jones, Project Mgmt. Assistant
rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I
(716)504-9874
melissa.deyo@testamericainc.com

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
Surrogate Summary 7
QC Sample Results 8
QC Association Summary 10
Lab Chronicle 11
Certification Summary 12
Method Summary 13
Sample Summary 14
Chain of Custody 15
Receipt Checklists 16

Glossary

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

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

TestAmerica Job ID: 480-46903-1

Job ID: 480-46903-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-46903-1

Receipt
The samples were received on 10/1/2013 5:25 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) 8260B: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: BLDG-10-MW-1 -100113 (480-46903-3). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The following sample(s) submitted for volatiles analysis was analyzed with insufficient preservation (pH >2): BLDG-10-MW-1 -100113 (480-46903-3), MW-9-101A -100113 (480-46903-1).

Method(s) 8260B: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: MW-9-12 -100113 (480-46903-2). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The following sample(s) submitted for volatiles analysis was analyzed with insufficient preservation (pH >2): MW-9-12 -100113 (480-46903-2).

No other analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 480-46903-1

Client Sample ID: MW-9-101A -100113 — Lab Sample ID: 480-46903-1

No Detections.

Client Sample ID: MW-9-12 -100113 — Lab Sample ID: 480-46903-2

No Detections.

Client Sample ID: BLDG-10-MW-1 -100113 — Lab Sample ID: 480-46903-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	160000		2000	720	ug/L	2000		8260B	Total/NA
Trichloroethene	3100		2000	920	ug/L	2000		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-9-101A -100113

Lab Sample ID: 480-46903-1

Date Collected: 10/01/13 11:45
Matrix: Water
Date Received: 10/01/13 17:25

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/11/13 21:00	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/11/13 21:00	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/11/13 21:00	1
Trichloroethene	ND		1.0	0.46	ug/L			10/11/13 21:00	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/11/13 21:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*66 - 137*		*10/11/13 21:00*	*1*
4-Bromofluorobenzene (Surr)	*94*		*73 - 120*		*10/11/13 21:00*	*1*
Toluene-d8 (Surr)	*100*		*71 - 126*		*10/11/13 21:00*	*1*

Client Sample ID: MW-9-12 -100113

Lab Sample ID: 480-46903-2

Date Collected: 10/01/13 12:45
Matrix: Water
Date Received: 10/01/13 17:25

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		10	8.1	ug/L			10/14/13 12:32	10
Tetrachloroethene	ND		10	3.6	ug/L			10/14/13 12:32	10
trans-1,2-Dichloroethene	ND		10	9.0	ug/L			10/14/13 12:32	10
Trichloroethene	ND		10	4.6	ug/L			10/14/13 12:32	10
Vinyl chloride	ND		10	9.0	ug/L			10/14/13 12:32	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*10/14/13 12:32*	*10*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*10/14/13 12:32*	*10*
Toluene-d8 (Surr)	*100*		*71 - 126*		*10/14/13 12:32*	*10*

Client Sample ID: BLDG-10-MW-1 -100113

Lab Sample ID: 480-46903-3

Date Collected: 10/01/13 14:35
Matrix: Water
Date Received: 10/01/13 17:25

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		2000	1600	ug/L			10/11/13 21:44	2000
Tetrachloroethene	**160000**		2000	720	ug/L			10/11/13 21:44	2000
trans-1,2-Dichloroethene	ND		2000	1800	ug/L			10/11/13 21:44	2000
Trichloroethene	**3100**		2000	920	ug/L			10/11/13 21:44	2000
Vinyl chloride	ND		2000	1800	ug/L			10/11/13 21:44	2000
Methylene Chloride	ND		2000	880	ug/L			10/11/13 21:44	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*66 - 137*		*10/11/13 21:44*	*2000*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*10/11/13 21:44*	*2000*
Toluene-d8 (Surr)	*100*		*71 - 126*		*10/11/13 21:44*	*2000*

Surrogate Summary

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

TestAmerica Job ID: 480-46903-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
		12DCE	BFB	TOL						
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)						
480-46903-1	MW-9-101A -100113	105	94	100						
480-46903-2	MW-9-12 -100113	103	95	100						
480-46903-3	BLDG-10-MW-1 -100113	106	95	100						
LCS 480-144444/6	Lab Control Sample	105	98	98						
LCS 480-144642/5	Lab Control Sample	104	99	96						
MB 480-144444/9	Method Blank	103	92	98						
MB 480-144642/6	Method Blank	105	95	99						

Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-144444/9
Matrix: Water
Analysis Batch: 144444

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			10/11/13 19:32	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/11/13 19:32	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/11/13 19:32	1
Trichloroethene	ND		1.0	0.46	ug/L			10/11/13 19:32	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/11/13 19:32	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/11/13 19:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*10/11/13 19:32*	*1*
4-Bromofluorobenzene (Surr)	*92*		*73 - 120*		*10/11/13 19:32*	*1*
Toluene-d8 (Surr)	*98*		*71 - 126*		*10/11/13 19:32*	*1*

Lab Sample ID: LCS 480-144444/6
Matrix: Water
Analysis Batch: 144444

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	26.9		ug/L		108	74 - 124
Tetrachloroethene	25.0	25.1		ug/L		100	74 - 122
trans-1,2-Dichloroethene	25.0	26.4		ug/L		106	73 - 127
Trichloroethene	25.0	26.8		ug/L		107	74 - 123
Vinyl chloride	25.0	27.0		ug/L		108	65 - 133
Methylene Chloride	25.0	25.9		ug/L		104	57 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*66 - 137*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*
Toluene-d8 (Surr)	*98*		*71 - 126*

Lab Sample ID: MB 480-144642/6
Matrix: Water
Analysis Batch: 144642

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			10/14/13 12:03	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/14/13 12:03	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/14/13 12:03	1
Trichloroethene	ND		1.0	0.46	ug/L			10/14/13 12:03	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/14/13 12:03	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/14/13 12:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*66 - 137*		*10/14/13 12:03*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*10/14/13 12:03*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*10/14/13 12:03*	*1*

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

Lab Sample ID: LCS 480-144642/5
Matrix: Water
Analysis Batch: 144642

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	23.9		ug/L		96	74 - 122
trans-1,2-Dichloroethene	25.0	25.7		ug/L		103	73 - 127
Trichloroethene	25.0	25.5		ug/L		102	74 - 123
Vinyl chloride	25.0	25.5		ug/L		102	65 - 133
Methylene Chloride	25.0	25.3		ug/L		101	57 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Toluene-d8 (Surr)	*96*		*71 - 126*

QC Association Summary

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

TestAmerica Job ID: 480-46903-1

GC/MS VOA

Analysis Batch: 144444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-46903-1	MW-9-101A -100113	Total/NA	Water	8260B	
480-46903-3	BLDG-10-MW-1 -100113	Total/NA	Water	8260B	
LCS 480-144444/6	Lab Control Sample	Total/NA	Water	8260B	
MB 480-144444/9	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 144642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-46903-2	MW-9-12 -100113	Total/NA	Water	8260B	
LCS 480-144642/5	Lab Control Sample	Total/NA	Water	8260B	
MB 480-144642/6	Method Blank	Total/NA	Water	8260B	

Lab Chronicle

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

TestAmerica Job ID: 480-46903-1

Client Sample ID: MW-9-101A -100113

Lab Sample ID: 480-46903-1

Date Collected: 10/01/13 11:45

Matrix: Water

Date Received: 10/01/13 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	144444	10/11/13 21:00	NQN	TAL BUF

Client Sample ID: MW-9-12 -100113

Lab Sample ID: 480-46903-2

Date Collected: 10/01/13 12:45

Matrix: Water

Date Received: 10/01/13 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	144642	10/14/13 12:32	NMD1	TAL BUF

Client Sample ID: BLDG-10-MW-1 -100113

Lab Sample ID: 480-46903-3

Date Collected: 10/01/13 14:35

Matrix: Water

Date Received: 10/01/13 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2000	144444	10/11/13 21:44	NQN	TAL BUF

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 480-46903-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-13 *
California	NELAP	9	1169CA	09-30-13 *
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14
Georgia	State Program	4	N/A	03-31-14
Iowa	State Program	7	374	03-15-15
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-14
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-14
Michigan	State Program	5	9937	04-01-14
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-14
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	12-31-13
Wisconsin	State Program	5	998310390	08-31-14

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

Method Summary

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

TestAmerica Job ID: 480-46903-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (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: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-46903-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-46903-1	MW-9-101A -100113	Water	10/01/13 11:45	10/01/13 17:25
480-46903-2	MW-9-12 -100113	Water	10/01/13 12:45	10/01/13 17:25
480-46903-3	BLDG-10-MW-1 -100113	Water	10/01/13 14:35	10/01/13 17:25

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: T. Bohlen	Lab PM: Hoffman, Sally J	Carrier Tracking No(s):	COC No: 480-39650-10473.1
Client Contact: Mr. Christopher Boron	Phone: 716 570 5983	E-Mail: sally.hoffman@testamericainc.com		Page: Page ~~1 of 2~~ 1 of 1
Company: GZA GeoEnvironmental, Inc.				Job #: 21.0056546.00 Task 34
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days): Standard			
State, Zip: NY, 14203				
Phone: 716-844-7050(Tel)	PO #: Purchase Order not required			
Email: christopher.boron@gza.com	WO #:			
Project Name: GMCH	Project #: 48008533			
Site: BCP Site 9-32-140	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)	8260B - TCL VOCs	8082 - PCBs	8270C - TCL SVOCs	6010B, 7471A	8260B - TCL VOCs	6010B, 7470A	6010B, 7470A	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N	A	D	N		
MW-9-101A	10/1/13	1145	G	W ~~Solid~~	N	N	X							W	
MW-9-12	↓	1245	↓	W ~~Solid~~	N	N	X							W	
BLDG-10-MW-1	↓	1435	↓	W ~~Solid~~	N	N	X							W	
				Solid											
				Solid											
				Solid											
				Solid											
				Solid											
				Solid											
				Solid											
				Solid											
				Solid											

480-46903 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
Thomas Bohlen	10/1/13 1725			10-1-13 17:25	
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: 5.0 ICE#1

10/15/2013

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-46903-1

Login Number: 46903

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kolb, Chris M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	N/A	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual 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: 480-47386-1
Client Project/Site: GMCH - Lockport, NY

For:
GZA GeoEnvironmental, Inc.
535 Washington Street
11th Floor
Buffalo, New York 14203

Attn: Mr. Tom Bohlen

Joseph V. Giacomazza

Authorized for release by:
10/10/2013 11:46:51 AM
Joe Giacomazza, Project Administrator
joe.giacomazza@testamericainc.com

Designee for

Sally Hoffman, Project Manager II
(716)504-9839
sally.hoffman@testamericainc.com

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
Surrogate Summary 8
QC Sample Results 9
QC Association Summary 11
Lab Chronicle 12
Certification Summary 13
Method Summary 14
Sample Summary 15
Chain of Custody 16
Receipt Checklists 17

Glossary

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

Case Narrative

Client: GZA GeoEnvironmental, Inc.
Project/Site: GMCH - Lockport, NY

TestAmerica Job ID: 480-47386-1

Job ID: 480-47386-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-47386-1

Receipt
The sample was received on 10/7/2013 4:30 PM; the sample arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 4.3º C.

GC/MS VOA
No analytical or quality issues were noted.

Detection Summary

Client: GZA GeoEnvironmental, Inc.
Project/Site: GMCH - Lockport, NY

TestAmerica Job ID: 480-47386-1

Client Sample ID: TK-6-100713 **Lab Sample ID: 480-47386-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1.9		1.0	0.36	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: GZA GeoEnvironmental, Inc.
Project/Site: GMCH - Lockport, NY

TestAmerica Job ID: 480-47386-1

Client Sample ID: TK-6-100713
Date Collected: 10/07/13 15:40
Date Received: 10/07/13 16:30

Lab Sample ID: 480-47386-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/09/13 15:27	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/09/13 15:27	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/09/13 15:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/09/13 15:27	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/09/13 15:27	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/09/13 15:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/09/13 15:27	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/09/13 15:27	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/09/13 15:27	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/09/13 15:27	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/09/13 15:27	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/09/13 15:27	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/09/13 15:27	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/09/13 15:27	1
2-Hexanone	ND		5.0	1.2	ug/L			10/09/13 15:27	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/09/13 15:27	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/09/13 15:27	1
Acetone	ND		10	3.0	ug/L			10/09/13 15:27	1
Benzene	ND		1.0	0.41	ug/L			10/09/13 15:27	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/09/13 15:27	1
Bromoform	ND		1.0	0.26	ug/L			10/09/13 15:27	1
Bromomethane	ND		1.0	0.69	ug/L			10/09/13 15:27	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/09/13 15:27	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/09/13 15:27	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/09/13 15:27	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/09/13 15:27	1
Chloroethane	ND		1.0	0.32	ug/L			10/09/13 15:27	1
Chloroform	ND		1.0	0.34	ug/L			10/09/13 15:27	1
Chloromethane	ND		1.0	0.35	ug/L			10/09/13 15:27	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/09/13 15:27	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/09/13 15:27	1
Cyclohexane	ND		1.0	0.18	ug/L			10/09/13 15:27	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/09/13 15:27	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/09/13 15:27	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/09/13 15:27	1
Methyl acetate	ND		1.0	0.50	ug/L			10/09/13 15:27	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/09/13 15:27	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/09/13 15:27	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/09/13 15:27	1
Styrene	ND		1.0	0.73	ug/L			10/09/13 15:27	1
Tetrachloroethene	**1.9**		1.0	0.36	ug/L			10/09/13 15:27	1
Toluene	ND		1.0	0.51	ug/L			10/09/13 15:27	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/09/13 15:27	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/09/13 15:27	1
Trichloroethene	ND		1.0	0.46	ug/L			10/09/13 15:27	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/09/13 15:27	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/09/13 15:27	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/09/13 15:27	1

Client: GZA GeoEnvironmental, Inc.
Project/Site: GMCH - Lockport, NY

TestAmerica Job ID: 480-47386-1

Client Sample ID: TK-6-100713
Date Collected: 10/07/13 15:40
Date Received: 10/07/13 16:30

Lab Sample ID: 480-47386-1
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		66 - 137		10/09/13 15:27	1
Toluene-d8 (Surr)	97		71 - 126		10/09/13 15:27	1
4-Bromofluorobenzene (Surr)	96		73 - 120		10/09/13 15:27	1

Surrogate Summary

Client: GZA GeoEnvironmental, Inc.
Project/Site: GMCH - Lockport, NY

TestAmerica Job ID: 480-47386-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)								
		12DCE	TOL	BFB						
Lab Sample ID	Client Sample ID	(66-137)	(71-126)	(73-120)						
480-47386-1	TK-6-100713	99	97	96						
LCS 480-143695/5	Lab Control Sample	89	100	106						
MB 480-143695/6	Method Blank	94	102	102						

Surrogate Legend

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

Client: GZA GeoEnvironmental, Inc.
Project/Site: GMCH - Lockport, NY

TestAmerica Job ID: 480-47386-1

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

Lab Sample ID: MB 480-143695/6
Matrix: Water
Analysis Batch: 143695

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/09/13 12:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/09/13 12:44	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/09/13 12:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/09/13 12:44	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/09/13 12:44	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/09/13 12:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/09/13 12:44	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/09/13 12:44	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/09/13 12:44	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/09/13 12:44	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/09/13 12:44	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/09/13 12:44	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/09/13 12:44	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/09/13 12:44	1
2-Hexanone	ND		5.0	1.2	ug/L			10/09/13 12:44	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/09/13 12:44	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/09/13 12:44	1
Acetone	ND		10	3.0	ug/L			10/09/13 12:44	1
Benzene	ND		1.0	0.41	ug/L			10/09/13 12:44	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/09/13 12:44	1
Bromoform	ND		1.0	0.26	ug/L			10/09/13 12:44	1
Bromomethane	ND		1.0	0.69	ug/L			10/09/13 12:44	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/09/13 12:44	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/09/13 12:44	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/09/13 12:44	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/09/13 12:44	1
Chloroethane	ND		1.0	0.32	ug/L			10/09/13 12:44	1
Chloroform	ND		1.0	0.34	ug/L			10/09/13 12:44	1
Chloromethane	ND		1.0	0.35	ug/L			10/09/13 12:44	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/09/13 12:44	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/09/13 12:44	1
Cyclohexane	ND		1.0	0.18	ug/L			10/09/13 12:44	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/09/13 12:44	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/09/13 12:44	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/09/13 12:44	1
Methyl acetate	ND		1.0	0.50	ug/L			10/09/13 12:44	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/09/13 12:44	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/09/13 12:44	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/09/13 12:44	1
Styrene	ND		1.0	0.73	ug/L			10/09/13 12:44	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/09/13 12:44	1
Toluene	ND		1.0	0.51	ug/L			10/09/13 12:44	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/09/13 12:44	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/09/13 12:44	1
Trichloroethene	ND		1.0	0.46	ug/L			10/09/13 12:44	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/09/13 12:44	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/09/13 12:44	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/09/13 12:44	1

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

Lab Sample ID: MB 480-143695/6
Matrix: Water
Analysis Batch: 143695

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*94*		*66 - 137*		*10/09/13 12:44*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*10/09/13 12:44*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*10/09/13 12:44*	*1*

Lab Sample ID: LCS 480-143695/5
Matrix: Water
Analysis Batch: 143695

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	25.0	20.7		ug/L		83	71 - 129
1,1-Dichloroethene	25.0	21.7		ug/L		87	58 - 121
1,2-Dichlorobenzene	25.0	23.3		ug/L		93	80 - 124
1,2-Dichloroethane	25.0	21.2		ug/L		85	75 - 127
Benzene	25.0	21.3		ug/L		85	71 - 124
Chlorobenzene	25.0	23.9		ug/L		95	72 - 120
cis-1,2-Dichloroethene	25.0	22.2		ug/L		89	74 - 124
Ethylbenzene	25.0	24.5		ug/L		98	77 - 123
Methyl tert-butyl ether	25.0	22.6		ug/L		91	64 - 127
Tetrachloroethene	25.0	24.9		ug/L		99	74 - 122
Toluene	25.0	23.3		ug/L		93	80 - 122
trans-1,2-Dichloroethene	25.0	21.7		ug/L		87	73 - 127
Trichloroethene	25.0	22.4		ug/L		89	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*89*		*66 - 137*
Toluene-d8 (Surr)	*100*		*71 - 126*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*

QC Association Summary

Client: GZA GeoEnvironmental, Inc.
Project/Site: GMCH - Lockport, NY

TestAmerica Job ID: 480-47386-1

GC/MS VOA

Analysis Batch: 143695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-47386-1	TK-6-100713	Total/NA	Water	8260C	
LCS 480-143695/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-143695/6	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: GZA GeoEnvironmental, Inc.
Project/Site: GMCH - Lockport, NY

TestAmerica Job ID: 480-47386-1

Client Sample ID: TK-6-100713
Date Collected: 10/07/13 15:40
Date Received: 10/07/13 16:30

Lab Sample ID: 480-47386-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	143695	10/09/13 15:27	NMD1	TAL BUF

Laboratory References:

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

Certification Summary

Client: GZA GeoEnvironmental, Inc.
Project/Site: GMCH - Lockport, NY

TestAmerica Job ID: 480-47386-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	11-06-13
California	NELAP	9	1169CA	10-30-13
Connecticut	State Program	1	PH-0568	09-30-14
Florida	NELAP	4	E87672	06-30-14
Georgia	State Program	4	N/A	03-31-14
Illinois	NELAP	5	200003	10-30-13
Iowa	State Program	7	374	03-15-15
Kansas	NELAP	7	E-10187	01-31-14
Kentucky	State Program	4	90029	12-31-13
Kentucky (UST)	State Program	4	30	04-01-14
Louisiana	NELAP	6	02031	06-30-14
Maine	State Program	1	NY00044	12-04-14
Maryland	State Program	3	294	03-31-14
Massachusetts	State Program	1	M-NY044	06-30-14
Michigan	State Program	5	9937	04-01-14
Minnesota	NELAP	5	036-999-337	12-31-13
New Hampshire	NELAP	1	2973	09-11-14
New Jersey	NELAP	2	NY455	06-30-14
New York	NELAP	2	10026	04-01-14
North Dakota	State Program	8	R-176	03-31-14
Oklahoma	State Program	6	9421	08-31-14
Oregon	NELAP	10	NY200003	06-09-14
Pennsylvania	NELAP	3	68-00281	07-31-14
Rhode Island	State Program	1	LAO00328	12-31-13
Tennessee	State Program	4	TN02970	04-01-14
Texas	NELAP	6	T104704412-11-2	07-31-14
USDA	Federal		P330-11-00386	11-22-14
Virginia	NELAP	3	460185	09-14-14
Washington	State Program	10	C784	02-10-14
West Virginia DEP	State Program	3	252	12-31-13
Wisconsin	State Program	5	998310390	08-31-14

Method Summary

Client: GZA GeoEnvironmental, Inc.
Project/Site: GMCH - Lockport, NY

TestAmerica Job ID: 480-47386-1

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: GZA GeoEnvironmental, Inc.
Project/Site: GMCH - Lockport, NY

TestAmerica Job ID: 480-47386-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-47386-1	TK-6-100713	Water	10/07/13 15:40	10/07/13 16:30

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 GeoEnvironmental	C. Boron	10/7/13	246154
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
535 Washington St.	716 685-2300		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Buffalo / NY / 14203	T. Bohlen	M Deyo	
Project Name and Location (State)	**Carrier/Waybill Number**		
GMCH, Lockport, NY			
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: 8260 TCL	Special Instructions/ Conditions of Receipt
TK-6-100713	10/7/13	1540		X						X			X	

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 _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Thomas Bohlen	10/7/13	1630	1. Received By:	10/7/13	1630
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

2 4.3

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: GZA GeoEnvironmental, Inc.

Job Number: 480-47386-1

Login Number: 47386

List Source: TestAmerica Buffalo

List Number: 1

Creator: Robison, Zachary J

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

APPENDIX D

DATA QUALITY ASSESSMENT & VERIFICATION REPORT

CONESTOGA-ROVERS & ASSOCIATES

2055 Niagara Falls Blvd., Suite #3
Niagara Falls, New York 14304
Telephone: (716) 297-6150 Fax: (716) 297-2265
www.CRAworld.com

MEMORANDUM

TO:	Denis Conley	REF. NO.:	58507-256015
FROM:	Kathleen Willy/bjw/73	DATE:	July 1, 2013
CC:	Claire Mondello, Chris Boron		E-Mail and Hard Copy If Requested
RE:	Data Quality Assessment and Verification Groundwater Monitoring General Motors Corporation Lockport, New York May 2013		

INTRODUCTION

The following details a quality assessment and validation of the analytical data resulting from the May 2013 collection of groundwater samples from the General Motors Site in Lockport, New York. Sample analysis was completed at TestAmerica Laboratories, Inc. (TestAmerica) 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.

Evaluation of the data was based on information obtained from the finished data sheets, chain of custody form, blank data, recovery data from surrogate spikes, laboratory control samples (LCS), and matrix spike samples (MS); and field quality assurance/quality control samples (QA/QC) samples. The assessment of analytical and in-house data included checks for: data consistency (by observing comparability of duplicate analyses); adherence to accuracy and precision criteria; and transmittal errors.

The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and the documents entitled:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", EPA-540/R-94/013, February 1994.

These guidelines are collectively referred to as "NFGs" in this Memorandum.

The final sample results and supporting QA/QC results were reported by the laboratory in a reduced deliverable format.

SAMPLE PRESERVATION AND HOLDING TIMES

Sample holding time criteria for the analyses are summarized in Table 2. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were analyzed within the required holding times.

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

METHOD BLANK SAMPLES

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect.

Method blanks were analyzed at the recommended frequency, and the results were non-detect for all analytes of interest with the exception of a low concentration of ammonia. Sample results that were similar to that found in the method blank were qualified as non-detect (see Table 4). Sample results that were either non-detect or significantly higher than that found in the method blank would not have been impacted and no qualification of the data was necessary.

SURROGATE COMPOUNDS – ORGANIC ANALYSES

Individual sample performance for organic analyses was monitored by assessing the results of surrogate compound percent recoveries. Surrogate percent recoveries are reviewed against the laboratory developed control limits provided in the analytical report.

The surrogate recovery acceptance criteria were met for all samples indicating acceptable laboratory performance.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES

To assess the long term accuracy and precision of the analytical methods on various matrices, matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and the relative percent difference (RPD) of the concentrations were determined. The organic MS/MSD percent recovery and RPD control limits are established by the laboratory.

Site specific MS/MSD analyses were not requested. The laboratory performed additional site-specific analyses internally. All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

LABORATORY CONTROL SAMPLE (LCS) ANALYSES

The LCS analysis serves as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS percent recoveries were evaluated against method and laboratory established control limits.

The LCS percent recoveries were all within the laboratory control limits indicating acceptable analytical accuracy.

FIELD QUALITY ASSURANCE/QUALITY CONTROL

The field QA/QC consisted of eleven trip blanks and one field duplicate sample set.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, eleven trip blanks were submitted to the laboratory for VOC analysis, as identified in Table 1. All results were non-detect for the analytes of interest with the exception of trichloroethene. Associated sample results with concentrations similar to that found in the trip blank were qualified as non-detect (see Table 5). Sample results that were either non-detect or significantly higher than that found in the method blank would not have been impacted and no qualification of the data was necessary.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one (1) field duplicate sample set 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. If the reported concentration in either the investigative sample or its duplicate is less than five times the practical quantitation limit (PQL), the evaluation criteria is one times the PQL value for water.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision with the exception of ethane and ethane which showed some variability. A summary of qualified results can be found in Table 6.

ANALYTE REPORTING

The laboratory reported detected results down to the laboratory's 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.

OVERALL ASSESSMENT

Based on this assessment of the information provided, the data produced by TestAmerica were found to exhibit acceptable levels of accuracy and precision and may be used with the qualifications noted.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

				Analysis/Parameters											
Sample ID	*Location ID*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*Site-specific VOCs*	*TOC*	*Sulfate, Chloride*	*Sulfide*	*Nitrate, Nitrite*	*Ammonia*	*Volatile Fatty Acids*	*Alkalinity*	*Site-specific Metals*	*Hydrogen*	*Dissolved Gases*	*Comments*
MW-10-050113	MW-10	5/1/2013	10:30	X	X	X	X	X	X	X	X	X		X	
MW-4-050113	MW-4	5/1/2013	14:15	X	X	X	X	X	X	X	X	X		X	
MW-15-050113	MW-15	5/1/2013	16:10	X	X	X	X	X	X	X	X	X		X	
TRIP BLANK	TRIP BLANK	5/1/2013	5/1/2013	X											Trip Blank
G-1-050213	G-1	5/2/2013	08:50	X	X	X	X	X	X	X	X	X		X	
MW-11-050213	MW-11	5/2/2013	11:30	X	X	X	X	X	X	X	X	X		X	
MW-13-050213	MW-13	5/2/2013	13:50	X	X	X	X	X	X	X	X	X		X	
Trip Blank	TRIP BLANK	5/2/2013	5/2/2013	X											Trip Blank
MW-12-050313	MW-12	5/3/2013	09:00	X	X	X	X	X	X	X	X	X		X	
MW-14-050313	MW-14	5/3/2013	12:00	X	X	X	X	X	X	X	X	X		X	
MW-7-050313	MW-7	5/3/2013	14:10	X	X	X	X	X	X	X	X	X		X	
Trip Blank	TRIP BLANK	5/3/2013	5/3/2013	X											Trip Blank
MW-7-3-050613	MW-7-3	5/6/2013	11:50	X	X	X	X	X	X	X	X	X		X	
MW-7-1-050613	MW-7-1	5/6/2013	14:30	X	X	X	X	X	X	X	X	X		X	
MW-7-2-050613	MW-7-2	5/6/2013	17:15	X	X	X	X	X	X	X	X	X		X	
TRIP BLANK	TRIP BLANK	5/6/2013	5/6/2013	X											Trip Blank
MW-7-6-050713	MW-7-6	5/7/2013	09:20	X	X	X	X	X	X	X	X	X		X	
MW-7-C-2-050713	MW-7-C-2	5/7/2013	15:45	X	X	X	X	X	X	X	X	X		X	
MW-7-5-050713	MW-7-5	5/7/2013	12:15	X	X	X	X	X	X	X	X	X		X	
MW-7-4-050713	MW-7-4	5/7/2013	16:30	X	X	X	X	X	X	X	X	X		X	

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

				Analysis/Parameters											
Sample ID	*Location ID*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*Site-specific VOCs*	*TOC*	*Sulfate, Chloride*	*Sulfide*	*Nitrate, Nitrite*	*Ammonia*	*Volatile Fatty Acids*	*Alkalinity*	*Site-specific Metals*	*Hydrogen*	*Dissolved Gases*	*Comments*
Trip Blank	TRIP BLANK	5/7/2013	5/7/2013	X											Trip Blank
MW-7-A-6-050813	MW-7-A-6	5/8/2013	11:15	X	X	X	X	X	X	X	X	X		X	
MW-7-7-050813	MW-7-7	5/8/2013	15:15	X	X	X	X	X	X	X	X	X		X	
MW-7-P-1-050813	MW-7-P-1	5/8/2013	18:15	X	X	X	X	X	X	X	X	X		X	
GW-DUPLICATE-050813	MW-7-A-6	5/8/2013	5/8/2013	X	X	X	X	X	X	X	X	X		X	Field duplicate of sample MW-7-A-6-050813
TRIP BLANK	TRIP BLANK	5/8/2013	5/8/2013	X											Trip Blank
MW-7-8-050913	MW-7-8	5/9/2013	08:20	X	X	X	X	X	X	X	X	X		X	
MW-10-2-050913	MW-10-2	5/9/2013	12:30	X	X	X	X	X	X	X	X	X		X	
MW-10-3-050913	MW-10-3	5/9/2013	15:45	X	X	X	X	X	X	X	X	X		X	
BLDG-10-MW-1-050913	BLDG-10-MW-1	5/9/2013	17:45	X	X	X	X	X	X	X	X	X		X	
TRIP BLANK	TRIP BLANK	5/9/2013	5/9/2013	X											Trip Blank
MW-9-101-A-051013	MW-9-101-A	5/10/2013	10:20	X	X	X	X	X	X	X	X	X		X	
TRIP BLANK	TRIP BLANK	5/10/2013	5/10/2013	X											Trip Blank
MW-8-003-B-051013	MW-8-003-B	5/10/2013	13:00	X	X	X	X	X	X	X	X	X		X	
MW-8-1-051013	MW-8-1	5/10/2013	16:40	X	X	X	X	X	X	X	X	X		X	
TRIP BLANK	TRIP BLANK	5/10/2013	5/10/2013	X											Trip Blank
MW-8-4-051313	MW-8-4	5/13/2013	12:00	X	X	X	X	X	X	X	X	X		X	
MW-8-2-051313	MW-8-2	5/13/2013	16:30	X	X	X	X	X	X	X	X	X		X	
Trip Blank	TRIP BLANK	5/13/2013	5/13/2013	X											Trip Blank
MW-6-F-8-051413	MW-6-F-8	5/14/2013	09:10	X	X	X	X	X	X	X	X	X		X	

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

				Analysis/Parameters											
Sample ID	*Location ID*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*Site-specific VOCs*	*TOC*	*Sulfate, Chloride*	*Sulfide*	*Nitrate, Nitrite*	*Ammonia*	*Volatile Fatty Acids*	*Alkalinity*	*Site-specific Metals*	*Hydrogen*	*Dissolved Gases*	*Comments*
MW-6-2-051413	MW-6-2	5/14/2013	11:50	X	X	X	X	X	X	X	X	X		X	
MW-6-1-051413	MW-6-1	5/14/2013	14:10	X	X	X	X	X	X	X	X	X		X	
MW-8-3-051413	MW-8-3	5/14/2013	15:15	X	X	X	X	X	X	X	X	X		X	
TRIP BLANK	TRIP BLANK	5/14/2013	5/14/2013	X											Trip Blank
MW-10-051613	MW-10	5/16/2013	09:12										X		
MW-4-051613	MW-4	5/16/2013	10:08										X		
MW-15-051613	MW-15	5/16/2013	11:17										X		
MW-11-051613	MW-11	5/16/2013	12:10										X		
MW-13-051613	MW-13	5/16/2013	13:06										X		

Notes:

VOCs Volatile organic compounds.
TOC Total organic carbon.

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

	Sample Location:	*BLDG-10-MW-1*	*G-1*	*MW-4*	*MW-4*	*MW-6-1*	*MW-6-2*	*MW-6-F-8*
	Sample ID:	*BLDG-10-MW-1-050913*	*G-1-050213*	*MW-4-050113*	*MW-4-051613*	*MW-6-1-051413*	*MW-6-2-051413*	*MW-6-F-8-051413*
	Sample Date:	*5/9/2013*	*5/2/2013*	*5/1/2013*	*5/16/2013*	*5/14/2013*	*5/14/2013*	*5/14/2013*
Parameters:	***Units***							
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	2000 U	14	45000	-	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	180000	110	500 U	-	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	2000 U	1.0 U	500 U	-	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	3000	21	24000	-	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2000 U	1.0 U	6600	-	1.0 U	1.0 U	1.0 U
Metals								
Iron	mg/L	1.2	0.057	3.9	-	16.7	0.23	0.12
Magnesium	mg/L	87.0	101	163	-	59.2	76.1	230
Manganese	mg/L	0.35	0.0071 J	2.0 J	-	2.3	0.60	0.59
Potassium	mg/L	5.4	11.1	20.2	-	2.4	4.4	5.2
Sodium	mg/L	89.9	2160	2080	-	453	1710	1170
Gas								
Carbon dioxide	µg/L	16000	11000	23000	-	26000	19000	16000
Ethane	µg/L	0.94 J	7.5 U	7.5 U	-	7.5 U	7.5 U	7.5 U
Ethene	µg/L	6.3 J	7.0 U	7.0 U	-	7.0 U	7.0 U	7.0 U
Hydrogen	nM	-	-	-	0.63	-	-	-
Methane	µg/L	9.6	4.0 U	4.0 U	-	14	4.0 U	4.0

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

	Sample Location:	*BLDG-10-MW-1*	*G-1*	*MW-4*	*MW-4*	*MW-6-1*	*MW-6-2*	*MW-6-F-8*
	Sample ID:	*BLDG-10-MW-1-050913*	*G-1-050213*	*MW-4-050113*	*MW-4-051613*	*MW-6-1-051413*	*MW-6-2-051413*	*MW-6-F-8-051413*
	Sample Date:	*5/9/2013*	*5/2/2013*	*5/1/2013*	*5/16/2013*	*5/14/2013*	*5/14/2013*	*5/14/2013*
Parameters:	***Units***							
General Chemistry								
Acetic acid	mg/L	1.6	10.0 U	1.0 U	-	1.0 U	1.0 U	1.0 U
Alkalinity, total (as CaCO3)	mg/L	334	300	329	-	394	403	394
Ammonia	mg/L	0.18	0.020 U	3.4	-	0.44	0.018 J	0.020 U
Butanoic acid	mg/L	1.0 U	10.0 U	1.0 U	-	1.0 U	1.0 U	1.0 U
Chloride	mg/L	386	3810	4300	-	968	3040	2680
Formic acid	mg/L	1.0 U	10.0 U	1.0 U	-	1.0 U	1.0 U	1.0 U
Lactic acid	mg/L	1.0 U	10.0 U	1.0 U	-	1.0 U	1.0 U	1.0 U
Nitrate (as N)	mg/L	0.050 U	1.3	0.050 U	-	0.048 J	0.26	0.050 U
Nitrite (as N)	mg/L	0.050 U	0.050 U	0.050 U	-	0.050 U	0.022 J	0.050 U
Propionic acid	mg/L	1.0 U	10.0 U	1.0 U	-	1.0 U	1.0 U	1.0 U
Pyruvic acid	mg/L	1.0 U	10.0 U	1.0 U	-	1.0 U	1.0 U	1.0 U
Sulfate	mg/L	252	301	268	-	52.8	127	228
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	4.2	1.4	2.8	-	3.9	1.7	1.1

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

	Sample Location:	*MW-7*	*MW-7-1*	*MW-7-2*	*MW-7-3*	*MW-7-4*	*MW-7-5*	*MW-7-6*
	Sample ID:	*MW-7-050313*	*MW-7-1-050613*	*MW-7-2-050613*	*MW-7-3-050613*	*MW-7-4-050713*	*MW-7-5-050713*	*MW-7-6-050713*
	Sample Date:	*5/3/2013*	*5/6/2013*	*5/6/2013*	*5/6/2013*	*5/7/2013*	*5/7/2013*	*5/7/2013*
Parameters:	***Units***							
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	55000	1.0 U	1.0 U	7.0	1.0 U	1000	750
Tetrachloroethene	µg/L	10000 U	1.0 U	1.0 U	1.0 U	1.0 U	11000	980
trans-1,2-Dichloroethene	µg/L	10000 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	20 U
Trichloroethene	µg/L	880000	1.0 U	1.0 U	1.0 U	1.0 U	1200	440
Vinyl chloride	µg/L	10000 U	1.0 U	1.0 U	38	1.0 U	200 U	88
Metals								
Iron	mg/L	0.021 J	0.11	0.12	3.9	0.20	0.097	0.11
Magnesium	mg/L	76.0	107	35.2	251	28.8	138	99.1
Manganese	mg/L	0.019 J	0.39 J	0.016 J	0.39 J	0.0074	1.3	0.19
Potassium	mg/L	14.3	4.5 J	1.4 J	50.7 J	1.9	7.7	10.7
Sodium	mg/L	254	569	92.0	4640	198 J	2540 J	2400 J
Gas								
Carbon dioxide	µg/L	4400	4900	3100	7800	2000	7100	4100
Ethane	µg/L	32	7.5 U	7.5 U	17	7.5 U	7.5 U	8.2
Ethene	µg/L	250	7.0 U	7.0 U	11	7.0 U	0.75 J	1.6 J
Hydrogen	nM	-	-	-	-	-	-	-
Methane	µg/L	120	21	4.0 U	190	4.0 U	22	90

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

Sample Location:		*MW-7*	*MW-7-1*	*MW-7-2*	*MW-7-3*	*MW-7-4*	*MW-7-5*	*MW-7-6*
Sample ID:		*MW-7-050313*	*MW-7-1-050613*	*MW-7-2-050613*	*MW-7-3-050613*	*MW-7-4-050713*	*MW-7-5-050713*	*MW-7-6-050713*
Sample Date:		*5/3/2013*	*5/6/2013*	*5/6/2013*	*5/6/2013*	*5/7/2013*	*5/7/2013*	*5/7/2013*
Parameters:	***Units***							
General Chemistry								
Acetic acid	mg/L	7.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Alkalinity, total (as CaCO3)	mg/L	242	339	330	336	333	300	304
Ammonia	mg/L	0.75 J	0.029	0.020 U	3.4	0.020 U	0.060	0.059
Butanoic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloride	mg/L	569	1320	125	7470	267	5030	4220
Formic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Lactic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Nitrate (as N)	mg/L	0.050 U	0.041 J	0.050 U	0.17	0.064	0.94	0.031 J
Nitrite (as N)	mg/L	0.050 U	0.050 U	0.050 U	0.022 J	0.050 U	0.033 J	0.050 U
Propionic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyruvic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Sulfate	mg/L	253	115	32.1	746	39.3	177 J	193 J
Sulfide	mg/L	0.10 U	0.10 U	0.10 U	0.057 J	0.10 U	0.10 U	0.10 U
Total organic carbon (TOC)	mg/L	7.6	1.4	1.3	1.8	0.64 J	2.0	1.5

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

	Sample Location:	*MW-7-7*	*MW-7-8*	*MW-7-A-6*	*MW-7-A-6*	*MW-7-C-2*	*MW-7-P-1*
	Sample ID:	*MW-7-7-050813*	*MW-7-8-050913*	*GW-DUPLICATE-050813*	*MW-7-A-6-050813*	*MW-7-C-2-050713*	*MW-7-P-1-050813*
	Sample Date:	*5/8/2013*	*5/9/2013*	*5/8/2013 (Duplicate)*	*5/8/2013*	*5/7/2013*	*5/8/2013*
Parameters:	***Units***						
Volatile Organic Compounds							
cis-1,2-Dichloroethene	µg/L	4400	280	26000	25000	430	1.1
Tetrachloroethene	µg/L	120000	110	140000	130000	5.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	2000 U	4.0 U	2000 U	2000 U	5.0 U	2.3
Trichloroethene	µg/L	2300	66	28000	25000	5.0 U	0.74 J
Vinyl chloride	µg/L	2000 U	4.0 U	2000 U	2000 U	18	11
Metals							
Iron	mg/L	0.37	3.0	0.46	0.45	0.17	62.5
Magnesium	mg/L	122	239	119	116	90.7	384
Manganese	mg/L	0.013	0.21	1.1	1.0	0.14	9.2
Potassium	mg/L	32.9	25.9	3.2	3.1	7.6	33.6
Sodium	mg/L	910	976	283	274	133 J	423
Gas							
Carbon dioxide	µg/L	1000 U	2200	21000	19000	4100	30000
Ethane	µg/L	27	5.6 J	23 J	8.1 J	0.87 J	54
Ethene	µg/L	65	0.88 J	200 J	81 J	1.5 J	10
Hydrogen	nM	-	-	-	-	-	-
Methane	µg/L	250	44	980	1100	49	2800

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

Sample Location:		*MW-7-7*	*MW-7-8*	*MW-7-A-6*	*MW-7-A-6*	*MW-7-C-2*	*MW-7-P-1*
Sample ID:		*MW-7-7-050813*	*MW-7-8-050913*	*GW-DUPLICATE-050813*	*MW-7-A-6-050813*	*MW-7-C-2-050713*	*MW-7-P-1-050813*
Sample Date:		*5/8/2013*	*5/9/2013*	*5/8/2013 (Duplicate)*	*5/8/2013*	*5/7/2013*	*5/8/2013*
Parameters:	***Units***						
General Chemistry							
Acetic acid	mg/L	4.1	1.0 U	0.21 J	0.20 J	1.0 U	1.0 U
Alkalinity, total (as CaCO3)	mg/L	89.7	120	458	459	296	264
Ammonia	mg/L	1.4	0.096	0.065	0.047	0.32	136
Butanoic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloride	mg/L	1870	2450	813	813	179	4610
Formic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Lactic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.16 J
Nitrate (as N)	mg/L	0.11	0.050 U	0.17	0.050 U	0.040 J	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
Propionic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyruvic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Sulfate	mg/L	399	116	81.6	81.2	538	85.5
Sulfide	mg/L	0.44	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Total organic carbon (TOC)	mg/L	11.4	0.90 J	8.3	8.1	0.67 J	2.6

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

	Sample Location:	*MW-8-1*	*MW-8-2*	*MW-8-3*	*MW-8-003-B*	*MW-8-4*	*MW-9-101-A*
	Sample ID:	*MW-8-1-051013*	*MW-8-2-051313*	*MW-8-3-051413*	*MW-8-003-B-051013*	*MW-8-4-051313*	*MW-9-101-A-051013*
	Sample Date:	*5/10/2013*	*5/13/2013*	*5/14/2013*	*5/10/2013*	*5/13/2013*	*5/10/2013*
Parameters:	***Units***						
Volatile Organic Compounds							
cis-1,2-Dichloroethene	µg/L	1.0 U	7800	3.0	790	43	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.49 J	880	1.0 U	11
trans-1,2-Dichloroethene	µg/L	1.0 U	77	1.0 U	25 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	200	0.78 J	390	7.9	1.7
Vinyl chloride	µg/L	1.0 U	270	1.0 U	120	12	1.0 U
Metals							
Iron	mg/L	0.43	0.19	0.56	0.24	1.7	0.057
Magnesium	mg/L	130	45.4	48.4	39.9	260	147
Manganese	mg/L	0.18	0.021	4.3	0.54	1.9	0.015
Potassium	mg/L	21.2	17.6	558	9.0	8.1	24.8
Sodium	mg/L	858	282	423	3020	1640	1290
Gas							
Carbon dioxide	µg/L	14000	9300	21000	1600	15000	5700
Ethane	µg/L	13	380 U	9.7	0.82 J	38 U	7.5 U
Ethene	µg/L	7.0 U	350 U	7.0 U	7.4	35 U	7.0 U
Hydrogen	nM	-	-	-	-	-	-
Methane	µg/L	110	320	130	55	93	4.0 U

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

	Sample Location:	*MW-8-1*	*MW-8-2*	*MW-8-3*	*MW-8-003-B*	*MW-8-4*	*MW-9-101-A*
	Sample ID:	*MW-8-1-051013*	*MW-8-2-051313*	*MW-8-3-051413*	*MW-8-003-B-051013*	*MW-8-4-051313*	*MW-9-101-A-051013*
	Sample Date:	*5/10/2013*	*5/13/2013*	*5/14/2013*	*5/10/2013*	*5/13/2013*	*5/10/2013*
Parameters:	***Units***						
General Chemistry							
Acetic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Alkalinity, total (as CaCO3)	mg/L	318	381	380	187	328	210
Ammonia	mg/L	1.6	0.85	1.9	0.15	0.11	0.019 J
Butanoic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloride	mg/L	1710	318	1730	4190	3540	2180
Formic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Lactic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Nitrate (as N)	mg/L	0.050 U	0.14	0.031 J	0.48	0.021 J	5.0
Nitrite (as N)	mg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Propionic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyruvic acid	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Sulfate	mg/L	644	222	58.0	178	225	1000
Sulfide	mg/L	0.82	0.95	0.10 U	0.10 U	0.10 U	0.10 U
Total organic carbon (TOC)	mg/L	0.86 J	1.5	5.4	2.0	0.84 J	2.6

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

	Sample Location:	*MW-10*	*MW-10*	*MW-10-2*	*MW-10-3*	*MW-11*	*MW-11*	*MW-12*
	Sample ID:	*MW-10-050113*	*MW-10-051613*	*MW-10-2-050913*	*MW-10-3-050913*	*MW-11-050213*	*MW-11-051613*	*MW-12-050313*
	Sample Date:	*5/1/2013*	*5/16/2013*	*5/9/2013*	*5/9/2013*	*5/2/2013*	*5/16/2013*	*5/3/2013*
Parameters:	***Units***							
Volatile Organic Compounds								
cis-1,2-Dichloroethene	µg/L	180	-	2600	38	1.1	-	150
Tetrachloroethene	µg/L	4.0 U	-	150	24	1.0 U	-	1.0 U
trans-1,2-Dichloroethene	µg/L	4.0 U	-	40 U	1.0 U	1.0 U	-	1.0
Trichloroethene	µg/L	56	-	450	24	1.0 U	-	2.0 U
Vinyl chloride	µg/L	14	-	60	1.4	1.1	-	73
Metals								
Iron	mg/L	0.48	-	0.35	0.038 J	0.70	-	8.1
Magnesium	mg/L	31.8	-	76.3	22.1	47.0	-	76.4
Manganese	mg/L	1.5 J	-	0.13	0.00054 J	0.17 J	-	7.4 J
Potassium	mg/L	3.4	-	9.6	2.9	9.0	-	3.9
Sodium	mg/L	845	-	1130	64.1	151	-	1260
Gas								
Carbon dioxide	µg/L	7400	-	7800	1100	4200	-	14000
Ethane	µg/L	0.71 J	-	2.8 J	7.5 U	1.0 J	-	3.1 J
Ethene	µg/L	1.2 J	-	2.1 J	7.0 U	1.3 J	-	4.2 J
Hydrogen	nM	-	0.77	-	-	-	0.91	1.1
Methane	µg/L	58	-	38	4.0 U	40	-	200

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

	Sample Location:	*MW-10*	*MW-10*	*MW-10-2*	*MW-10-3*	*MW-11*	*MW-11*	*MW-12*
	Sample ID:	*MW-10-050113*	*MW-10-051613*	*MW-10-2-050913*	*MW-10-3-050913*	*MW-11-050213*	*MW-11-051613*	*MW-12-050313*
	Sample Date:	*5/1/2013*	*5/16/2013*	*5/9/2013*	*5/9/2013*	*5/2/2013*	*5/16/2013*	*5/3/2013*
Parameters:	***Units***							
General Chemistry								
Acetic acid	mg/L	1.0 U	-	1.0 U	1.0 U	1.0 U	-	1.0 U
Alkalinity, total (as CaCO3)	mg/L	270	-	310	145	259	-	323
Ammonia	mg/L	0.039	-	0.44	0.020 U	0.15	-	1.2 J
Butanoic acid	mg/L	1.0 U	-	1.0 U	1.0 U	1.0 U	-	1.0 U
Chloride	mg/L	1470	-	2010	87.8	333	-	3090
Formic acid	mg/L	1.0 U	-	1.0 U	1.0 U	1.0 U	-	1.0 U
Lactic acid	mg/L	1.0 U	-	1.0 U	1.0 U	1.0 U	-	1.0 U
Nitrate (as N)	mg/L	0.33	-	0.077	1.3	0.34	-	0.050 U
Nitrite (as N)	mg/L	0.050 U	-	0.050 U	0.050 U	0.050 U	-	0.050 U
Propionic acid	mg/L	1.0 U	-	1.0 U	1.0 U	1.0 U	-	1.0 U
Pyruvic acid	mg/L	1.0 U	-	1.0 U	1.0 U	1.0 U	-	1.0 U
Sulfate	mg/L	153	-	226	118	84.6	-	120
Sulfide	mg/L	0.10 U	-	0.10 U	0.10 U	0.10 U	-	0.10 U
Total organic carbon (TOC)	mg/L	3.3	-	1.3	0.71 J	1.6	-	3.6

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

	Sample Location:	*MW-13*	*MW-13*	*MW-14*	*MW-15*	*MW-15*
	Sample ID:	*MW-13-050213*	*MW-13-051613*	*MW-14-050313*	*MW-15-050113*	*MW-15-051613*
	Sample Date:	*5/2/2013*	*5/16/2013*	*5/3/2013*	*5/1/2013*	*5/16/2013*
Parameters:	***Units***					
Volatile Organic Compounds						
cis-1,2-Dichloroethene	µg/L	1.0 U	-	1.0 U	1.0 U	-
Tetrachloroethene	µg/L	1.0 U	-	1.0 U	6.8	-
trans-1,2-Dichloroethene	µg/L	1.0 U	-	1.0 U	1.0 U	-
Trichloroethene	µg/L	1.0 U	-	1.0 U	0.64 J	-
Vinyl chloride	µg/L	1.0 U	-	1.0 U	1.0 U	-
Metals						
Iron	mg/L	4.7	-	0.038 J	0.050 U	-
Magnesium	mg/L	39.4	-	59.4	43.7	-
Manganese	mg/L	4.3 J	-	0.20 J	0.21 J	-
Potassium	mg/L	6.2	-	5.1	3.2	-
Sodium	mg/L	964	-	850	384	-
Gas						
Carbon dioxide	µg/L	3700	-	6200	15000	-
Ethane	µg/L	75 U	-	7.5 U	7.5 U	-
Ethene	µg/L	70 U	-	7.0 U	7.0 U	-
Hydrogen	nM	-	0.69	16	-	0.75
Methane	µg/L	110	-	50	4.0 U	-

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

	Sample Location:	***MW-13***	***MW-13***	***MW-14***	***MW-15***	***MW-15***
	Sample ID:	***MW-13-050213***	***MW-13-051613***	***MW-14-050313***	***MW-15-050113***	***MW-15-051613***
	Sample Date:	***5/2/2013***	***5/16/2013***	***5/3/2013***	***5/1/2013***	***5/16/2013***
Parameters:	***Units***					
General Chemistry						
Acetic acid	mg/L	1.0 U	-	1.0 U	1.0 U	-
Alkalinity, total (as CaCO3)	mg/L	382	-	361	415	-
Ammonia	mg/L	0.60	-	0.15	0.020 U	-
Butanoic acid	mg/L	1.0 U	-	1.0 U	1.0 U	-
Chloride	mg/L	1590	-	1340	672	-
Formic acid	mg/L	1.0 U	-	1.0 U	1.0 U	-
Lactic acid	mg/L	1.0 U	-	1.0 U	1.0 U	-
Nitrate (as N)	mg/L	0.057	-	0.061	1.4	-
Nitrite (as N)	mg/L	0.050 U	-	0.050 U	0.050 U	-
Propionic acid	mg/L	1.0 U	-	1.0 U	1.0 U	-
Pyruvic acid	mg/L	1.0 U	-	1.0 U	1.0 U	-
Sulfate	mg/L	62.7	-	60.0	74.7	-
Sulfide	mg/L	0.10 U	-	0.10 U	0.10 U	-
Total organic carbon (TOC)	mg/L	3.8	-	1.7	2.1	-

Notes:

J Estimated concentration.

U Not present at or above the associated value.

- Not analyzed.

TABLE 3

ANALYTICAL METHODS AND HOLDING TIME CRITERIA
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

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

Notes

SW-846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions.
SM "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992, with subsequent revisions.
EPA "Methods for Chemical Analysis of Water and Wastes", USEPA-600/4-79-020, March 1983 with subsequent revisions.
VOCs Volatile organic compounds.
TOC Total organic carbon.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE METHOD BLANKS
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

Parameter	*Analyte*	*Analysis Date*	*Blank Result **	*Sample ID*	*Original Result*	*Qualified Result*	*Units*
General Chemistry	Ammonia	05/10/13	0.020	MW-12-050313	0.015 J	0.020 U	mg/L

Notes:

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

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE TRIP BLANKS
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

Parameter	*Analyte*	*Analysis Date*	*Blank Result **	*Sample ID*	*Original Result*	*Qualified Result*	*Units*
VOCs	Trichloroethene	05/03/13	62.0	MW-12-050313	2.0	2.0 U	µg/L

Notes:

* Blank result adjusted for sample factors where applicable.
U Not detected at the associated reporting limit.
VOCs Volatile organic compounds.

TABLE 6

QUALIFIED SAMPLE DATA DUE TO VARIABILITY IN FIELD DUPLICATE RESULTS
GROUNDWATER MONITORING
GENERAL MOTORS CORPORATION
LOCKPORT, NEW YORK
MAY 2013

Parameter	*Analyte*	*RPD/Diff*	*Sample ID*	*Qualified Result*	*Field Duplicate Sample ID*	*Qualified Result*	*Units*
Dissolved Gases	Ethane	96	MW-7-A-6-050813	8.1 J	GW-DUPLICATE-050813	23 J	µg/L
Dissolved Gases	Ethene	85	MW-7-A-6-050813	81 J	GW-DUPLICATE-050813	200 J	µg/L

Notes:

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

APPENDIX E

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-10-1	MW-10-2	MW-10-3
DO	<0.5 mg/L	3	3	0	3	0	3	3	0	0	3	3	3	3	3	3	3	0	0	0	0	0	0	0
DO	>5 mg/l	-3																						
Nitrate	<1 mg/L	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	2	2	0
Iron II	>1 mg/l	2	0	0	2	0	0	0	0	2	0	0	2	2	0	0	0	0	2	0	0	2	0	0
Sulfate	<20 mg/L	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sulfide	>1 mg/L	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Methane	<0.5 mg/L	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
Methane	>0.5 mg/L	3																						
ORP	<50 mV	1	0	0	1	0	0	1	2	2	1	2	1	1	1	0	2	2	1	1	1	0	1	1	1
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
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
Temp	> 20^{o}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
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
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
Chloride	>2 times background (2,195)	2	0	0	2	0	2	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Hydrogen	>1 nM	3																							
Hydrogen	<1nM	0																							
Volatile Fatty Acids	>0.1 mg/L	2	0	0	0	0	0	0	2	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
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
TCE	If Daughter Product	2	0	0	0	0	2	2	2	2	2	0	2	0	0	0	0	0	0	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	2	2
VC	If Daughter Product	2	0	0	2	0	0	2	0	0	0	2	2	0	0	0	0	2	0	2	2	0	0	2	2
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	2	0	0	2	2	0	3	0	2	0	0	0	2	0	0	0	0	0	0	0	0
	>0.1 mg/L	3																							
Chloroform	If Daughter Product	2																							
Dichloromethane	If Daughter Product	2																							
		SCORE	**5**	**2**	**16**	**2**	**11**	**16**	**12**	**10**	**18**	**11**	**25**	**8**	**6**	**5**	**9**	**11**	**6**	**9**	**7**	**0**	**7**	**9**	**7**

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