March 9, 2015

Mr. Frank Sowers
Project Manager
NYSDEC
Region 8 - Division of Environmental Remediation
6274 East Avon-Lima Road
Avon, NY 14414-9519

Subject: **2014 Annual Progress Report and Remedial Progress Evaluation**
Voluntary Cleanup Agreement (VCA) Index B8-0508-97-02
Former Taylor Instruments Facility
Rochester, New York
AMEC Project 3031052006

Dear Mr. Sowers:

In accordance with Section X.I.B. of the Taylor Instruments Site Voluntary Cleanup Agreement, enclosed please find one hard copy and one electronic copy of the 2014 Annual Progress Report and Remedial Progress Evaluation. The Periodic Review Report is included as an Appendix.

If you have any questions, please call me at (865) 671-6774.

Sincerely,

Amec Foster Wheeler Environment & Infrastructure, Inc.

Ricky A. Ryan, P.E.
Senior Principal Project Manager

K. Joe Deatherage
Senior Environmental Engineer

Enclosures

cc: Bart Putzig, NYSDEC (w/o enclosure [*electronic*])
John Frazer, MCDOH (w/o enclosure)
Justin Deming, NYSDOH (w/ 1 electronic enclosure)
Jean McCreary, Nixon Peabody LLP (w/ 1 electronic enclosure)
Robert H. Fetter, Thermo Fisher Scientific (w/ 1 electronic enclosure)
Melody Christopher, ABB (w/ 1 hard copy + electronic enclosure)
Nelson Walter, AMEC (w/o enclosure [*electronic*])

Amec Foster Wheeler Environment & Infrastructure, Inc.
9725 Cogdill Road
Knoxville, Tennessee 37932
Tel (865) 671-6774
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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Region 8 Main Office
6274 East Avon-Lima Road, Avon, NY 14414-9516
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March 30, 2015

ABB INC.
Melody B. Christopher
5 Waterside Crossing
Windsor, CT 06095

Re: Site Management (SM) Periodic Review Report (PRR) Response Letter
Former Taylor Instruments Facility, Rochester
Monroe County, Site No.: V00144

Dear Melody B. Christopher (as the Certifying Party):

The Department has reviewed your Periodic Review Report (PRR) and IC/EC Certification for following period: 02/14/2014 to 02/14/2015.

The Department hereby accepts the PRR and associated Certification. The frequency of Periodic Reviews for this site is 1 year(s), your next PRR is due on **March 15, 2016**. You will receive a reminder letter and updated certification form 45-days prior to the due date.

If you have any questions, or need additional forms, please contact me at 585-226-5357 or e-mail: frank.sowers@dec.ny.gov.

Sincerely,

Frank Sowers
Project Manager

ec:
Frank Sowers, Project Manager
Albert DeMarco, DOH Project Manager
Bart Putzig, RHWRE

cc:
Kevin Carter

2014 ANNUAL PROGRESS REPORT AND REMEDIAL PROGRESS EVALUATION

FORMER TAYLOR INSTRUMENTS SITE
95 AMES STREET
ROCHESTER, NEW YORK

PREPARED FOR:

ABB, INC.
5 WATERSIDE CROSSING
WINDSOR, CT 06095

PREPARED BY:

AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.
9725 COGDILL ROAD
KNOXVILLE, TN 37932

AMEC FOSTER WHEELER PROJECT 3031052006

March 2015

amec
foster
wheeler

2014 ANNUAL PROGRESS REPORT AND REMEDIAL PROGRESS EVALUATION

FORMER TAYLOR INSTRUMENTS SITE
95 AMES STREET
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9725 COGDILL ROAD
KNOXVILLE, TN 37932

AMEC FOSTER WHEELER PROJECT 3031052006

March 2015

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and Remedial Progress Evaluation
Former Taylor Instruments Site
Rochester, New York

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Figure No. **Description**

Figures are contained in Appendix A.

LIST OF TABLES

Table No. **Description**

Tables are contained in Appendix C.

LIST OF ACRONYMS

µg/L	micrograms per liter
µmole/L	micromoles per liter
3DMe®	3-D Microemulsion®
AMEC	AMEC Environment & Infrastructure, Inc.
Amec Foster Wheeler	Amec Foster Wheeler Environment & Infrastructure, Inc.
COC	contaminant of concern
1,1-DCE	1,1-dichloroethene
cis-1,2-DCE	cis-1,2-dichloroethene
trans-1,2-DCE	trans-1,2-dichloroethene
EPA	Environmental Protection Agency
MS	matrix spike
MS/MSD	matrix spike/matrix spike duplicate
MSD	matrix spike duplicate
NYSDEC	New York State Department of Environmental Conservation
PARCC	precision, accuracy, representativeness, completeness, and comparability
PCE	tetrachloroethene
QC	quality control
RPD	relative percent difference
TCE	trichloroethene
VFA	volatile fatty acid
VOC	volatile organic compound

1.0 INTRODUCTION

This annual progress report summarizes the results from site wide groundwater sampling events conducted in May and October 2014. These activities occurred at the former Taylor Instruments Site – New York State Department of Environmental Conservation (NYSDEC) Site #828028a located at 95 Ames Street in Rochester, New York (Figure 1 in Appendix A), pursuant to a Voluntary Cleanup Agreement (NYSDEC, 1997). The 2014 sampling events were the fourth year of sampling since Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), formerly AMEC Environment & Infrastructure, Inc. (AMEC) completed an expanded accelerated bioremediation application using 3-D Microemulsion® (3DMe®) in 2010 as the final required active Site remediation. This continued remedial evaluation is consistent with the statement of remedial action objectives in Section 2.2 of the approved *Remedial Work Plan* (Harding Lawson Associates, 2000); to demonstrate a downward trend in volatile organic compound (VOC) concentrations achieved using a combination of active, passive, and accelerated biodegradation remedial technology approaches. All activities described herein are also consistent with an assignable release for the Site, granted by the NYSDEC via letter dated September 2, 2005 (NYSDEC, 2005). In the same letter, NYSDEC approved previous remedial activities as implemented and determined that no further investigation or response would be required at the Site to render it safe for contemplated uses.

Details of the Site investigation and remedial history, including the certification of engineering and institutional controls, are presented in the *Periodic Review Report,* which is provided in Appendix B of this report as requested by NYSDEC (NYSDEC, 2015).

The first semi-annual sampling event for 2014 was conducted in May and the second in October. A summary of the sampling event results for the 3DMe® baseline event, as well as events from 2001-2014, are also included.

Following decommissioning of the remedial treatment system and selected monitoring wells in 2010, 14 monitoring wells remain on the Site, as shown in Figure 1 (Appendix A). Unless otherwise agreed to by NYSDEC, contaminant conditions will continue to be monitored until groundwater concentrations of the contaminants of concern (COCs) are at or below the NYSDEC Class GA Standards.

2.0 GROUNDWATER MONITORING

2.1 SCOPE OF WORK

Amec Foster Wheeler personnel performed the May and October sampling events to provide an inclusive set of groundwater analytical data for the 2014 reporting period. During each event, 20 samples were collected and submitted to Test America, Inc. for VOC analyses by U.S. Environmental Protection Agency (EPA) Method 8260C (Table 1, Appendix C). As approved by NYSDEC in the 2011 Operations, Maintenance, and Monitoring Plan (MACTEC, 2011), the samples were analyzed for the six primary COCs remaining at the Site: tetrachloroethene (PCE); trichloroethene (TCE); cis-1,2-dichloroethene (cis-1,2-DCE); trans-1,2-dichloroethene (trans-1,2-DCE); 1,1-dichloroethene (1,1-DCE); and vinyl chloride. The results for the 2014 sampling events are presented in tables in Appendix C. Additionally, to further assess biological parameters supportive for contaminant degradation, selected samples were also analyzed for sulfate by EPA Method 300, methane/ethane by Method EPA RSK175, and volatile fatty acids (VFA's) by Method AM23G. The methane/ethane and VFA samples were analyzed by Microseeps/Pace Analytical Energy Services, LLC. The results for these parameters are included in the laboratory reports in Appendix D. Data for dissolved oxygen, oxygen reduction potential, pH, and temperature were also collected in the field during the sampling events. Six of the 20 samples collected for each event were associated with quality control efforts. All environmental samples, including field duplicates and matrix spike/matrix spike duplicate (MS/MSD) samples, were collected using a low-flow peristaltic pump at flow rates <400 milliliters per minute.

Analytical results from the 14 remaining Site wells are presented in Figures 2 and 3 (Appendix A). Laboratory reports and chain-of-custody forms for the 2014 samples are located in Appendix D. Purge and sample field data are presented in the field data records located in Appendix E.

2.2 SUMMARY OF RESULTS

This section presents the results of the groundwater sampling events conducted during 2014. As detailed below, the results from both the May and October events showed the effects of subsequent enhanced biodegradation from the 3DMe® application. The results summary focuses primarily on the current October 2014 results. Tables 1 and 2 (Appendix C) summarize the monitoring well locations with COCs exceeding NYSDEC Class GA Standards for overburden and bedrock monitoring wells, respectively. Tables 3 and 4 (Appendix C) show a historical summary of analytical results for the remaining overburden

and bedrock monitoring wells, respectively, shown on Figure 1 (Appendix A). Sample VOC results are also presented in "flag boxes" shown on Figures 2 and 3 (Appendix A), representing overburden monitoring wells and bedrock monitoring wells, respectively. Complete laboratory analytical data reports for the 2014 events are included in Appendix D. Well construction information is provided in Appendix F.

While certain COCs remain above the NYSDEC Class GA Standards, substantial declines of COC concentrations have been observed in all Site monitoring wells. The greatest decrease has been within the two former source areas; COCs in source area overburden monitoring well OB-04 in May 2014 were below their respective NYSDEC Class GA standards and five of the six primary COCs in OB-04 and OB-08 in May and October 2014 were below their respective NYSDEC Class GA standards, as shown in Figure 2 (Appendix A).

COCs in six of the eight overburden wells are presently near or below the NYSDEC Class GA standards, including all three wells along the downgradient eastern property boundary (i.e., TW-04, TW-09, and TW-20). It is also notable that in the South Source Area, there were no COCs detected above the NYSDEC Class GA standards in overburden well OB-04 during the May sampling event. Also, the total contaminant mass of the overburden wells in October was the lowest ever.

As shown in Tables 1 and 2 (Appendix C) in October 2014, PCE was not detected at any location over the NYSDEC Class GA Standard of 5 micrograms per liter (µg/L); TCE was detected above the NYSDEC Class GA Standard of 5 µg/L in the groundwater samples collected from three overburden monitoring wells and five bedrock monitoring wells; cis-1,2-DCE was detected above the NYSDEC Class GA Standard of 5 µg/L in the groundwater samples collected from four overburden monitoring wells and five bedrock monitoring wells; trans-1,2-DCE was detected above the NYSDEC Class GA Standard of 5 µg/L in the groundwater samples collected from three overburden monitoring wells and three bedrock monitoring wells; 1,1-DCE was detected above the NYSDEC Class GA Standard of 5 µg/L in the groundwater samples collected from two bedrock monitoring wells; and vinyl chloride was detected above the NYSDEC Class GA Standard of 2 µg/L in the groundwater samples collected from five overburden monitoring wells and four bedrock monitoring wells.

After the expanded accelerated bioremediation application of 3DMe® in the overburden groundwater in 2010, the total COC contaminant mass in overburden monitoring wells increased from 12.3 micromoles per liter (µmole/L) prior to the injection to 18.5 µmole/L in May 2011, six months after the injection.

This increase is typical for the initial months following a 3DMe® injection, as the 3DMe® causes contaminants to de-sorb from the soil particles in the saturated zone matrix, thus increasing the available contaminant mass in the groundwater. However, since May 2011 the total contaminant mass has dropped significantly and in October 2014, four years after the injection, total contaminant mass is at 3.7 µmole/L, the lowest ever. The October 2014 total contaminant mass is 80% lower than the May 2011 event and 70% lower than the baseline event. Looking at specific COCs, the TCE contaminant mass in overburden wells has decreased steadily from 8.8 µmole/L prior to injection to 2.1 µmole/L in May 2014 and then 1.4 µmole/L in October 2014, demonstrating that the 3DMe® has been effective in reducing site source contamination. Cis-1,2-DCE increased from 2.4 µmole/L prior to injection to 7.1 µmole/L in May 2011 after the injection, but has since decreased to 1.8 µmole/L in May 2014 and 0.9 µmole/L in October 2014. Vinyl chloride increased from 0.8 µmole/L prior to injection to 4.8 µmole/L after the injection in May 2011, but decreased to 1.2 µmole/L in May and 1.1 µmole/L in October 2014. All other COCs are at minimal concentrations or were not detected. The contaminant mass values are depicted on Figure 4 (Appendix A). The substantial decreases in contaminant mass indicate that the 3DMe® has enhanced contaminant biodegradation.

While substantial decreases in contaminant mass have been noted in the affected overburden groundwater, the corresponding response in the bedrock groundwater has been slower. However, with the exception of abnormally high contaminant mass in May 2014, the total bedrock COC contaminant mass has more recently demonstrated a reducing trend, as shown on Figure 5 in Appendix A. Looking at specific COCs, the TCE contaminant mass has decreased from 14.2 µmole/L in the May 2010 pre-injection baseline event to 10.3 µmole/L in October 2014; the cis-1,2-DCE contaminant mass has increased from 7.5 µmole/L in May 2010 to 29.9 µmole/L in October 2014, likely influenced by the degradation of TCE; and the vinyl chloride contaminant mass has increased from 0.1 µmole/L in May 2010 to 6.2 µmole/L in October 2014, reflecting biodegradation of TCE and cis-1,2-DCE. All other COCs have had minimal concentrations or were not detected. Although historically bedrock concentrations have varied considerably, the overall decreases in TCE contaminant mass in correlation with overall increases in TCE daughter products (cis-1,2-DCE and vinyl chloride) in October 2014 indicate that the bedrock groundwater has been affected by the enhanced contaminant biodegradation in the overburden groundwater. Specific evidence of this is in North Source Area bedrock well BR-15 where following the 2010 injection COCs have decreased to near or below their NYSDEC Class GA standards.

2.3 POTENTIOMETRIC SURFACE

Associated with each monitoring event, a potentiometric surface map was generated to depict groundwater elevations for the overburden groundwater. AutoCAD 2014 was used to plot the potentiometric surface maps in Figures 6 and 8 (Appendix A). The programs mathematically calculate contours based upon groundwater elevation measurements collected in the field.

The May and October 2014 overburden potentiometric maps (Figures 6 and 8 in Appendix A) were based upon water level information collected during the course of sampling activities on the subject Site. Overburden potentiometric surface mapping for the water level events is comparable to past groundwater mapping indicating groundwater flow is generally to the northeast.

The bedrock water level data cannot readily be plotted due to the large variation in elevation heads. These variations are due to the fractured bedrock system. The head data appears to be bi-modally distributed possibly reflecting differing elevations of water bearing fractures. The historical absence of contaminants at the southwest corner of the Site and their presence in wells along the north and east site perimeters also support the interpretation that bedrock groundwater flow beneath the two source areas is generally towards the north/northeast. Bedrock water level elevations are presented on Figures 7 and 9 in Appendix A.

3.0 ANALYTICAL PROGRAM

Overall data quality is assessed by grouping particular data evaluation findings and reviewing them in terms of accuracy, precision, representativeness, completeness, and comparability (PARCC) criteria. Data generated during this monitoring period were evaluated for PARCC criteria after receipt of all analytical data.

3.1 ACCURACY

Accuracy is a quantitative measurement of agreement between an analytical result and the true value. Accuracy is determined by comparing known amounts of analytes, which are added to the sample prior to analysis, to the field analytical results. Accuracy is expressed as a percentage of recovery of the total amount of spiked analyte. For VOC analyses, each sample was spiked with surrogate compounds prior to analysis (and extraction), and chosen samples were spiked (in duplicate) with additional spikes [Matrix Spike (MS) and Matrix Spike Duplicate (MSD)]. Surrogate and MS/MSD recoveries evaluate accuracy and identify interferences from the sample matrix and were acceptable for VOC analysis for these sampling events.

3.2 PRECISION

Precision is a quantitative evaluation of the repeatability of a measurement. Precision of analytical measurements is determined by calculating the relative percent difference (RPD) between the two numerical values. For precision, the matrix spike (MS) is performed in duplicate, and the values from both analyses are evaluated. Comparison of results from duplicate field samples may also be indicative of overall precision of a data set. However, field duplicates may be influenced by sampling precision and are not as controlled as laboratory duplicates.

For quality control purposes, an MS and MSD were taken for each set of 20 samples with a net result of one MS/MSD analysis for the May 2014 sampling event and one MS/MSD analysis for the October 2014 event. The evaluation of MS/MSD criteria was used to qualify the data. The evaluations of MS/MSD analyses are presented in the following tables.

BR-04 – May 2014

Analyte	MS Value (µg/L)	Recovery (%)	MSD Value (µg/L)	MSD Recovery (%)	RPD	Control Limits (%)	RPD Limit
cis-1,2-DCE	1173	NA	1153	NA	2	68-138	17
trans-1,2-DCE	134.5	92	133.7	90	1	66-143	16
1,1-Dichloroethene	71.50	120	71.10	119	1	70-142	17
Trichloroethene	716.5	NA	701.8	NA	2	73-144	17
Tetrachloroethene	52.11	104	52.41	105	1	72-145	16
Vinyl chloride	122.2	108	118.1	100	3	56-129	17
NA = Not Applicable. The analyte present in original sample is greater than four times the matrix spike concentration.							

BR-04 – October 2014

Analyte	MS Value (µg/L)	Recovery (%)	MSD Value (µg/L)	MSD Recovery (%)	RPD	Control Limits (%)	RPD Limit
cis-1,2-DCE	999.8	NA	1023	NA	2	68-138	17
trans-1,2-DCE	122.5	90	118.2	82	4	66-143	16
1,1-Dichloroethene	58.22	98	55.73	93	4	70-142	17
Trichloroethene	641.3	NA	677.3	NA	5	73-144	17
Tetrachloroethene	50.18	100	50.01	100	0	72-145	16
Vinyl chloride	96.51	83	98.91	88	2	56-129	17
NA = Not Applicable. The analyte present in original sample is greater than four times the matrix spike concentration							

The RPDs were below the National Functional Data Validation Guideline of 30 for water samples, and demonstrate that MS/MSD analyses are within acceptable limits.

Field duplicate sampling followed the same sampling outline as MS/MSD analysis. One duplicate sample was collected for each set of 20 samples, resulting in one duplicate sample for the May 2014 and one duplicate sample for the October 2014 sampling event. Field duplicate precision is presented in the following tables.

W-5 – May 2014

Sample ID	Analyte	Practical Quantitation Limit	Sample Result (µg/L)	Flag	Duplicate Result (µg/L)	Flag	RPD
W-5	cis-1,2-Dichloroethene	1	49.7		52.1		4.7
	trans-1,2-Dichloroethene	1	7.35		7.71		4.8
	Trichloroethene	1	182		177		2.8
	Vinyl Chloride	1	14.9		15.3		2.6

W-5 – October 2014

Sample ID	Analyte	Practical Quantitation Limit	Sample Result (µg/L)	Flag	Duplicate Result (µg/L)	Flag	RPD
W-5	cis-1,2-Dichloroethene	1	57.9		55.6		4.0
	trans-1,2-Dichloroethene	1	10.9		10.3		5.7
	Trichloroethene	1	141		155		9.5
	Vinyl Chloride	1	39.7		33.9		15.8

Field duplicate precision was evaluated between the two data sets for detected compounds. The RPDs were below the National Functional Data Validation Guideline of 30 for water samples.

3.3 REPRESENTATIVENESS

Representativeness is a qualitative measurement of the degree to which analytical results reflect the true concentrations of analytes that may (or not) be present in a sample. Representativeness of organic analytical results of true Site conditions is evaluated using trip blanks, field blanks, method blanks, and rinsates from decontaminated sampling equipment. Target organic compounds in quality control (QC) samples may represent contamination during sampling or transportation of samples to the laboratory. Compliance with holding time and extraction criteria also assures representativeness of results.

One field blank for the May 2014 event and one field blank for the October 2014 event were analyzed to characterize the water source used during these sampling events. Distilled water was used by the field crews for field blanks. No target VOCs were detected above the reporting limit in the field blanks.

No target VOCs were detected above the reporting limit in the method blank in May 2014 or October 2014.

Two trip blanks were analyzed during the May 2014 sampling event and one trip blank was analyzed during the October 2014 event as part of the VOC laboratory QC program. No target VOCs were detected above the reporting limit in the trip blanks.

Equipment rinse samples were collected for each set of 20 samples, using distilled water to rinse field equipment, and analyzed for all target constituents. One rinsate blank was collected during the May 2014 event and the October 2014 event. No target VOCs were detected above the reporting limit in either rinsate blank.

Representativeness is considered complete due to the lack of target VOC detections in QC efforts.

3.4 COMPLETENESS

Completeness is a quantitative measurement of the usability of a data set. Completeness is defined as the percentage of data that satisfy validation criteria. Rejected data are not usable. Data qualified as

estimated, however, is usable. Completeness goals were 100 percent for this report and are considered to be met.

3.5 COMPARABILITY

Comparability is a qualitative assessment of the confidence with which different data sets may be used to characterize a site. Comparability is a necessary criterion because sampling is often performed at different times and precision, accuracy, and representativeness are unique to each sampling event. Comparability between data generated at different times at a single site is evaluated by reviewing sample collection and handling procedures, sample matrix, and analytical methods used. Standardization of sampling protocols and analytical methods assures comparability as long as precision and accuracy criteria are satisfied for each data set. The overall analytical performance for this report was evaluated and is considered comparable to previous and future data sets.

4.0 CONCLUSIONS AND RECOMMENDATIONS

A comparison of analytical data from the 33 sampling events that occurred from 2001-2014 provides an evaluation of the Site remedial progress. The following overall conclusions and recommendations have been reached in this remedial progress evaluation:

- Following shutdown of the remedial treatment system in 2006 and subsequent decommissioning in 2010, overall contaminant levels in the Site monitoring wells have not demonstrated significant rebound effects, and overall declines remain evident.

- While certain COCs remain above the NYSDEC Class GA Standards, substantial declines of COC concentrations have been observed in all Site monitoring wells. The greatest decrease has been within the two former source areas, overburden monitoring wells OB-04 and OB-08. In OB-04 there were no COCs detected above their NYSDEC Class GA standards in May 2014 and only one COC was detected above the NYSDEC Class GA standard in October 2014. In OB-08, five of the six primary COCs were below their respective NYSDEC Class GA standards for the May and October 2014 sampling events.

- COCs in six of the eight overburden wells are presently near or below the NYSDEC Class GA standards, including all three wells along the downgradient eastern property boundary (i.e., TW-04, TW-09, and TW-20). It is also notable that monitoring well TW-04 has been near or below the NYSDEC Class GA standards since May 2009.

- Since the post-injection high concentrations in May 2011, the total overburden groundwater contaminant mass has dropped significantly and is presently at the lowest total ever. The substantial decrease in contaminant mass indicates that the 3DMe® has enhanced contaminant biodegradation in the overburden monitoring wells.

- Bedrock groundwater has now been affected by the enhanced contaminant biodegradation in the overlying overburden groundwater as indicated by the overall decreases in TCE contaminant mass in correlation with overall increases in TCE daughter products in October 2014.

- Groundwater monitoring events will continue to be conducted semi-annually on all 14 remaining monitoring wells. Groundwater samples will be analyzed for the six primary COCs remaining at the Site: PCE; TCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCE; and vinyl chloride. These VOCs will be analyzed using EPA Method 8260C. Additionally, as detailed in the revised *Operations, Maintenance, and Monitoring Manual* (MACTEC, 2011), the groundwater samples will be analyzed for the full suite of 8260C constituents once every five years and prior to ending monitoring at any specified well.

- Results for future post-closure monitoring events will be provided to NYSDEC in subsequent annual reports. Unless otherwise agreed to by NYSDEC, contaminant conditions will continue to be monitored until groundwater concentrations of the COCs are at or below the NYSDEC Class GA Standards.

- As requested by NYSDEC (NYSDEC, 2015), the Site Periodic Review Report is provided in Appendix B of this report.

5.0 REFERENCES

Harding Lawson Associates, 2000. *Remedial Work Plan, Former Taylor Instruments Site, 95 Ames Street in Rochester, New York.* Prepared for Combustion Engineering (April).

MACTEC, 2011. *Operations, Maintenance, and Monitoring Manual, Rev. 1, Former Taylor Instruments Site, Monroe County, New York.* Prepared for the New York State Department of Environmental Conservation (March).

NYSDEC, 1997. Voluntary Cleanup Agreement regarding the Taylor Instruments Site, Number B8-0508-97-02 (November).

NYSDEC, 2005. Letter to Ms. Jean H. McCreary with Nixon Peabody LLC (September 2).

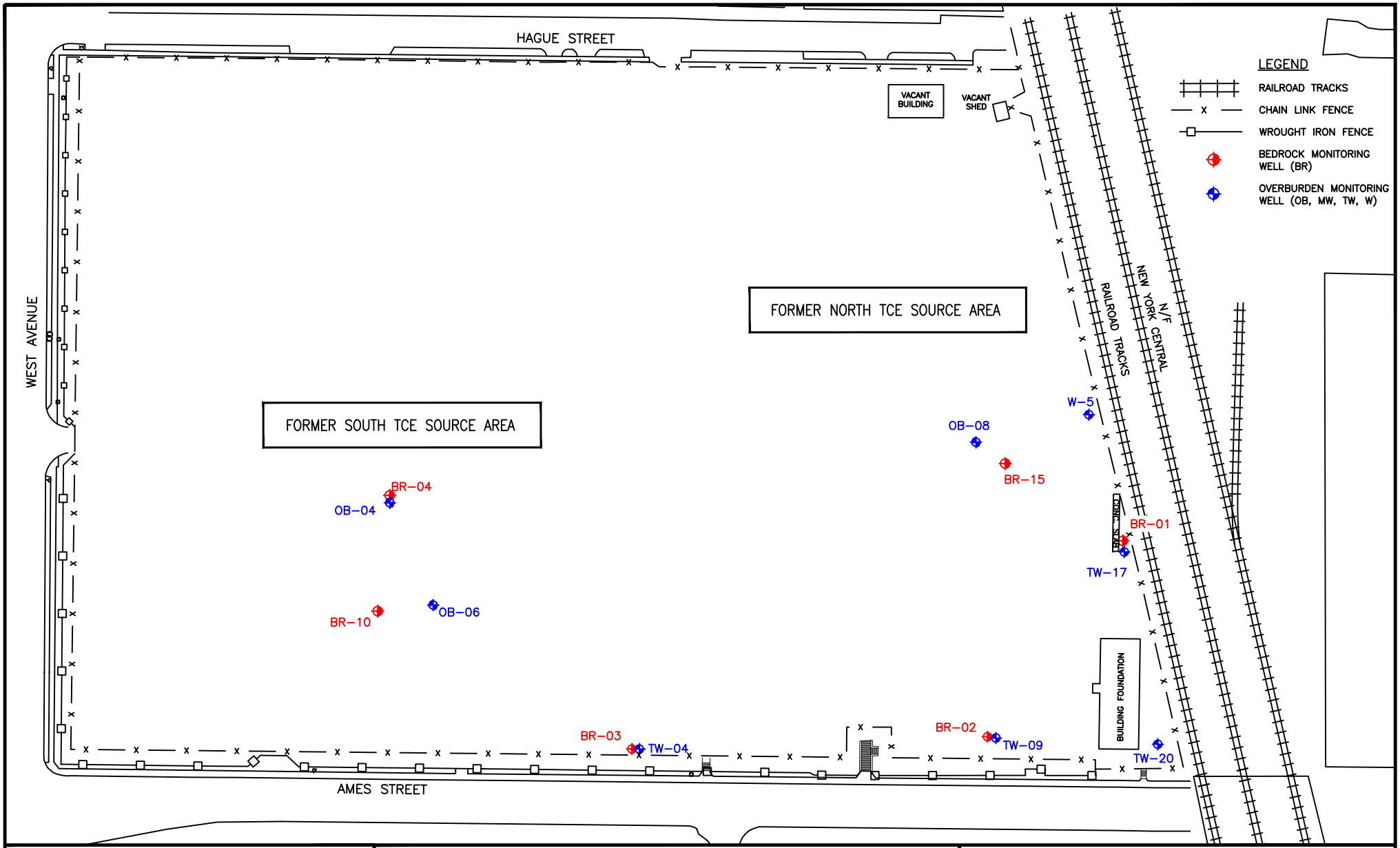
NYSDEC, 2010. Email from Mr. Frank Sowers with NYSDEC to Mr. Joe Deatherage of MACTEC Engineering and Consulting, Inc. (December 12).

NYSDEC, 2015. *Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal Site* (January 14).

APPENDIX A

FIGURES

P:\CADD\Projects\3031\3031052006 ABB\2014 Annual Report\F 01 Well Locations 8.5x11.dwg Feb. 02, 2015 william.wiers



N

0' 60' 120' 180'

1" = 120'

amec foster wheeler

CLIENT: ABB

TITLE:

WELL LOCATIONS

ANNUAL REPORT 2014

FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

DR:	REV:	PROJ. NO.:
APT	NG	3031-05-2006
CHK:	DATE:	DWG NO.
KJD	12-02-2014	NA
SCALE:		FIGURE. NO.:
AS SHOWN		FIGURE 1

HAGUE STREET

WEST AVENUE

AMES STREET

VACANT BUILDING

VACANT SHED

RAILROAD TRACKS

NEW YORK CENTRAL R/R

N/F

CONC. SLAB

BUILDING FOUNDATION

LEGEND

- RAILROAD TRACKS
- CHAIN LINK FENCE
- WROUGHT IRON FENCE
- BEDROCK MONITORING WELL (BR)
- OVERBURDEN MONITORING WELL (OB, MW, TW, W)

DCE	DICHLOROETHENE
PCE	TETRACHLOROETHENE (PERCHLOROETHENE)
TCE	TRICHLOROETHENE
U	NON DETECT
µg/L	MICROGRAMS PER LITER

RESULTS ABOVE NYSDEC CLASS GA STANDARD

SITE ID	NYSDEC CLASS GA groundwater standard	(units:ug/L)
Site ID: OB-XX		MAY 08 — DATE SAMPLED
Analyte		
PCE	5	1 U — NOT DETECTED AT THE INDICATED QUANTITATION LIMIT
TCE	5	1 U
cis-1,2-DCE	5	41.4 — DETECTED
trans-1,2-DCE	5	8.07
1,1-DCE	5	NS — NOT SAMPLED
Vinyl Chloride	2	47.8

NOTE: HISTORICAL HIGH OBTAINED FROM DATA FROM THE TIME FRAMES OF ACTIVE REMEDIATION OCT/NOV 2000 TO PRESENT.

BASELINE IS THE MAY 2010 EVENT CONDUCTED PRIOR TO THE EXPANDED ACCELERATED BIOREMEDIATION APPLICATION.

Site ID: W-5 (units: µg/L)

Analyte	Historical High	Baseline	May-14	Oct-14
PCE	2.41	1 U	1 U	1 U
TCE	1,435	601	182	141
cis-1,2-DCE	340	164	49.7	57.9
trans-1,2-DCE	13.1	2.08	7.35	10.9
1,1-DCE	1 U	1 U	1 U	1 U
Vinyl Chloride	39.5	5.04	14.9	39.7

W-5

Site ID: OB-04 (units: µg/L)

Analyte	Historical High	Baseline	May-14	Oct-14
PCE	19.9	1 U	1 U	1 U
TCE	71,500	5.76	1.46	1 U
cis-1,2-DCE	56,000	5.69	1 U	1 U
trans-1,2-DCE	170	1.77	1 U	1 U
1,1-DCE	108	1 U	1 U	1 U
Vinyl Chloride	145	9.74	1.21	4.25

OB-04

BR-04

Site ID: OB-08 (units: µg/L)

Analyte	Historical High	Baseline	May-14	Oct-14
PCE	13.1	1 U	1 U	1 U
TCE	40,000	1 U	1 U	1 U
cis-1,2-DCE	3,750	30.5	1 U	1 U
trans-1,2-DCE	32	3.44	3.5	9.57
1,1-DCE	12.9	1 U	1 U	1 U
Vinyl Chloride	249	36	3.03	1 U

OB-08

BR-15

Site ID: TW-17 (units: µg/L)

Analyte	Historical High	Baseline	May-14	Oct-14
PCE	1 U	1 U	1 U	1 U
TCE	1,000	316	1.38	1 U
cis-1,2-DCE	556	10.6	112	1.51
trans-1,2-DCE	5.92	1 U	4.21	1 U
1,1-DCE	1 U	1 U	1 U	1 U
Vinyl Chloride	130	1 U	48	4.80

BR-01

TW-17

Site ID: OB-06 (units: µg/L)

Analyte	Historical High	Baseline	May-14	Oct-14
PCE	1 U	1 U	1 U	1 U
TCE	5,600	105	35.5	38.9
cis-1,2-DCE	240	10.5	6.8	7.64
trans-1,2-DCE	1.28	1 U	1 U	1.05
1,1-DCE	1 U	1 U	1 U	1 U
Vinyl Chloride	13.8	1 U	2.51	5.20

OB-06

BR-10

Site ID: TW-04 (units: µg/L)

Analyte	Historical High	Baseline	May-14	Oct-14
PCE	1 U	1 U	1 U	1 U
TCE	51.1	5.32	1 U	1 U
cis-1,2-DCE	79	1 U	2.08	8.24
trans-1,2-DCE	1 U	1 U	1 U	1 U
1,1-DCE	1 U	1 U	1 U	1 U
Vinyl Chloride	1 U	1 U	1 U	1 U

BR-03

TW-04

Site ID: TW-09 (units: µg/L)

Analyte	Historical High	Baseline	May-14	Oct-14
PCE	1 U	1 U	1 U	1 U
TCE	230	56.7	6.06	2.98
cis-1,2-DCE	36	12.8	4.15	12.5
trans-1,2-DCE	34.6	14.3	3.47	9.86
1,1-DCE	1 U	1 U	1 U	1 U
Vinyl Chloride	9.03	1 U	2.09	12.9

BR-02

TW-09

Site ID: TW-20 (units: µg/L)

Analyte	Historical High	Baseline	May-14	Oct-14
PCE	1 U	1 U	1 U	1 U
TCE	107	65.9	48.4	6.11
cis-1,2-DCE	8.3	2.34	4.48	1 U
trans-1,2-DCE	1 U	1 U	1 U	1 U
1,1-DCE	1 U	1 U	1 U	1 U
Vinyl Chloride	1 U	1 U	1 U	1 U

TW-20

0' 40' 80' 120'

1" = 80'

amec foster wheeler

CLIENT: ABB

TITLE:

VOCs IN OVERBURDEN MONITORING WELLS

ANNUAL REPORT 2014

FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

DR:	REV:	PROJ. NO.:
APT	NG	3031-05-2006
CHK: KJD	DATE: 12-02-2014	DWG NO. NA
SCALE: AS SHOWN		FIGURE 2

P:\CADD\Projects\3031\3031052006 ABB\2014 Annual Report\F 02 Annual 2013 VOCs OB.dwg Feb. 02, 2015 william.wiers

HAGUE STREET

WEST AVENUE

AMES STREET

VACANT BUILDING

VACANT SHED

BUILDING FOUNDATION

CONC. SLAB

N

LEGEND

- RAILROAD TRACKS
- CHAIN LINK FENCE
- WROUGHT IRON FENCE
- BEDROCK MONITORING WELL (BR)
- OVERBURDEN MONITORING WELL (OB, MW, TW, W)

DCE	DICHLOROETHENE
PCE	TETRACHLOROETHENE (PERCHLOROETHENE)
TCE	TRICHLOROETHENE
U	NON DETECT
µg/L	MICROGRAMS PER LITER

RESULTS ABOVE NYSDEC CLASS GA STANDARD

SITE ID

Site ID: OB-XX	NYSDEC CLASS GA groundwater standard	(units:ug/L) MAY 08
Analyte		DATE SAMPLED
PCE	5	1 U — NOT DETECTED AT THE INDICATED QUANTITATION LIMIT
TCE	5	1 U
cis-1,2-DCE	5	41.4 — DETECTED
trans-1,2-DCE	5	8.07
1,1-DCE	5	NS — NOT SAMPLED
Vinyl Chloride	2	47.8

NOTE: HISTORICAL HIGH OBTAINED FROM DATA FROM THE TIME FRAMES OF ACTIVE REMEDIATION OCT/NOV 2000 TO PRESENT.

BASELINE IS THE MAY 2010 EVENT CONDUCTED PRIOR TO THE EXPANDED ACCELERATED BIOREMEDIATION APPLICATION.

W-5

OB-08

BR-15

Site ID: BR-15				(units: µg/L)
Analyte	Historical High	Baseline	May-14	Oct-14
PCE	1 U	1 U	1 U	1 U
TCE	6,590	167	1.64	1 U
cis-1,2-DCE	1,390	123	8.33	1.28
trans-1,2-DCE	43.6	2.12	2.47	1.77
1,1-DCE	12.8	1 U	1 U	1 U
Vinyl Chloride	199	3.11	41.1	11.3

BR-01

TW-17

Site ID: BR-01				(units: µg/L)
Analyte	Historical High	Baseline	May-14	Oct-14
PCE	1 U	1 U	1 U	1 U
TCE	551	9.23	98.9	86.9
cis-1,2-DCE	1,590	12.8	1,570	1,590
trans-1,2-DCE	61.4	2.02	61.4	56.6
1,1-DCE	7.70	1 U	7.7	7.62
Vinyl Chloride	406	1 U	377	320

Site ID: BR-04				(units: µg/L)
Analyte	Historical High	Baseline	May-14	Oct-14
PCE	1.8	1 U	1 U	1 U
TCE	10,000	325	757	514
cis-1,2-DCE	6,410	321	1,370	955
trans-1,2-DCE	147	11.7	88.7	77.4
1,1-DCE	21.3	1.37	11.5	9.33
Vinyl Chloride	77	1 U	68	55.1

BR-04

OB-04

OB-06

BR-10

Site ID: BR-10				(units: µg/L)
Analyte	Historical High	Baseline	May-14	Oct-14
PCE	2.94	1.72	1 U	1.33
TCE	8,700	277	329	345
cis-1,2-DCE	1,700	77.3	189	299
trans-1,2-DCE	82.8	14	32.8	46.2
1,1-DCE	4.7	1 U	1 U	1.49
Vinyl Chloride	16.1	1 U	1.02	2.72

Site ID: BR-03				(units: µg/L)
Analyte	Historical High	Baseline	May-14	Oct-14
PCE	1 U	1 U	1 U	1 U
TCE	1,150	270	519	381
cis-1,2-DCE	329	3.15	15.3	37.0
trans-1,2-DCE	6.71	1 U	1.66	1.73
1,1-DCE	3.1	1 U	1.72	1.74
Vinyl Chloride	1 U	1 U	1 U	1 U

BR-03

TW-04

Site ID: BR-02				(units: µg/L)
Analyte	Historical High	Baseline	May-14	Oct-14
PCE	1.32	1 U	1 U	1 U
TCE	25,200	821	25,200	25.3
cis-1,2-DCE	19,100	186	5,860	19.7
trans-1,2-DCE	238	21.9	238	2.52
1,1-DCE	156	1.76	46.4	1 U
Vinyl Chloride	103	2.25	103	1 U

BR-02

TW-09

TW-20

0' 40' 80' 120'

1" = 80'

amec foster wheeler

CLIENT: ABB

TITLE:

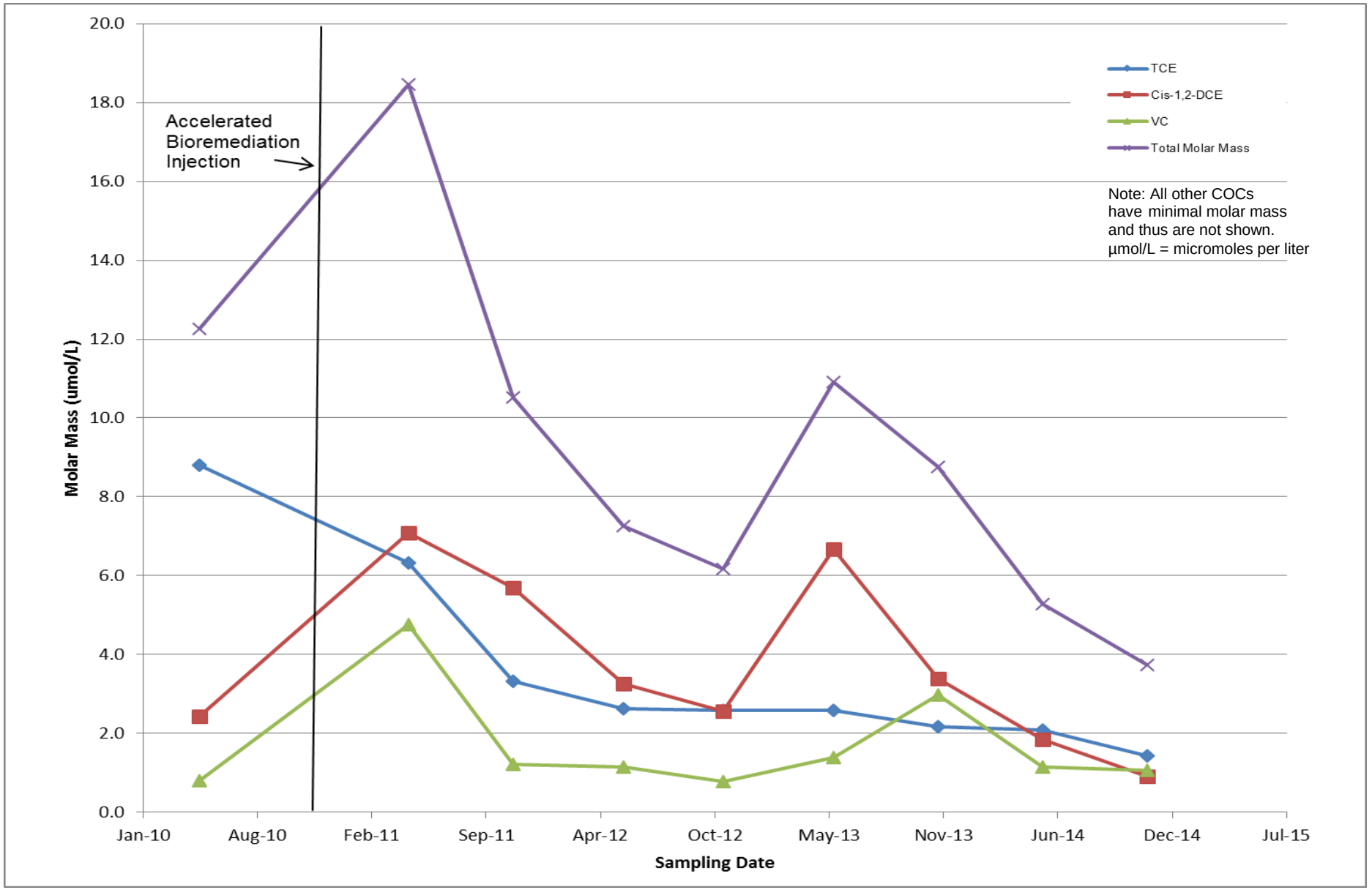
VOCs IN BEDROCK MONITORING WELLS

ANNUAL REPORT 2014

FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

DR:	REV:	PROJ. NO.:
APT	NG	3031-05-2006
CHK:	DATE:	DWG NO.
KJD	12-02-2014	NA
SCALE:		
AS SHOWN		FIGURE 3

P:\CADDProjects\3031\3031052006 ABB\2014 Annual Report\F 03 Annual 2013 VOCs BR.dwg Feb. 02, 2015 william.wiers

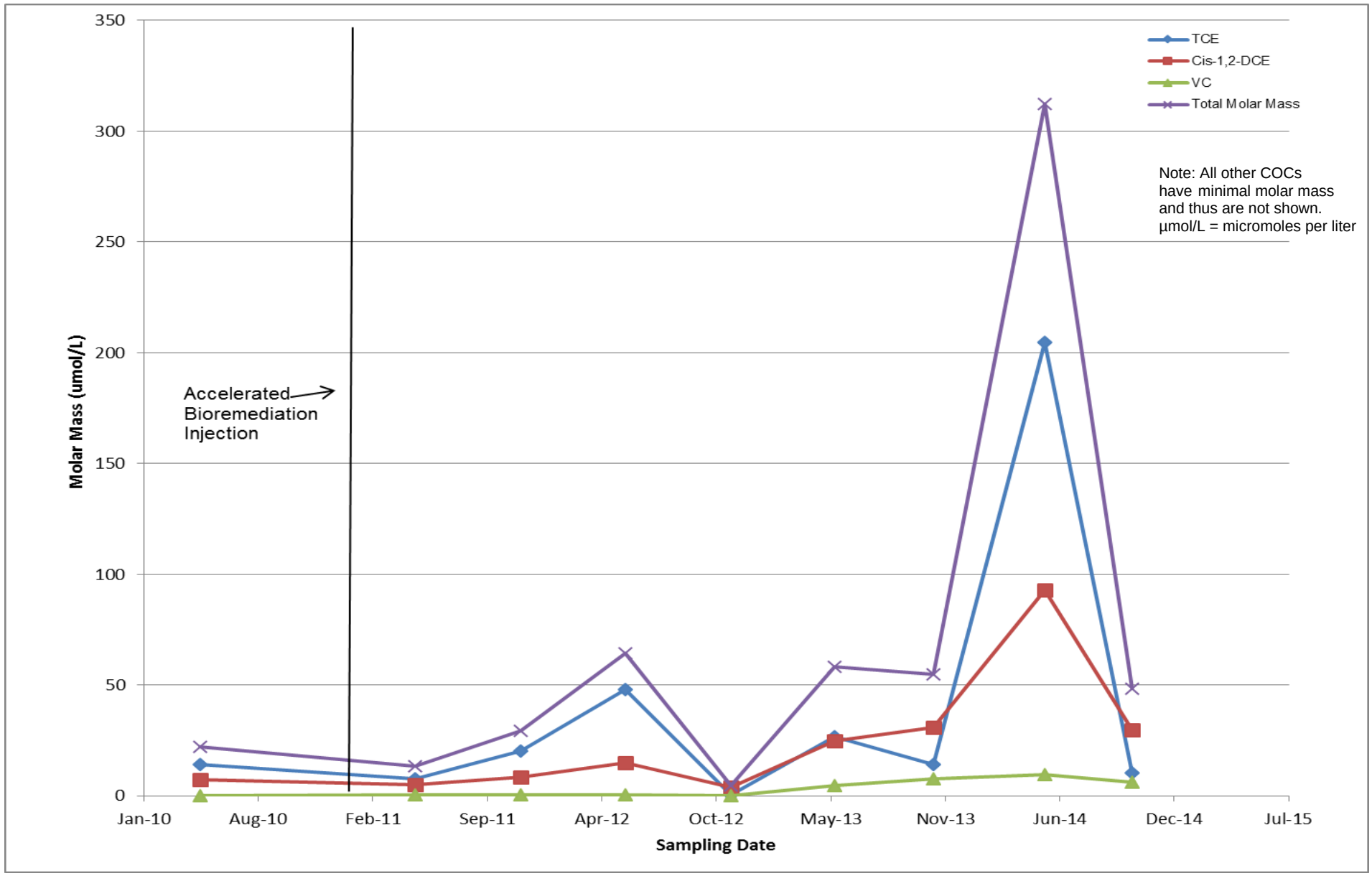


amec foster wheeler

Prepared by/Date: NG 12/02/14

Checked by/Date: KJD 12/02/14

FIGURE 4: OVERBURDEN CONTAMINANT MASS GRAPH
FORMER TAYLOR INSTRUMENTS SITE
ROCHESTER, NEW YORK



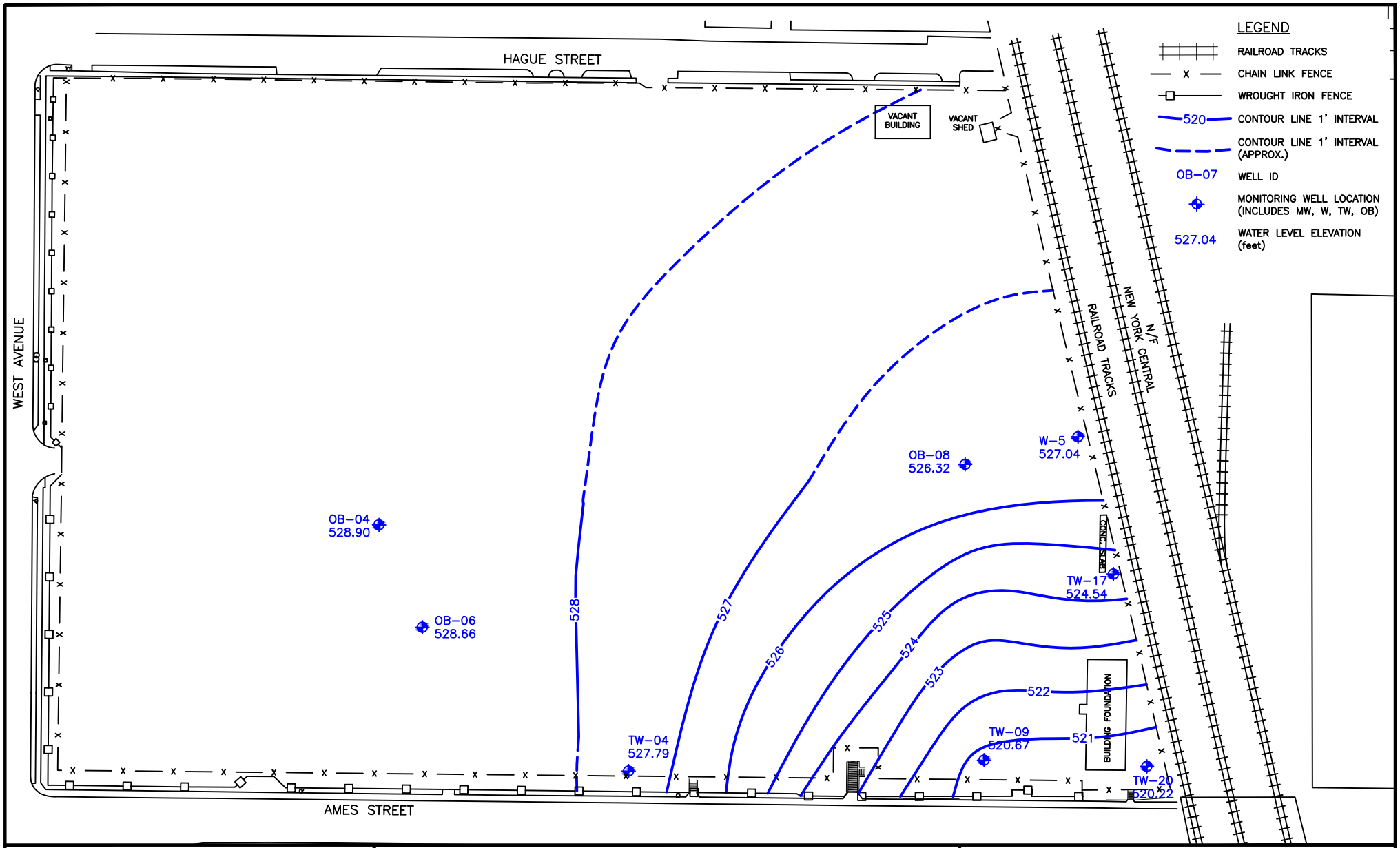
amec foster wheeler

Prepared by/Date: NG 12/02/14

Checked by/Date: KJD 12/02/14

FIGURE 5: BEDROCK CONTAMINANT MASS GRAPH
FORMER TAYLOR INSTRUMENTS SITE
ROCHESTER, NEW YORK

P:\CADD\Projects\3031\3031052006 ABB\2014 Annual Report\F 06 OB Potentiometric Map May 2014.dwg Feb. 02, 2015 william.wiers



N

0' 60' 120' 180'

1" = 120'

amec foster wheeler

CLIENT: ABB

TITLE:

OVERBURDEN POTENTIOMETRIC SURFACE MAP

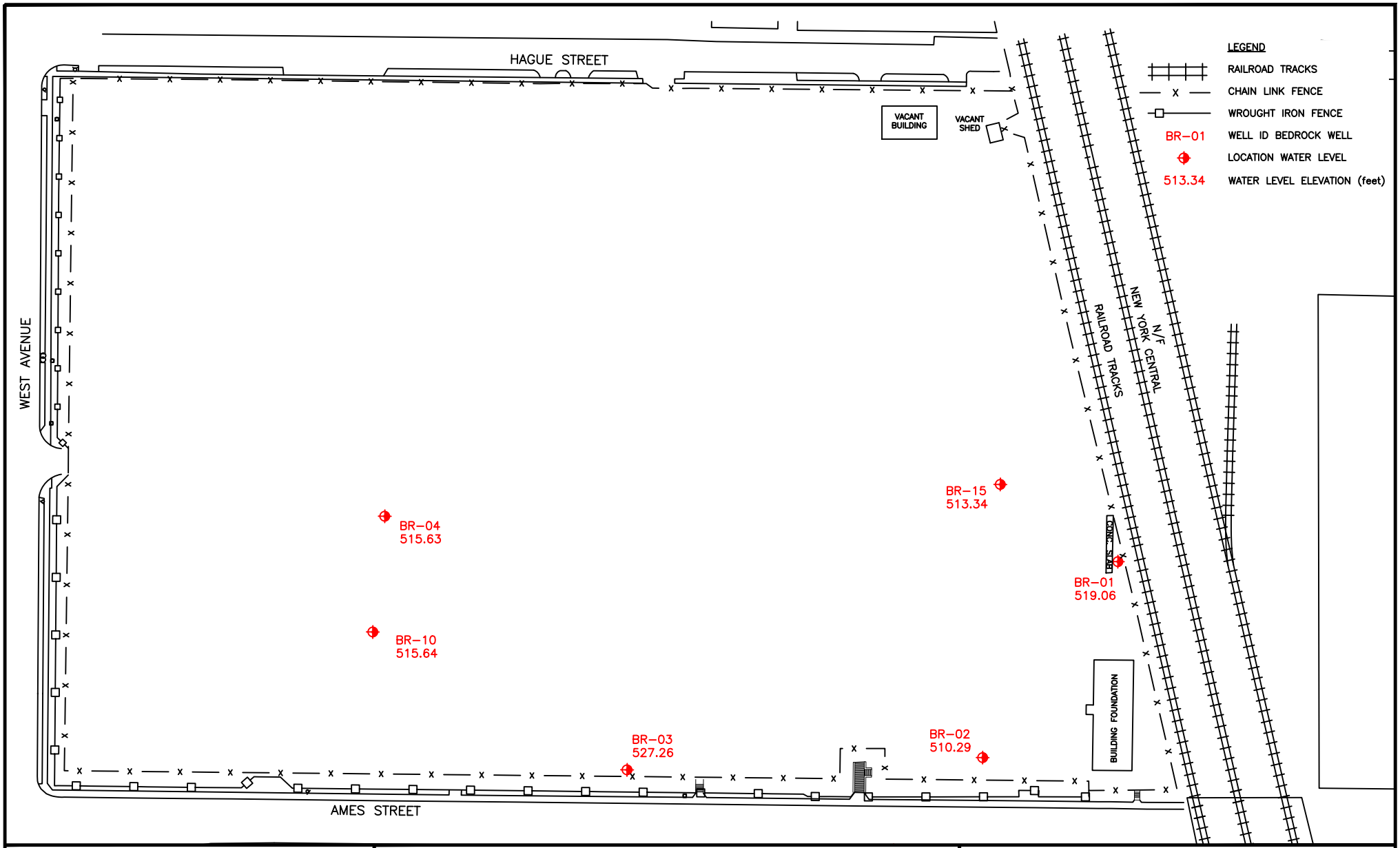
MAY 2014 SAMPLING EVENT

ANNUAL REPORT 2014

FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

DR:	REV:	PROJ. NO.:
APT	NG	3031-05-2006
CHK:	DATE:	DWG NO.
KJD	12-02-2014	NA
SCALE:		FIGURE 6
AS SHOWN		

P:\CADD\Projects\3031\3031052006 ABB\2014 Annual Report\F 07 BR GW Elevations Map May 2014.dwg Feb. 02, 2015 william.wiers



N

0' 60' 120' 180'

1" = 120'

amec foster wheeler

CLIENT: ABB

TITLE:

BEDROCK GROUNDWATER ELEVATIONS

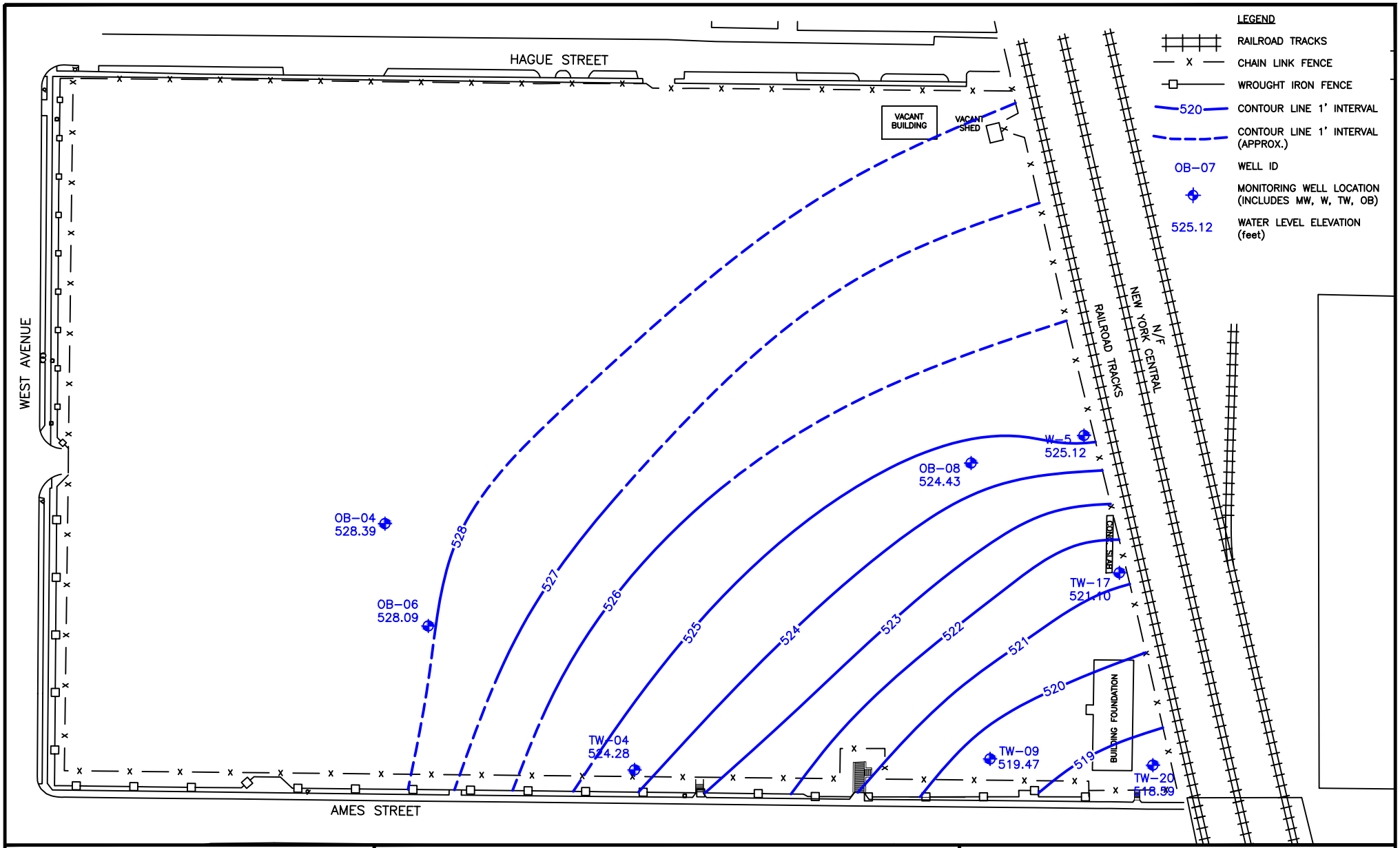
MAY 2014 SAMPLING EVENT

ANNUAL REPORT 2014

FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

DR:	REV:	PROJ. NO.:
APT	NG	3031-05-2006
CHK:	DATE:	DWG NO.
KJD	12-02-2014	NA
SCALE:		
AS SHOWN		FIGURE 7

P:\CADD\Projects\3031\3031052006 ABB\2014 Annual Report\F 08 OB Potentiometric Map Nov 2014.dwg Feb. 02, 2015 william.wiers



N

0' 60' 120' 180'

1" = 120'

amec foster wheeler

CLIENT: ABB

TITLE:
OVERBURDEN POTENTIOMETRIC SURFACE MAP
OCTOBER 2014 SAMPLING EVENT
ANNUAL REPORT 2014
FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

DR:	REV:	PROJ. NO.:
APT	NG	3031-05-2006
CHK:	DATE:	DWG NO.
KJD	12-02-2014	NA
SCALE:		FIGURE 8
AS SHOWN		

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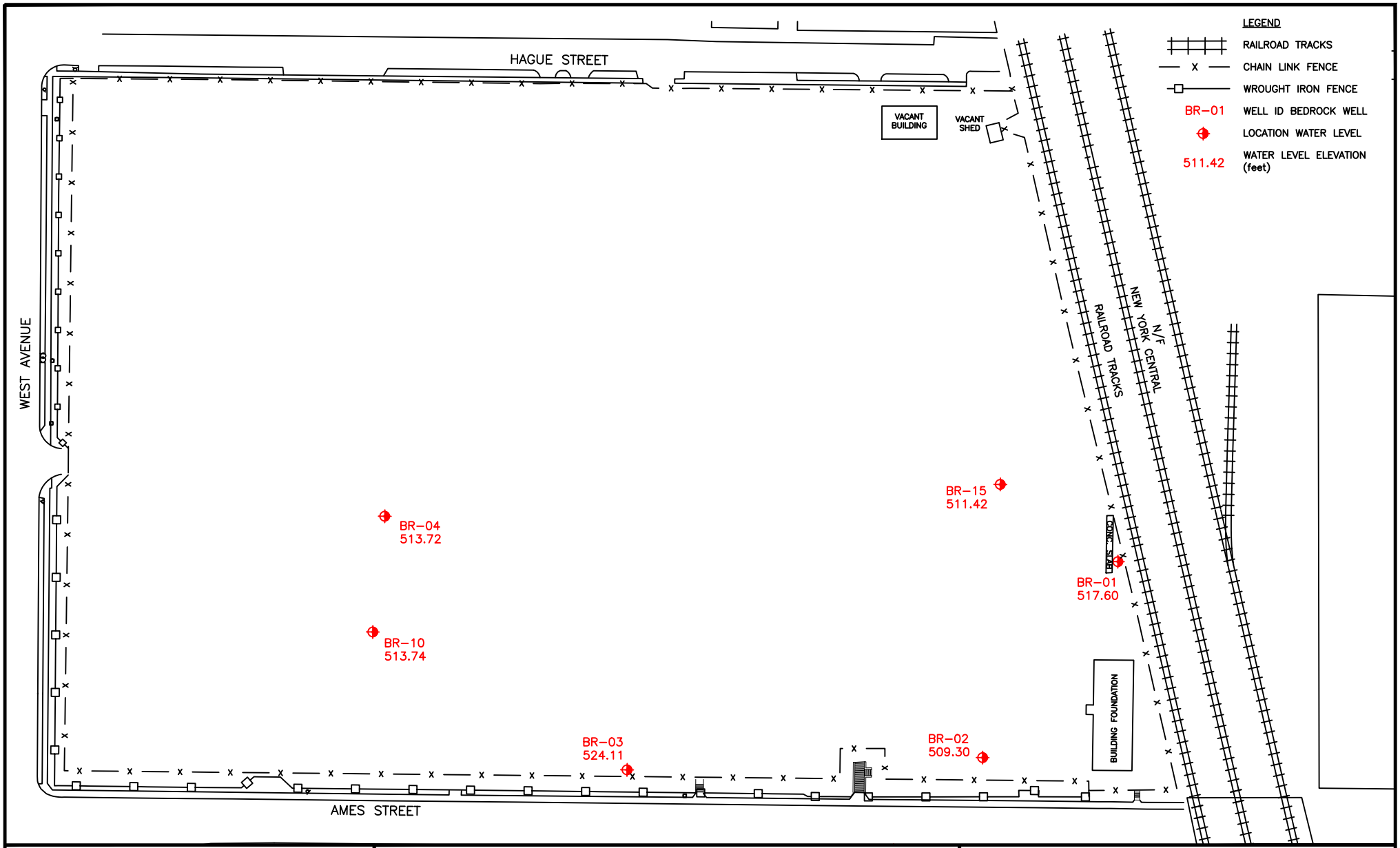


N

0' 60' 120' 180'

1" = 120'

amec foster wheeler

CLIENT: ABB

TITLE:

BEDROCK GROUNDWATER ELEVATIONS

OCTOBER 2014 SAMPLING EVENT

ANNUAL REPORT 2014

FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

DR:	REV:	PROJ. NO.:
APT	NG	3031-05-2006
CHK:	DATE:	DWG NO.
KJD	12-02-2014	NA
SCALE:		
AS SHOWN		FIGURE 9

APPENDIX B

PERIODIC REVIEW REPORT

APPENDIX B
PERIODIC REVIEW REPORT

Introduction

This Periodic Review Report (PRR) was prepared to fulfill the requirements of the New York State Department of Environmental Conservation's (NYSDEC) request for a Site Management PRR as requested in a letter dated January 14, 2015 (NYSDEC, 2015).

Executive Summary

The Site was the location of the former Taylor Instruments facility that was operated from 1904 to 1994 under a variety of owners. In 1993 Combustion Engineering (CE) closed the facility. The Site is currently vacant. In 1997 a Voluntary Clean-up Agreement (VCA) was executed between CE and NYSDEC (VCA Index #B8-0508-97-02, NYSDEC, 1997).

Following extensive soil excavation, filling and capping, and other remedial activities, a groundwater remedy for chlorinated volatile organic compounds (VOCs) was implemented from January 2001 to May 2006. This included an on-site remedial treatment system which consisted of a dual-phase vacuum extraction (DPVE) and bedrock groundwater extraction and treatment system (System).

Upon reaching the conclusion that the System had reached asymptotic contaminant removal rates, in July 2006 AMEC Environment & Infrastructure, Inc. (AMEC) (formerly MACTEC Engineering and Consulting, Inc. [MACTEC]) initiated a pilot-scale application of Hydrogen Release Compound (HRC) Advanced® near monitoring wells OB-08 in the North Trichloroethene (TCE) Source Area and OB-04 in the South TCE Source Area of the Site to evaluate the effectiveness of HRC Advanced® in accelerating the biodegradation of the Site contaminants of concern (COCs) in lieu of further operation of the System. The HRC Advanced® was effective in reducing TCE contamination in the overburden groundwater within the North and South TCE Source Areas.

Following NYSDEC's approval of MACTEC's *Revised Work Plan for Accelerated Bioremediation and Permanent Decommissioning of the Remediation Treatment System* (MACTEC, 2010a) in 2010, the System was decommissioned, most monitoring wells were abandoned, an expanded

application of 3-D Microemulsion® (3DMe®, formerly HRC Advanced®) was implemented, and post-closure monitoring of natural attenuation was implemented starting in 2011. Unless otherwise agreed to by NYSDEC, contaminant conditions will continue to be monitored in remaining wells (BR-01, BR-02, BR-03, BR-04, BR-10, BR-15, OB-04, OB-06, OB-08, TW-04, TW-09, TW-17, TW-20, and W-5) until groundwater concentrations of the COCs are at or below NYSDEC Class GA Standards. Figure 1 (Appendix A of the Annual Report [AMEC, 2015]) depicts the remaining 14 monitoring wells and site boundaries. In October 2010, AMEC completed the expanded accelerated bioremediation application using 3DMe® in the vicinities of the remaining source area overburden monitoring wells and along the eastern portion of the Site.

Also in cooperation with the NYSDEC and the New York State Department of Health in 2010, following a sub-slab vapor investigation, ABB installed a sub-slab depressurization (SSD) system to mitigate sub-slab vapor at the 80 Ames/215 Danforth duplex residences across from the Site.

Complete details of the system decommissioning, 3DMe® injection, and SSD system installation were provided in the *Construction Completion Report* (CCR) (MACTEC, 2010b) which was approved by NYSDEC on February 16, 2011 (NYSDEC, 2011a).

Overburden and bedrock monitoring wells located on the Site have been sampled regularly from 2001 to 2014. Analytical data from the most recent October 2014 groundwater sampling event indicates that while certain COCs remain above the NYSDEC Class GA standards, overall substantial declines of COC concentrations have been observed in all Site monitoring wells.

During the past reporting period, no areas of noncompliance were noted. Additionally, no changes to the *Soil Management Plan* (MACTEC, 2005), the revised *Operations, Maintenance, and Monitoring* (OM&M) *Manual* (MACTEC, 2011), or frequency of PRR submittals are recommended. The requirements for discontinuing the Site management have not yet been met.

Site Overview

The Site is located at 95 Ames Street in Rochester, New York. The approximately 14-acre Site is vacant, containing a fabricated building that previously housed the System as well as a second small storage shed. The Site is mostly paved and is surrounded by a chain link fence. North of the Site are a railroad line and a commercial/industrial property; to the east across Ames Street are a

food processing facility, residences, and a community center; to the south across West Avenue are residences; and to the west across Hague Street is Rochester Gas and Electric. Figure 1 (Appendix A of the Annual Report [AMEC, 2015]) depicts the current Site layout.

Prior to Site remediation, Site assessments identified the following contaminants:

Site Contamination

- Mercury and TCE were the principal Site contaminants present in Site soils.
- VOCs were being released from the North and South TCE Source Areas to overburden and bedrock groundwater at concentrations exceeding groundwater quality standards. TCE was the predominant site-related VOC in overburden and bedrock groundwater samples.
- Soil gas samples collected from downgradient Site perimeter locations contained TCE along with tetrachloroethene and dichloroethene at less frequent detections and lower concentrations.
- TCE and its degradation products were found at several locations in on-site sewers; they were the only VOCs detected. Mercury was detected at low levels in each of the water samples obtained from on-site sewer locations**.**

Complete details on the nature and extent of contamination prior to Site remediation were provided in the *Final Investigative Report* (Harding Lawson Associates, 1999).

Remedial Program

Comprehensive remedial actions implemented at the Site were previously detailed in the *Final Engineering Report, On-Site Storm Sewers* (Harding Lawson Associates, 2000a) [2000 FER], and the *Final Engineering Report* (MACTEC, 2003) [2003 FER]. The FER also contained the *Soil Management Plan* (MACTEC, 2005) which contains details on the Site engineering and institutional controls that have been recorded at the Site. These reports were all approved by NYSDEC.

Subsequent to the 2003 FER, the NYSDEC issued an *Assignable Release and Covenant Not to Sue* (AR-CNTS) (NYSDEC, 2005), subject to implementation of an Operations and Maintenance (O&M) Plan that acknowledged the satisfactory implementation of all Site remedial actions. The AR-CNTS indicated that:

> "*…no further investigation or response will be required at the Site respecting the Existing Contaminations to render the Site safe to be used for the Contemplated Uses." … "The Department, therefore, hereby releases,… Volunteer for the further investigation and remediation of the Site, based on the release of threatened release of any Existing Contamination, provided that … Volunteer pursue to completion the Department-approved O&M Plan…"*

The Site is currently in post-closure groundwater monitoring. Fourteen remaining groundwater monitoring wells are sampled semi-annually for analysis of the six primary contaminants of concern remaining at the Site: tetrachloroethene; TCE; cis-1,2-dichloroethene (cis-1,2-DCE); trans-1,2-dichloroethene (trans-1,2-DCE); 1,1-dichloroethene (1,1-DCE); and vinyl chloride by Environmental Protection Agency (EPA) Method 8260C. Additionally, the groundwater samples will be tested for the full suite of 8260C constituents once every five years and prior to ending monitoring at any specified well. Unless otherwise agreed to by NYSDEC, contaminant conditions will continue to be monitored until groundwater concentrations of the COCs are at or below the NYSDEC Class GA Standards.

Complete details of the remedial program were provided in the April 2000 *Remedial Work Plan* (Harding Lawson Associates, 2000b), the *Final Engineering Report* (MACTEC, 2003), and the CCR (MACTEC, 2010b).

Evaluation of Remedy Performance, Effectiveness, and Protectiveness

The most current assessment of the effectiveness of the final Site remedial action is presented in the *2014 Annual Progress Report and Remedial Progress Evaluation* (AMEC, 2015).

Institutional and Engineering Control (IC/EC) Plan Compliance Report

Specific details on IC/ECs for the Site were provided in the *Remedial Work Plan* (Harding Lawson Associates, 2000b), the *Soil Management Plan* (MACTEC, 2005), and the revised OM&M Manual (MACTEC, 2011). Certification of the IC/ECs is provided in the NYSDEC-approved certification form (Attachment A).

Monitoring Plan Compliance Report

The scope of the May and October 2014 semi-annual monitoring events, as well as future post-closure monitoring events, is provided in the revised OM&M Manual (MACTEC, 2011). A summary of recent monitoring, comparisons with remedial objectives, and conclusions and recommendations are provided in the *2014 Annual Progress Report and Remedial Progress Evaluation* (AMEC, 2015). AMEC has not identified deficiencies with the monitoring plan.

O&M Plan Compliance Report

The original Site O&M Manual (Harding ESE, 2001) governed all sampling events prior to the May 2011 monitoring event. The components of the plan included details of the DPVE System, including System maintenance; Site health and safety; Site environmental sampling; and reporting and notification requirements. The revised OM&M Manual (MACTEC, 2011), which governs OM&M activities beginning in 2011, was approved by NYSDEC on March 3, 2011 (NYSDEC, 2011b). The components of the revised OM&M Manual include Site groundwater monitoring, SSD system O&M, IC/ECs, and reporting and certification requirements.

O&M activities completed during the 2014 reporting period included two site-wide groundwater sampling events; yearly inspection of a SSD system at an off-site residential duplex; and the submittal of the 2014 Annual Progress Report (AMEC, 2015) to NYSDEC. AMEC has not identified deficiencies with the revised OM&M Manual (MACTEC, 2011). The yearly inspection of the SSD system at the off-site residential duplex located at 80 Ames Street/215 Danforth Street was conducted on October 28, 2014 by the installation contractor, Mitigation Tech (National Environmental Health Association National Radon Proficiency Program ID certification #100722). Upon arrival AMEC and Mitigation Tech discovered that power to the one of the duplex residences had been turned off by the duplex owner in August 2014, and thus the SSD system was not operating. Mitigation Tech subsequently provided temporary power to perform the SSD system inspection and certified that the SSD system is sufficient to effectively maintain sub-slab depressurization. The inspection report is included as Attachment B. The power to the residence was restored by the owner on October 30, 2014 so that the SSD system would again be operational. AMEC subsequently explained to the duplex owner, Mr. Kevin Carter, why the SSD needs to remain operational. Mr. Carter indicated there were no additional planned discontinuances of

power to the duplex in the future, and that if he becomes aware of any he will alert AMEC (AMEC, 2015a).

Overall PRR Conclusions and Recommendations

Compliance with the revised Site O&M Manual (MACTEC, 2011) including performance and effectiveness of the Site remedy is detailed in the 2014 Annual Progress Report (AMEC, 2015). As indicated in that report, a comparison of analytical data from the 33 sampling events that occurred in 2001-2014 provides an evaluation of the Site remedial progress. The following overall conclusions and recommendations have been reached in this remedial progress evaluation:

- Following shutdown of the remedial treatment system in 2006 and subsequent decommissioning in 2010, overall contaminant levels in the Site monitoring wells have not demonstrated significant rebound effects, and overall declines remain evident.

- While certain COCs remain above the NYSDEC Class GA Standards, substantial declines of COC concentrations have been observed in all Site monitoring wells. The greatest decrease has been within the two former source areas, overburden monitoring wells OB-04 and OB-08. In OB-04 there were no COCs detected above their NYSDEC Class GA standards in May 2014 and only one COC was detected above the NYSDEC Class GA standard in October 2014. In OB-08, five of the six primary COCs were below their respective NYSDEC Class GA standards for the May and October 2014 sampling events.

- COCs in six of the eight overburden wells are presently near or below the NYSDEC Class GA standards, including all three wells along the downgradient eastern property boundary (i.e., TW-04, TW-09, and TW-20). It is also notable that monitoring well TW-04 has been near or below the NYSDEC Class GA standards since May 2009.

- Since the post-injection high concentrations in May 2011, the total overburden groundwater contaminant mass has dropped significantly and is presently at the lowest total ever. The substantial decrease in contaminant mass indicates that the 3DMe® has enhanced contaminant biodegradation in the overburden monitoring wells.

- Bedrock groundwater has now been affected by the enhanced contaminant biodegradation in the overlying overburden groundwater as indicated by the overall decreases in TCE contaminant mass in correlation with overall increases in TCE daughter products in October 2014.

- Groundwater monitoring events will continue to be conducted semi-annually on all 14 remaining monitoring wells. Groundwater samples will be analyzed for the six primary COCs remaining at the Site: PCE; TCE; cis-1,2-DCE;

trans-1,2-DCE; 1,1-DCE; and vinyl chloride. These VOCs will be analyzed using EPA Method 8260C. Additionally, as detailed in the revised *Operations, Maintenance, and Monitoring Manual* (MACTEC, 2011), the groundwater samples will be analyzed for the full suite of 8260C constituents once every five years and prior to ending monitoring at any specified well.

- In September 2010, ABB installed an SSD system to mitigate vapors beneath the basement at the 80 Ames Street/215 Danforth Street duplex as a precautionary measure. The yearly SSD system inspection and maintenance was performed by the installation contractor Mitigation Tech on October 28, 2014, and Mitigation Tech certified that the SSD System is sufficient to effectively maintain sub-slab depressurization. Inspections will continue to be performed by Mitigation Tech annually.

References

AMEC, 2015. *2014 Annual Progress Report and Remedial Progress Evaluation*, Former Taylor Instruments Site, Rochester, New York. Prepared for ABB, Inc. (January 14).

AMEC, 2015a. Telephone discussion between Joe Deatherage of AMEC and Kevin Carter owner of the duplex at 80 Ames Street, Rochester, New York (November 11).

Harding ESE, 2001. *Dual-Phase Vacuum Extraction Remediation System Operation and Maintenance Manual (OM&M)*, prepared for the former Taylor Instruments Site, 95 Ames Street in Rochester, New York (March).

Harding Lawson Associates, 1999. *Final Investigative Report, Taylor Instruments Site, Rochester, New York.* Prepared for the New York State Department of Environmental Conservation (March).

Harding Lawson Associates, 2000a. *Final Engineering Report, On-Site Storm Sewers, Former Taylor Instruments Site, Rochester, New York.* Prepared for Combustion Engineering (January).

Harding Lawson Associates, 2000b. *Remedial Work Plan, Taylor Instruments Site, 95 Ames Street, Rochester, New York.* Prepared for Combustion Engineering (April).

MACTEC, 2003. *Final Engineering Report, Former Taylor Instruments Site, Rochester, New York.* Prepared for Combustion Engineering (September).

MACTEC, 2005. *Soil Management Plan, Former Taylor Instruments Facility, 95 Ames Street, Rochester, New York 14611*. Prepared for Combustion Engineering (April).

MACTEC, 2010a. *Revised Work Plan for Accelerated Bioremediation and Permanent Decommissioning of the Remedial Treatment System, Former Taylor Instruments Site, 95 Ames Street in Rochester, New York.* Prepared for the New York State Department of Environmental Conservation (June 11).

MACTEC, 2010b. *Construction Completion Report, Former Taylor Instruments Site, Monroe County, New York*. Prepared for the New York State Department of Environmental Conservation (December).

MACTEC, 2011. *Operations, Maintenance, and Monitoring Manual, Rev. 1, Former Taylor Instruments Site, Monroe County, New York*. Prepared for the New York State Department of Environmental Conservation. (March).

NYSDEC, 1997. Voluntary Cleanup Agreement, Taylor Instruments Site, Number B8-0508-97-02 (November).

NYSDEC, 2005. Letter to Ms. Jean H. McCreary with Nixon Peabody LLC (September 2).

NYSDEC, 2011a. Letter to Ricky Ryan of AMEC approving the CCR (February 16).

NYSDEC, 2011b. Letter to Ricky Ryan of AMEC approving the *Operations, Maintenance, and Monitoring Manual, Rev. 1, Former Taylor Instruments Site, Monroe County, New York.* (March 3).

NYSDEC, 2015. *Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal Site*. (January 14).

Acronym List

2000 FER	*Final Engineering Report, On-Site Storm Sewers* (Harding Lawson Associates, 2000a)
2003 FER	*Final Engineering Report* (MACTEC, 2003)
3DMe®	3D Microemulsion®
µmole/L	micromole per liter
AMEC	AMEC Environment & Infrastructure, Inc.
AR-CNTS	Assignable Release and Covenant Not to Sue
CCR	*Construction Completion Report* (MACTEC, 2010b)
CE	Combustion Engineering
COC	contaminant of concern
1,1-DCE	1,1-dichloroethene
cis-1,2-DCE	cis-1,2-dichloroethene
trans-1,2-DCE	trans-1,2-dichloroethene
DPVE	dual-phase vacuum extraction
EPA	Environmental Protection Agency
HRC	Hydrogen Release Compound
IC/EC	institutional and engineering control
MACTEC	MACTEC Engineering and Consulting, Inc.
NYSDEC	New York State Department of Environmental Conservation
O&M	operation and maintenance
OM&M	operations, maintenance, and monitoring
PRR	Periodic Review Report
Site	location of the former Taylor Instruments facility
SSD	sub-slab depressurization
SSIA	sub-slab vapor and indoor air
System	DPVE and bedrock groundwater extraction and treatment system
TCE	trichloroethene
VCA	Voluntary Clean-up Agreement
VOC	volatile organic compound

Attachment A

NYSDEC-Approved Certification Form

95 Ames Street Certification

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **V00144**

Site Name Former Taylor Instruments Facility

Site Address: 95 Ames Street Zip Code: 14611
City/Town: Rochester
County: Monroe
Site Acreage: 14.5

Reporting Period: February 14, 2014 to February 14, 2015

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☒	☐
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

SITE NO. V00144 Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
120.410-1-2	ABB, Inc. (Attn: Melody Christopher)	Ground Water Use Restriction Landuse Restriction Soil Management Plan

~~- Ground Water Use Restriction~~
~~- Landuse Restriction~~
~~- Soil Management Plan~~
~~- Annual certification~~

~~120.42-1-4~~ ~~Kevin Carter~~ ~~Site Management Plan~~

~~Sub-slab depressurization system~~
~~Annual Certification~~

Box 4

Description of Engineering Controls

Parcel	Engineering Control
120.410-1-2	Vapor Mitigation (FUTURE Buildings) Cover System Annual Certification

~~- Cover System~~
~~- Vapor Mitigation (future buildings)~~

~~120.42-1-4~~ ~~Vapor Mitigation~~

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☒	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☒	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative _____ Date _____

IC CERTIFICATIONS
SITE NO. V00144

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Melody Christopher (print name) at ABB Inc. 5 Waterside Crossing Windsor CT (print business address)

am certifying as Remedial Party (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Melody B. Christopher for ABB Inc. — Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

2/9/2015 — Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Ricky Ryan (print name) at 9725 Cogdill Rd., Knoxville, TN 37932 (print business address)

am certifying as a Professional Engineer for the ABB Inc., Remedial Party (Owner or Remedial Party)

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE) 068327

Date 3/10/2015

Department of **Environmental Services**
Monroe County, New York

Maggie Brooks
County Executive

Michael J. Garland, P.E.
Director

NOV 13 2014

November 10, 2014

Mr. R Keith Knauerhase
ABB Incorporated
5 Waterside Crossing
Windsor, CT 06095

Re: Sewer Use Permit

Dear Mr. R Keith Knauerhase:

Attached you will find your Sewer Use Permit No. 999 , which will expire on November 29, 2017. Prior to expiration, we will mail you a renewal application.

This issue of the above permit is in compliance with the requirements of Section 6.1 of the Monroe County Sewer Use Law. In no way does it imply that you have complied with all present regulations. During the next six (6) months, a representative from the Industrial Waste Section may inspect your premises and sample the industrial wastewater discharge. If there should be any violations, you will be notified by mail.

If you have any questions regarding the permit, please call Sean Keenan at (585) 753-7658.

CR #064506

INITIAL SEWER USE PERMIT

County of Monroe Pure Waters District No. 8575 Permit No: 999

Expires: 11/30/17

Fee: $125.00

Firm Name ABB, Inc.

Address 5 Waterside Crossing

Windsor, CT 06095

Type of Business or Service Groundwater Monitoring

I. The above-named applicant is permitted to discharge wastes into the Monroe County Pure Waters Sewer system or Tributary thereto as applied for by an application dated 10/27/2014 and verified by the applicant except the Director of Pure Waters requires the following terms and conditions to govern the permitted discharge:

A.

B.

C.

II. The applicant further agrees to:

1. Accept and abide by all provisions of the Sewer Use Law of Monroe County and of all pertinent rules or regulations now in force or shall be adopted in the future.

2. Notify the Director of Pure Waters in writing of any revision to the plant sewer system or any change in industrial wastes discharge to the public sewers listed in Exhibit "B". The latter encompasses either (1) an increase or decrease in average daily volume or strength of wastes listed in Exhibit "B" or (2) new wastes that were not listed in Exhibit "B".

3. Furnish the Director of Pure Waters upon request any additional information related to the installation or use of sewer or drain for which this permit is sought.

4. Operate and maintain any waste pretreatment facilities, as may be required as a condition of the acceptance into the public sewer of the industrial wastes involved, in an efficient manner at all times, and at no expense to the County.

5. Cooperate with the Director of Pure Waters or his representatives in their inspecting, sampling, and study of wastes, or the facilities provided for pretreatment.

6. Notify the Director of Pure Waters immediately of any accident, negligence, breakdown of pretreatment equipment, or other occurrence that occasions discharge to the public sewers of any wastes or process waters not covered by this permit.

Applicant's Name (please print) R. Keith Knauerhase Phone 860-687-4902

Applicant's Signature Date 10/24/14

Applicant's Title Chief Counsel

Emergency Contact Joe Deatherage, AMEC Phone 865-218-1049

Renewal Approved by: Issued this 10 day of Nov 20 14.

Michael J. Garland, P.E.
Director of Environmental Services-Pure Waters

COUNTY OF MONROE
SEWER USE PERMIT ENCLOSURE

ABB Inc.
5 Waterside Crossing
Windsor, CT 06095

PERMIT NUMBER: 999
DISTRICT NUMBER: 8575

TYPE OF BUSINESS: Groundwater Monitoring
LOCATION: 95 Ames Street
Rochester, New York

SAMPLE POINT: IWC-999.1 - Monitoring Well Purge Water

REQUIRED MONITORING & EFFLUENT LIMITS

SAMPLE POINT: IWC-999.1 - Monitoring Well Purge Water

SELF-MONITORING FREQUENCY: **Each and Every Batch Discharge**

SAMPLING PROTOCOL: Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto. In the absence of 40 CFR Part 136 testing methodology, a New York State Department of Health, approved method is acceptable. A grab sample, collected from the above noted sample points shall be analyzed for the following:

Purgeable Halocarbons
Purgeable Aromatics

Discharge Limitations: The summation of the purgeable halocarbon and purgeable aromatic compounds detected above 10 ug/l shall not exceed 2.13 mg/l.

SPECIAL CONDITIONS:

Quarterly flow summaries shall be submitted for billing purposes. It is imperative these summaries are submitted in a timely manner. If there is no discharge for a given quarter, then a letter must be submitted stating so.

11-10-2014

TERMS AND CONDITIONS

GENERAL REQUIREMENTS:

A. The permittee agrees to accept and abide by all provisions of the Sewer Use Law of Monroe County(MCSUL) and of all pertinent rules or regulations now in force or shall be adopted in the future.

B.1 In addition to the parameters/limits outlined, the total facility discharge shall meet all other concentration values as described in Article II, Section 10e of the Monroe County Pure Waters Districts, Rules and Regulations-Sewer Use Law of the County of Monroe.

B.2 Included in Article II, Section 10e, is the definition of "Normal Sewage". "Normal Sewage" may be discharged to the sewer system in excess of the concentrations outlined in the Joint Rules and Regulations, however, the facility will be subject to the imposition of a sewer surcharge and possible self monitoring requirements as a result. Surcharging procedures are outlined in Article X of the MCSUL.

B.3 Regulatory sampling for analytes not specified under "required monitoring" shall be conducted by the Industrial Waste Section at a minimum frequency of once every three (3) years.

C. This permit is not assignable or transferable. The permit is issued to a specific user and location.

D. Per Article VIII, Section 8.11 of the MCSUL, a violation by the permittee of the permit conditions may be cause for revocation or suspension of the permit after a Hearing by the Administrative Board, or if the violation is found to be within the emergency powers of the Director under Sections 4.5 or 5.5. The revocation is immediate upon receipt of notice to the Industrial User, however a Hearing shall be held as soon as possible.

E. As provided under Article VIII, Section 8.1, the Director and his duly authorized representatives shall gain entry on to private lands by permission or duly issued warrant for the purpose of inspection, observation, measurement sampling and testing in accordance with the provisions of this law and its implementing Rules and Regulations. The Director or his representatives shall not have authority to inquire into any processes used in any industrial operation beyond that information having a direct bearing on the kind and source of discharge to the sewers or the on-site facilities for waste treatment. While performing the necessary work on private lands, referred to above, the Director or his duly authorized representative shall observe all safety rules applicable to the premises as established by the owner and/or occupant.

SPECIAL CONDITION:

A. All required monitoring shall be analyzed by a New York State Department of Health certified laboratory. All sampling and analysis must be performed in accordance with Title 40 Code of Federal Regulations Part 136.

B. The pH range for this permit is 5.0 – 12.0 su. This range is specifically permitted by the Director as allowed under Article IV, Section 4.2 of the Monroe County Sewer Use Law. PH must be analyzed immediately.

C. The summation of all Total Toxic Organics(TTO) Compounds as defined in the Code of Federal Regulations (40 CFR part 433.11(e)) with detection levels above 10 ug/l shall not exceed 2.13 mg/l as imposed by the Director under Article IV, Section 4.3 of the Monroe County Sewer Use Law unless Federal limits are more stringent under which the Federal limits will apply.

D. Petroleum Oil and Grease shall not exceed 100 mg/l as imposed by the Director under Article IV, Section 4.3 of the Monroe County Sewer Use Law.

E. Discharges containing Phenolic compounds shall not exceed 2.13 mg/l as imposed by the Director under Article IV, Section 4.3 of the Monroe County Sewer Use Law unless otherwise specified in the permit. These limits are applicable unless Federal limits are more stringent under which Federal limits will apply.

SURCHARGE CONCENTRATIONS:

Concentration and/or characteristics of normal sewage:
"Normal Sewage" shall mean sewage, industrial wastes or other wastes, which when analyzed, show concentration values with the following characteristics based on daily maximum limits:

a. B. O. D.	300 mg/l
b. Total Suspended Solids	300 mg/l
c. Total Phosphorus, as P	10 mg/l

Annual average concentrations above normal sewage are subject to surcharge as defined in Article X of the sewer use law.

DISCHARGE LIMITATIONS (SEWER USE LIMITS)

Permissible concentrations of toxic substances and/or substances the Department wishes to control:
The concentration in sewage of any of the following toxic substances and/or substances the Department wishes to control shall not exceed the concentration limits specified when discharged into the County Sewer System; metal pollutants are expressed as <u>total</u> metals in mg/l (ppm): the following pollutant limits are based on daily maximum values:

a. Antimony (Sb)	1.0 mg/l
b. Arsenic (As)	0.5 mg/l
c. Barium (Ba)	2.0 mg/l
d. Beryllium (Be)	5.0 mg/l
e. Cadmium (Cd)	1.0 mg/l
f. Chromium (Cr)	3.0 mg/l
g. Copper (Cu)	3.0 mg/l
h. Cyanide (CN)	1.0 mg/l
i. Iron (Fe)	5.0 mg/l
j. Lead (Pb)	1.0 mg/l
k. Manganese (Mn)	5.0 mg/l
l. Mercury (Hg)	0.05 mg/l
m. Nickel (Ni)	3.0 mg/l
n. Selenium (Se)	2.0 mg/l
o. Silver (Ag)	2.0 mg/l
p. Thallium (Tl)	1.0 mg/l
q. Zinc (Zn)	5.0 mg/l

REPORTING REQUIREMENTS:

A. Per the requirements of 40 CFR, Part 403.5, Significant Industrial Users must submit Periodic Reports on Continued Compliance to the Control Authority on a biannual (2/yr) basis. Deadline dates of submission for these reports will be August 15 and February 15, respectively.

B. Discharge monitoring reports shall be submitted to the Control Authority upon receipt from the permittee's testing laboratory.

C. Any Industrial User subject to the reporting requirements of the General Pretreatment Regulations shall maintain records of all information resulting from any monitoring activities required by 403.12 for a minimum of three (3) years. These records shall be available for inspection and copying by the Control Authority. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Industrial User or the operation of the POTW Pretreatment Program or when requested by the Director or the Regional Administrator.

NOTIFICATION REQUIREMENTS:

A. Pursuant to Article VIII, Section 8.4K, the permittee shall notify the Department within 24 hours of becoming aware that discharge monitoring is in violation of any permit limit. This notification shall be directed to the Industrial Waste Section at 585-753-7600 Option 4. The User shall also repeat sampling and analysis for the analyte in non-compliance and submit the results of the repeat analysis to Monroe County within 30 days after becoming aware of the violation.

B. Notify the Director in writing when considering a revision to the plant sewer system or any change in industrial waste discharges to the public sewers. The later encompasses either an increase or decrease in average daily volume or strength of waste or new wastes.

C. Notify the Director immediately of any accident, negligence, breakdown of pretreatment equipment or other occurrence that occasions discharge to the public sewer of any waste or process waters not covered by this permit.

SLUG CONTROL

An Industrial User shall be required to report any/all slug discharges to the Monroe County sewer system by calling 585-753-7600 option 4. For the purpose of this permit enclosure, a slug discharge shall be identified as any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge. Following a review process, the Control Authority (Monroe County) shall determine the applicability of a facility slug control plan. If the Control Authority decides that a slug control plan is needed, the plan shall contain, at a minimum, the following elements:

1. Description of discharge practices, including non-routine batch discharges.
2. Description of stored chemicals.
3. Procedures for immediately notifying the Control Authority of slug discharges, including any discharge that would violate a prohibition under 40 CFR 403.5 (b), with procedures for follow up written notification within five (5) days.
4. If necessary, procedures to prevent adverse impact from accidental spills, including, but not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents) and/or measures and equipment for emergency purposes.

SNC DEFINITION:

In accordance with 40 CFR 403.8 (f) (vii), an Industrial User is in significant noncompliance (SNC) if its violations meet one or more of the following criteria:

A. Chronic violations of wastewater discharge limits – defined as those which 66% or more of all the measurements taken during a six-month period exceed (by any magnitude) the daily maximum limit or the average limit for the same pollutant parameter. This criteria does NOT apply to the following Monroe County surchargeable parameters: Biochemical Oxygen Demand, Total Suspended Solids, Chlorine Demand and Total Phosphorus (ref. Article X – Monroe County Sewer Use Law).

B. Technical review criteria (TRC) violations – defined as those in which 33% or more of all the measurements for each pollutant parameter taken during a six month period equal or exceed the product of the daily maximum limit or the average limit times the applicable TRC. This criteria does NOT apply to the following Monroe County surchargeable parameters: Biochemical Oxygen Demand, Total Suspended Solids, Chlorine Demand and Total Phosphorus (ref. Article X – Monroe County Sewer Use Law).

C. Any other violation of a pretreatment effluent limit (daily maximum or longer-term average) that the Control Authority determines has caused, alone or in combination with other discharges, interference or pass-through (including endangering the health or POTW personnel or the general public).

D. Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or the environment or has resulted in the POTW's exercise of its emergency authority under paragraph (t)(1)(vi)(8) of 40 CFR part 403 to prevent such a discharge.

E. Failure to meet, within 90 days after the scheduled date, a compliance schedule milestone contained in a local control mechanism or enforcement order, for starting construction, completing construction or attaining final compliance.

F. Failure to provide, within 30 days after the due date, required reports such as BMRs, 90 day compliance reports, period reports on continued compliance.

G. Failure to accurately report noncompliance.

H. Any other violation or group of violations that the Control Authority determines will adversely affect the operation and implementation of the local Pretreatment Program.

PENALTIES

Should the facility be considered in Significant Non-Compliance (SNC), based on the above mentioned criteria, the minimum enforcement response by Monroe County will be the publication of the company name in the Gannett Rochester newspaper. The company will be published as an Industrial User in Significant Non-Compliance (SNC). Fines and criminal penalties may follow this publication (ref. Article XII – Monroe County Sewer Use Law).

Nothing in this permit shall be construed to relieve the permittees from civil/criminal penalties for noncompliance under Article XII, Section 12.1(D) of the Sewer Use Law of the County of Monroe. Article XII, Section 12.1(D) provides that any person who violates a permit condition is subject to a civil penalty not to exceed $10,000 for any one case and an additional penalty not to exceed $10,000 for each day of continued violation.

80 Ames Street/215 Danforth Street Certification

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **V00144**

Site Name Former Taylor Instruments Facility

Site Address: 95 Ames Street Zip Code: 14611
City/Town: Rochester
County: Monroe
Site Acreage: 14.5

Reporting Period: February 14, 2014 to February 14, 2015

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

SITE NO. V00144 Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
~~120.410-1-2~~	~~ABB, Inc. (Attn: Melody Christopher)~~	~~Ground Water Use Restriction~~ ~~Landuse Restriction~~ ~~Soil Management Plan~~
~~- Ground Water Use Restriction~~ ~~- Landuse Restriction~~ ~~- Soil Management Plan~~ ~~- Annual certification~~		
120.42-1.4	Kevin Carter	Site Management Plan
~~Sub-slab depressurization system~~ ~~Annual Certification~~		

Box 4

Description of Engineering Controls

Parcel	Engineering Control
~~120.410-1-2~~	~~Vapor Mitigation~~ ~~Cover System~~
~~- Cover System~~ ~~- Vapor Mitigation (future buildings)~~	
120.42-1.4	Vapor Mitigation Annual Certification

Parcel 120.42-1.4 is located at 80 Ames street/215 Danforth street Rochester, NY 14611

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☒	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☒	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. V00144

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Melody Christopher (print name) at ABB Inc. 5 Waterside Crossing, Windsor, CT (print business address)

am certifying as Remedial Party (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Melody B. Christopher for ABB Inc — 2/9/2015

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification — Date

IC/EC CERTIFICATIONS

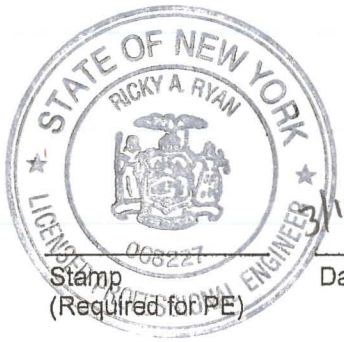
Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Ricky Ryan (print name) at 9725 Cogdill Rd, Knoxville, TN 37932 (print business address),

am certifying as a Professional Engineer for the ABB Inc., Remedial Party (Owner or Remedial Party)



Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

3/10/2015
Date

Attachment B

Mitigation Tech Inspection Report for Sub-Slab Depressurization System
80 Ames Street and 215 Danforth Street

mitigation tech *vapor intrusion specialists*

INSPECTION REPORT

November 9, 2014

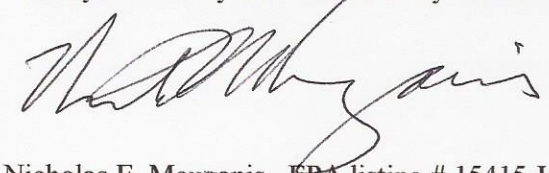
Mr. Joe Deatherage, P.E.
Senior Engineer
AMEC E&I, Inc.
9725 Cogdill Rd.
Knoxville, TN 37932
Via email: joe.deatherage@amec.com

Re: ABB Rochester - Former Taylor Instruments
Project No. 3031052006-31//// WO No. & PO No.: C012603121
Work site: 80 Ames St./215 Danforth St., Rochester, NY
Inspection Report for Sub-slab Depressurization System

For work completed October 28, 2014 per WO C012603121, February 7, 2014

1. Conducted a visual inspection of the complete System (e.g., vent fan, piping, warning device, labeling on systems, etc.): **SATISFACTORY** (apply temporary power for testing)
2. Conducted an inspection of all surfaces to which vacuum is applied:**SATISFACTORY**
3. Inspected all components for condition and proper operation:**SATISFACTORY**
4. Identify and repair any leaks in accordance with Section 4.3.1(a) of the NYS DOH Guidance, with smoke tubes:**NO LEAKS OBSERVED**
5. Inspect the exhaust or discharge point to verify that no air intakes have been located nearby: **NO AIR INTAKES WITHIN TEN FEET**
6. Conduct an airstream velocity measurement:**SATISFACTORY**
7. Conduct pressure field extension testing (to ensure that the system is maintaining a vacuum beneath the entire slab): **SATISFACTORY**
8. Interview an appropriate occupantor owner seeking comments and observations regarding the operation of the System:**SATISFACTORY**
9. Observe VOC readings from sample port: **NON-DETECT AT 100 PPB SCALE**

I certify that this system is effectively maintaining sub-slab depressurization.



Nicholas E. Mouganis EPA listing # 15415-I; NEHA ID# 100722 ***mitigationtech.com

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APPENDIX C

TABLES

Table 1
Overburden Monitoring Wells with COCs Exceeding NYSDEC Class GA Standards
October 2014

2014 Annual Progress Report
and Remedial Progress Evaluation
Former Taylor Instruments Site
Rochester, New York

COC	NYSDEC Class GA Standard	Monitoring Well							
		OB-04	OB-06	OB-08	TW-04	TW-09	TW-17	TW-20	W-5
PCE	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TCE	5	1 U	**38.9**	1 U	1 U	2.98	1 U	**6.11**	**141**
cis-1,2-DCE	5	1 U	**7.64**	1 U	**8.24**	**12.5**	1.51	1 U	**57.9**
trans-1,2-DCE	5	1 U	1.05	**9.57**	1 U	**9.86**	1 U	1 U	**10.9**
1,1-DCE	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	2	**4.25**	**5.20**	1 U	1 U	**12.9**	**4.8**	1 U	**39.7**

All concentrations are in micrograms per liter.

Created by: NG on 11/26/14
Checked by: KJD on 12/02/14

Notes: **Bold and shaded** values indicate detection exceeding NYSDEC Class GA Standards
COC = contaminants of concern
DCE = dichloroethene
PCE = tetrachloroethene
TCE = trichloroethene
U = not detected at practical quantitation limit

Table 2
Bedrock Monitoring Wells with COCs Exceeding NYSDEC Class GA Standards
October 2014

2014 Annual Progress Report
and Remedial Progress Evaluation
Former Taylor Instruments Site
Rochester, New York

COC	NYSDEC Class GA Standard	Monitoring Well					
		BR-01	BR-02	BR-03	BR-04	BR-10	BR-15
PCE	5	1 U	1 U	1 U	1 U	1.33	1 U
TCE	5	**86.9**	**25.3**	**381**	**514**	**345**	1 U
cis-1,2-DCE	5	**1,590**	**19.7**	**37**	**955**	**299**	1.28
trans-1,2-DCE	5	**56.6**	2.52	1.73	**77.4**	**46.2**	1.77
1,1-DCE	5	**7.62**	1 U	1.74	**9.33**	1.49	1 U
Vinyl Chloride	2	**320**	1 U	1 U	**55.1**	**2.72**	**11.3**

All concentrations are in micrograms per liter.

Created by: NG on 11/26/14
Checked by: KJD on 12/02/14

Notes: **Bold and shaded** values indicate detection exceeding NYSDEC Class GA Standards.
COC = contaminants of concern
DCE = dichloroethene
PCE = tetrachloroethene
TCE = trichloroethene
U = not detected at practical quantitation limit

Table 3
Summary of VOC Results for Existing Overburden Wells for the 2000-2014 Sampling Events

2014 Annual Progress Report
and Remedial Progress Evaluation
Former Taylor Instruments Site
Rochester, New York

Sample ID	Date Sampled	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)
OB-04	11/19/00	-	70,000	2,900	--	--	--
OB-04	03/24/01	-	150	3.2 J	--	--	--
OB-04	06/18/01	-	39,000	21,000	--	--	--
OB-04	09/01	-	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)
OB-04	12/17/01	19.9	71,500	56,000	170	108	10.2
OB-04	03/12/02	12.9	65,600	1,640	16.6	3.8	--
OB-04	06/09/02	-	3,650	554	--	--	--
OB-04	09/23/02	1.8	3,760	1,950	7.5	4.9	2
OB-04	12/09/02	-	46.3	5.5	--	--	--
OB-04	03/22/03	-	11.3	1.3	--	--	--
OB-04	06/13/03	-	41.5	6.7	--	--	--
OB-04	09/21/03	6.0	2,780	125	1.9	--	--
OB-04	12/14/03	-	23.3	3	--	--	--
OB-04	06/19/04	-	394	87.2	1.3	--	--
OB-04	12/05/04	1.0	626	124	1.6	--	--
OB-04	06/26/05	-	367	141	2.4	--	--
OB-04	12/03/05	-	385	139	1.14	--	--
OB-04	07/20/06	-	252	153	1.56	--	--
OB-04	12/06/06	-	1,920	892	--	--	1.19
OB-04	05/03/07	-	618	399	3.19	--	--
OB-04	12/13/07	-	109	1,350	5.43	2.19	95.1
OB-04	05/05/08	-	125	875	5.72	1.60	145
OB-04	11/06/08	-	44.9	258	2.80	--	114
OB-04	05/06/09	-	28.9	102	2.27	--	21.7
OB-04	10/21/09	-	32.8	59.6	--	--	49.8
OB-04	05/12/10	-	5.76	5.69	1.77	--	9.74
OB-04	05/03/11	-	47.1	304	1.79	--	43.3
OB-04	11/01/11	-	5.68	51.1	2.51	--	33.2
OB-04	05/15/12	-	4.35	2.05	1.26	--	8.69
OB-04	10/30/12	-	3.94	2.31	--	--	4.25
OB-04	05/15/13	-	3.48	1.08	--	--	--
OB-04	11/13/13	-	2.95	--	--	--	2.44
OB-04	05/07/14	-	1.46	--	--	--	1.21
OB-04	10/28/14	-	--	--	--	--	4.25
OB-06	11/17/00	-	2,600	60	--	--	--
OB-06 (DUP)	11/17/00	-	3,300	80 J	--	--	--
OB-06	03/21/01	-	540	--	--	--	--
OB-06	06/15/01	-	720	12 J	--	--	--
OB-06	09/13/01	-	5,600	240	9.0 J	--	--
OB-06	12/13/01	-	637	13.7	--	--	--
OB-06	03/08/02	-	526	7.8	--	--	--
OB-06	06/07/02	-	184	2.8	--	--	--
OB-06	09/20/02	-	386	10.1	--	--	--

See notes at end of table.

Table 3 (Continued)
Summary of VOC Results for Existing Overburden Wells for the 2000-2014 Sampling Events

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Rochester, New York

Sample ID	Date Sampled	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)
OB-06	12/06/02	-	100	1.5	--	--	--
OB-06	03/20/03	-	84.9	1.5	--	--	--
OB-06	06/11/03	--	52.7	1.1	--	--	--
OB-06	09/18/03	--	242	2.6	--	--	--
OB-06	12/11/03	--	60	1	--	--	--
OB-06	06/17/04	--	38.6	--	--	--	--
OB-06	12/02/04	--	31.9	1.4	--	--	--
OB-06	06/26/05	--	37.1	1.8	--	--	--
OB-06	12/02/05	--	117	4.71	--	--	--
OB-06	07/21/06	--	60.5	2.59	--	--	--
OB-06	12/10/06	--	87.8	2.69	--	--	--
OB-06	05/03/07	--	66.3	4.85	--	--	--
OB-06	12/12/07	--	82.9	3.31	--	--	--
OB-06	05/03/08	--	72.6	3.90	--	--	--
OB-06	11/05/08	--	89.8	4.82	--	--	--
OB-06	05/05/09	--	78.3	6.03	--	--	--
OB-06	10/20/09	--	121	12.6	--	--	--
OB-06	05/11/10	--	105	10.5	--	--	--
OB-06	05/03/11	--	60	77.4	--	--	--
OB-06	11/01/11	--	18.9	46.5	1.28	--	13.8
OB-06	05/15/12	--	25.4	7.56	--	--	2.72
OB-06	10/30/12	--	34.3	6.63	--	--	3.86
OB-06	05/15/13	--	40.1	7.5	--	--	2.56
OB-06	11/13/13	--	43.7	7.83	1.03	--	8.02
OB-06	05/07/14	--	36.5	6.80	--	--	2.51
OB-06	10/28/14	--	38.9	7.64	1.05	--	5.20
OB-08	11/16/00	--	40,000	390 J	--	--	--
OB-08	03/20/01	--	29,000	390 J	--	--	--
OB-08	06/19/01	--	15,000	240 J	--	--	--
OB-08	03/12/02	13.1	15,750	208	8.6	2.7	--
OB-08	06/10/02	--	5,370	--	--	--	--
OB-08	09/24/02	9.4	5,440	110	3.6	--	--
OB-08	12/09/02	8.9	8,050	94.2	5	1.3	--
OB-08	03/24/03	5.1	3,480	37.3	2.2	--	--
OB-08	06/13/03	3.9	2,250	15.3	1.2	--	--
OB-08	09/22/03	2.6	2,780	32.1	3.1	--	--
OB-08	12/15/03	3.3	1,360	10.8	1.5	--	--
OB-08	06/20/04	2.9	725	13.1	2.5	--	--
OB-08	12/06/04	--	429	5.80	--	--	--
OB-08	06/29/05	1.3	570	3.3	--	--	--
OB-08	12/06/05	2.12	797	6.25	2.17	--	--
OB-08	07/21/06	2.13	890	7.85	3.91	--	--
OB-08	12/06/06	--	73.7	1,550	10.7	--	--

See notes at end of table.

Table 3 (Continued)
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OB-08	05/03/07	--	2.48	3,750	29.6	12.7	3.08
OB-08	12/13/07	--	--	1,150	32.0	4.24	1.54
OB-08	05/05/08	--	--	41.4	8.07	--	47.8
OB-08	11/06/08	--	--	53.9	14.8	--	68.9
OB-08	05/06/09	--	--	42.5	10.2	--	83.8
OB-08	10/21/09	--	--	35.2	12.4	--	111
OB-08	05/12/10	--	--	30.5	3.44	--	36.0
OB-08	05/04/11	--	--	67.9	22.7	--	249
OB-08	11/02/11	--	--	--	15.5	--	4.73
OB-08	05/17/12	--	--	3.78	11.1	--	13.2
OB-08	10/31/12	--	--	--	11.2	--	3.15
OB-08	05/15/13	--	--	--	8.29	--	5.72
OB-08	11/14/13	--	--	--	2.44	--	--
OB-08	05/07/14	--	--	--	3.50	--	3.03
OB-08	10/28/14	--	--	--	9.57	--	--
TW-04	10/24/00	--	42	79	--	--	--
TW-04	03/22/01	--	14	16	--	--	--
TW-04	06/15/01	--	--	--	--	--	--
TW-04	09/14/01	--	27	38	--	--	--
TW-04	12/13/01	--	51.1	19.4	--	--	--
TW-04	03/05/02	--	51	3.7	--	--	--
TW-04	06/04/02	--	20.7	--	--	--	--
TW-04	09/17/02	--	21.2	7.1	--	--	--
TW-04	12/04/02	--	42.5	5.5	--	--	--
TW-04	03/18/03	--	--	--	--	--	--
TW-04	06/10/03	--	19.3	--	--	--	--
TW-04	09/16/03	--	29.2	3.1	--	--	--
TW-04	12/09/03	--	49.8	1.1	--	--	--
TW-04	06/15/04	--	12.7	--	--	--	--
TW-04	11/30/04	--	40.0	--	--	--	--
TW-04	06/24/05	--	9.20	1.7	--	--	--
TW-04	12/01/05	--	31.4	--	--	--	--
TW-04	07/18/06	--	27.9	--	--	--	--
TW-04	12/11/06	--	8.99	--	--	--	--
TW-04	05/03/07	--	4.66	--	--	--	--
TW-04	12/11/07	--	15.2	--	--	--	--
TW-04	05/03/08	--	4.40	--	--	--	--
TW-04	11/04/08	--	21.3	--	--	--	--
TW-04	05/04/09	--	4.78	--	--	--	--
TW-04	10/19/09	--	--	--	--	--	--
TW-04	05/11/10	--	5.32	--	--	--	--
TW-04	05/03/11	--	6.17	--	--	--	--
TW-04	11/01/11	--	8.9	2.44	--	--	--

See notes at end of table

Table 3 (Continued)
Summary of VOC Results for Existing Overburden Wells for the 2000-2014 Sampling Events

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Sample ID	Date Sampled	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)
TW-04	05/16/12	--	1.66	1.56	--	--	--
TW-04	10/31/12	--	--	2.85	--	--	--
TW-04	05/14/13	--	--	1.13	--	--	--
TW-04	11/13/13	--	--	6.87	--	--	--
TW-04	05/07/14	--	--	2.08	--	--	--
TW-04	10/28/14	--	--	8.24	--	--	--
TW-09	10/24/00	--	230	36	--	--	--
TW-09	03/27/01	--	120	1.9 J	--	--	--
TW-09	06/16/01	--	200	7.4	--	--	--
TW-09	09/16/01	--	150	9.6	--	--	--
TW-09	12/15/01	--	110	4	--	--	--
TW-09	03/06/02	--	55.4	2	--	--	--
TW-09	06/05/02	--	36.5	--	--	--	--
TW-09	09/19/02	--	91.5	4	--	--	--
TW-09	12/05/02	--	38	--	--	--	--
TW-09	03/19/03	--	--	--	--	--	--
TW-09	06/11/03	--	29.4	--	--	--	--
TW-09	09/17/03	--	77	6.4	--	--	--
TW-09	12/10/03	--	36.8	1.2	--	--	--
TW-09	06/16/04	--	43.1	1.0	--	--	--
TW-09	12/02/04	--	46.2	2.4	--	--	--
TW-09	06/24/05	--	48.2	1.7	--	--	--
TW-09	12/05/05	--	45.0	1.48	--	--	--
TW-09	07/18/06	--	56.7	1.35	--	--	--
TW-09	12/06/06	--	34.3	2.60	--	--	--
TW-09	05/03/07	--	31.2	3.01	1.46	--	--
TW-09	12/13/07	--	29.8	1.28	--	--	--
TW-09	05/05/08	--	50.5	4.70	4.87	--	--
TW-09	11/06/08	--	71.2	12.6	12.0	--	--
TW-09	05/06/09	--	72.1	32.6	32.0	--	5.83
TW-09	10/21/09	--	82.9	34.4	34.6	--	--
TW-09	05/12/10	--	56.7	12.8	14.3	--	--
TW-09	05/03/11	--	4.13	2.28	--	--	4.17
TW-09	11/02/11	--	1.24	4.23	7.07	--	6.26
TW-09	05/16/12	--	1.18	1.11	2.99	--	1.97
TW-09	11/01/12	--	--	--	--	--	--
TW-09	05/14/13	--	4.05	2.91	5.58	--	3.49
TW-09	11/12/13	--	--	3.38	6.92	--	9.03
TW-09	05/07/14	--	6.06	4.15	3.47	--	2.09
TW-09	10/29/14	--	2.98	12.5	9.86	--	12.9
TW-17	11/17/00	--	1,000	7.9 J	--	--	--
TW-17	03/23/01	--	530	--	--	--	--
TW-17	06/16/01	--	490	--	--	--	--

See notes at end of table

Table 3 (Continued)
Summary of VOC Results for Existing Overburden Wells for the 2000-2014 Sampling Events

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Sample ID	Date Sampled	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)
TW-17	09/14/01	--	740	--	--	--	--
TW-17	12/14/01	--	515	--	--	--	--
TW-17	03/05/02	--	339	--	--	--	--
TW-17	06/04/02	--	393	--	--	--	--
TW-17	09/18/02	--	666	--	--	--	--
TW-17	12/04/02	--	390	--	--	--	--
TW-17	03/18/03	--	379	--	--	--	--
TW-17	06/10/03	--	282	--	--	--	--
TW-17	09/16/03	--	435	--	--	--	--
TW-17	12/09/03	--	441	--	--	--	--
TW-17	06/15/04	--	280	--	--	--	--
TW-17	11/30/04	--	407	6.9	--	--	--
TW-17	06/24/05	--	340	1.0	--	--	--
TW-17	12/01/05	--	397	1.35	--	--	--
TW-17	07/18/06	--	410	2.04	--	--	--
TW-17	12/06/06	--	246	7.47	--	--	--
TW-17	05/02/07	--	253	5.87	--	--	--
TW-17	12/12/07	--	296	3.98	--	--	--
TW-17	05/04/08	--	477	4.19	--	--	--
TW-17	11/05/08	--	270	110	--	--	--
TW-17	05/05/09	--	332	6.46	--	--	--
TW-17	10/20/09	--	94	199	5.92	--	--
TW-17	05/11/10	--	316	10.6	--	--	--
TW-17	05/05/11	--	205	115	--	--	--
TW-17	11/03/11	--	21.6	310	--	--	4.92
TW-17	05/16/12	--	2.16	156	--	--	6.28
TW-17	10/31/12	--	--	147	--	--	2.66
TW-17	05/16/13	--	2.63	556	1.22	--	39.3
TW-17	11/14/13	--	--	240	--	--	130
TW-17	05/08/14	--	1.38	112	4.21	--	48.0
TW-17	10/29/14	--	--	1.51	--	--	4.80
TW-20	10/25/00	--	5.2	--	--	--	--
TW-20	03/27/01	--	12	--	--	--	--
TW-20	06/16/01	--	2.9 J	--	--	--	--
TW-20	09/14/01	--	--	--	--	--	--
TW-20	12/14/01	--	3.1	--	--	--	--
TW-20	03/06/02	--	2.4	--	--	--	--
TW-20	09/18/02	--	--	--	--	--	--
TW-20	12/04/02	--	11.6	--	--	--	--
TW-20	03/19/03	--	2.4	--	--	--	--
TW-20	06/10/03	--	--	--	--	--	--
TW-20	09/17/03	--	5.0	--	--	--	--
TW-20	12/10/03	--	14.8	--	--	--	--

See notes at end of table.

Table 3 (Continued)
Summary of VOC Results for Existing Overburden Wells for the 2000-2014 Sampling Events

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TW-20	06/15/04	--	--	--	--	--	--
TW-20	12/01/04	--	--	--	--	--	--
TW-20	06/24/05	--	1.5	--	--	--	--
TW-20	12/01/05	--	6.32	--	--	--	--
TW-20	07/18/06	--	12.0	--	--	--	--
TW-20	12/06/06	--	13.2	--	--	--	--
TW-20	05/02/07	--	8.28	--	--	--	--
TW-20	12/11/07	--	4.58	--	--	--	--
TW-20	05/02/08	--	4.50	--	--	--	--
TW-20	11/04/08	--	23.0	3.47	--	--	--
TW-20	05/04/09	--	25.2	1.55	--	--	--
TW-20	10/19/09	--	78.8	5.50	--	--	--
TW-20	05/11/10	--	65.9	2.34	--	--	--
TW-20	05/04/11	--	65	2.86	--	--	--
TW-20	11/02/11	--	88.8	8.3	--	--	--
TW-20	05/17/12	--	80.8	4.58	--	--	--
TW-20	11/01/12	--	107	4.11	--	--	--
TW-20	05/16/13	--	72.3	3.14	--	--	--
TW-20	11/14/13	--	56.6	1.73	--	--	--
TW-20	05/08/14	--	48.4	4.48	--	--	--
TW-20	10/29/14	--	6.11	--	--	--	--
W-5	11/16/00	--	--	27	11	--	--
W-5	03/23/01	--	120	25	8.1	--	--
W-5	06/18/01	--	62	23	9.6	--	--
W-5	09/17/01	--	64	9.1	6.5	--	--
W-5	12/17/01	--	1,435	39.5	9	--	--
W-5 (DUP)	12/17/01	--	1,780	36.2	8.5	--	--
W-5	03/07/02	--	737	21.6	3.5	--	--
W-5 (DUP)	03/07/02	--	607	23.2	3.9	--	--
W-5	06/06/02	--	155	15.7	--	--	--
W-5 (DUP)	06/06/02	--	150	13.8	--	--	--
W-5	09/19/02	--	960	49.6	--	--	--
W-5 (DUP)	09/19/02	--	676	48.5	4.7	--	--
W-5	12/05/02	--	777	52	3.6	--	--
W-5 (DUP)	12/05/02	--	843	51.7	4	--	--
W-5	03/20/03	--	262	132	3.4	--	--
W-5 (DUP)	03/20/03	--	232	119	3.3	--	--
W-5	06/11/03	--	234	128	5	--	--
W-5 (DUP)	06/11/03	--	234	152	5.1	--	--
W-5	09/18/03	--	510	129	4	--	--
W-5 (DUP)	09/18/03	--	444	112	3.9	--	--
W-5	12/11/03	--	550	127	3.5	--	--
W-5 (DUP)	12/11/03	--	520	118	3.4	--	--

See notes at end of table

Table 3 (Continued)
Summary of VOC Results for Existing Overburden Wells for the 2000-2014 Sampling Events

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Sample ID	Date Sampled	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)
W-5	06/16/04	--	348	98.9	5.4	--	--
W-5 (DUP)	06/16/04	--	360	71.6	4.6	--	--
W-5	12/02/04	--	569	125	4.7	--	--
W-5 (DUP)	12/02/04	--	725	89.4	4.4	--	--
W-5	06/25/05	--	381	98.2	3.7	--	--
W-5 (DUP)	06/25/05	--	380	93.2	3.5	--	--
W-5	12/05/05	--	1,100	76.9	2.13	--	--
W-5 (DUP)	12/05/05	--	916	69.5	--	--	--
W-5	07/19/06	--	212	104	2.34	--	3.63
W-5 (DUP)	07/19/06	--	219	99.0	2.30	--	3.81
W-5	12/05/06	--	263	122	2.89	--	7.14
W-5	05/03/07	--	1,140	340	4.61	--	4.43
W-5 (DUP)	05/03/07	--	1,070	336	4.60	--	4.00
W-5	12/13/07	--	835	158	3.83	--	22.1
W-5 (DUP)	12/13/07	--	850	124	3.36	--	16.1
W-5	05/05/08	2.41	1,180	314	4.41	--	6.77 J
W-5 (DUP)	05/05/08	2.25	1,110	342	4.33	--	13.6 J
W-5	11/06/08	--	687	143	3.28	--	8.86
W-5 (DUP)	11/06/08	--	703	126	2.88	--	8.85
W-5	05/06/09	--	961	124	2.61	--	1.33
W-5 (DUP)	05/06/09	--	961	123	2.69	--	--
W-5	10/21/09	--	664	59.9	1.55	--	5.39 J
W-5 (DUP)	10/21/09	--	642	68.2	1.61	--	7.42
W-5	05/12/10	--	601	164	2.08	--	5.04
W-5 (DUP)	05/12/10	--	591	159	2.08	--	5.27
W-5	05/04/11	--	445	117	1.39	--	1.51
W-5 (DUP)	05/04/11	--	432	141	1.62	--	1.53
W-5	11/03/11	--	293	130	1.41	--	12.5
W-5 (DUP)	11/03/11	--	325	153	1.74	--	17.0
W-5	05/17/12	--	230	139	5.37	--	39.5
W-5 (DUP)	05/17/12	--	220	136	5.19	--	37.2
W-5	11/01/12	--	195	85	13.1	--	34.8
W-5 (DUP)	11/01/12	--	191	83.9	12.9	--	34.2
W-5	05/16/13	--	218	75	10.6	--	35.3
DUP-01	05/16/13	--	228	74.6	10.3	--	33.8
W-5	11/14/13	--	182	69.5	10.2	--	36.5
DUP-01	11/14/13	--	185	69.8	9.97	--	33.8
W-5	05/08/14	--	182	49.7	7.35	--	14.9
DUP-01	05/08/14	--	177	52.1	7.71	--	15.3
W-5	10/29/14	--	141	57.9	10.9	--	39.7
DUP-01	10/29/14	--	155	55.6	10.3	--	33.9

See notes at end of table

Table 3 (Continued)
Summary of VOC Results for Existing Overburden Wells for the 2000-2014 Sampling Events

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Notes: -- = no detections
μg/L = micrograms per liter
1,1-DCE = 1,1-dichloroethene
cis-1,2-DCE = cis-1,2-dichloroethene
trans-1,2-DCE = trans-1,2-dichloroethene
DUP = duplicate
ID = identification
J = estimated value
NS = not sampled
TCE = trichloroethene
VOC = volatile organic compound

Prepared by NG on 12/02/14

Checked by KJD on 12/02/14

Table 4
Summary of VOC Results for Existing Bedrock Wells for the 2000-2014 Sampling Events

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Sample ID	Date Sampled	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)
BR-01	11/17/00	--	180	550	4.3 J	--	3.5 J
BR-01	03/21/01	--	320	34	2.2 J	--	--
BR-01 (DUP)	03/21/01	--	320	35	2.4 J	--	--
BR-01	06/16/01	--	270	59	4.4 J	--	--
BR-01	09/14/01	--	31	170	16	--	--
BR-01	12/14/01	--	63.8	77.5	2	--	--
BR-01	03/09/02	--	47.3	5.5	1.6	--	--
BR-01	06/08/02	--	85.7	10.1	3.2	--	--
BR-01	09/20/02	--	107	16	4	--	--
BR-01	12/07/02	--	14.3	83	3.8	--	--
BR-01	03/21/03	--	25.8	2.1	1	--	--
BR-01	06/12/03	--	60.9	4.6	2.8	--	--
BR-01	09/19/03	--	102	11.4	1.7	--	--
BR-01	12/12/03	--	127	61.7	20.6	--	--
BR-01	06/18/04	--	551	42	6.1	--	--
BR-01	12/03/04	--	65	4.3	1.4	--	--
BR-01	06/26/05	--	199	6.5	1.0	--	--
BR-01	12/02/05	--	1.12	36.2	1.10	--	--
BR-01	07/19/06	--	--	3.09	--	--	--
BR-01	12/08/06	--	--	3.73	--	--	--
BR-01	05/02/07	--	67.5	10.6	--	--	--
BR-01	12/10/07	--	--	70.6	4.33	--	--
BR-01	05/02/08	--	4.19	10.7	1.63	--	--
BR-01	11/04/08	--	--	98.7	2.23	--	--
BR-01	05/04/09	--	3.26	11.3	1.95	--	--
BR-01	10/19/09	--	--	6.92	--	--	--
BR-01	05/11/10	--	9.23	12.8	2.02	--	--
BR-01	05/04/11	--	2.05	14.6	1.03	--	--
BR-01	11/03/11	--	--	41.6	--	--	3.61
BR-01	05/17/12	--	89.6	34.7	1.87	--	3.13
BR-01	10/31/12	--	--	29.6	--	--	7.88
BR-01	05/15/13	--	76.3	695	35.4	7.52	200
BR-01	11/14/13	--	111	1,470	34.4	6.87	406
BR-01	05/08/14	--	98.9	1,570	61.4	7.70	377
BR-01	10/29/14	--	86.9	1,590	56.6	7.62	320
BR-02	11/18/00	--	1,800	540	31 J	--	--
BR-02	03/21/01	--	1,200	95	--	--	--
BR-02	06/17/01	--	1,000	94	27 J	--	--
BR-02	09/15/01	--	7,000	1,500	63	31 J	--
BR-02	12/15/01	--	6,500	1,830	59.8	30.3	19.6
BR-02	03/09/02	--	588	79.6	20.8	1.2	--
BR-02	06/08/02	--	568	122	2.2	--	--

See notes at end of table

Table 4 (Continued)
Summary of VOC Results for Existing Bedrock Wells for the 2000-2014 Sampling Events

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Sample ID	Date Sampled	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)
BR-02	09/21/02	--	768	518	24.4	4.6	18.7
BR-02	12/07/02	--	694	172	29.8	--	5.6
BR-02	03/21/03	--	4,000	19,100	154	156	64.9
BR-02	06/13/03	--	710	17,900	120	122	68.1
BR-02	09/18/03	--	372	245	23.3	--	--
BR-02	12/12/03	--	324	58.2	18.2	--	--
BR-02	06/18/04	--	450	257	33.8	2.8	2.3
BR-02	12/03/04	--	647	242	23.4	1.4	1.4
BR-02	06/27/05	--	163	29	9.1	--	--
BR-02	12/03/05	--	114	23.1	9.08	--	--
BR-02	07/19/06	--	120	16.9	8.29	--	--
BR-02	12/08/06	1.32	113	31.1	11.3	--	--
BR-02	05/02/07	--	409	118	15.2	1.26	--
BR-02	12/10/07	--	134	38.6	14.1	--	--
BR-02	05/02/08	--	153	74.2	14.0	--	--
BR-02	11/04/08	--	90.9	48.1	11.4	--	1.54
BR-02	05/04/09	--	88.1	142	20.5	1.00	1.19
BR-02	10/19/09	--	254	100	13.4	1.03	1.22
BR-02	05/11/10	--	821	186	21.9	1.76	2.25
BR-02	05/04/11	--	237	56.2	8.89	--	--
BR-02	11/02/11	--	2230	483	24.6	4.35	8.25
BR-02	05/16/12	--	5070	1100	49.4	8.67	22
BR-02	11/01/12	--	44.5	23.3	4.69	--	--
BR-02	05/16/13	--	904	169	12.6	1.61	2.3
BR-02	11/13/13	--	27	24.1	3.45	--	--
BR-02	05/08/14	--	25,200	5,860	238	46.4	103
BR-02	10/29/14	--	25.3	19.7	2.52	--	--
BR-03	11/18/00	--	440	99	1.2 J	2.2 J	--
BR-03	03/22/01	--	810	12 J	--	3.2 J	--
BR-03	06/15/01	--	500	20 J	--	--	--
BR-03	09/14/01	--	330	7.8 J	--	--	--
BR-03	12/13/01	--	780	7.6	--	2.2	--
BR-03	03/08/02	--	599	9.8	--	2.1	--
BR-03	06/07/02	--	854	19.7	--	2.8	--
BR-03	09/20/02	--	370	6.5	--	--	--
BR-03	12/07/02	--	821	13.5	--	--	--
BR-03	03/21/03	--	590	7.7	--	2	--
BR-03	06/12/03	--	632	25.3	1.9	3	--
BR-03	09/18/03	--	1,150	10.4	1.5	3.1	--
BR-03	12/12/03	--	--	--	--	--	--
BR-03	06/17/04	--	446	17.0	1.1	1.5	--
BR-03	12/03/04	--	60.6	27.0	--	1.0	--
BR-03	06/26/05	--	73.4	5.6	--	--	--

See notes at end of table.

Table 4 (Continued)
Summary of VOC Results for Existing Bedrock Wells for the 2000-2014 Sampling Events

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Sample ID	Date Sampled	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)
BR-03	12/02/05	--	5.57	21.0	--	--	--
BR-03	07/19/06	--	248	6.97	--	--	--
BR-03	12/08/06	--	29.7	27.3	--	--	--
BR-03	05/01/07	--	701	7.32	--	1.89	--
BR-03	12/11/07	--	35.4	21.8	--	--	--
BR-03	05/03/08	--	588	5.20	--	1.81	--
BR-03	11/04/08	--	61.8	4.61	--	--	--
BR-03	05/04/09	--	202	3.10	--	--	--
BR-03	10/19/09	--	365	29.3	1.02	2.05	--
BR-03	05/11/10	--	270	3.15	--	--	--
BR-03	05/03/11	--	52.5	75	--	--	--
BR-03	11/02/11	--	--	37.1	--	--	--
BR-03	05/16/12	--	573	43.4	1.18	1.89	--
BR-03	10/31/12	--	3.06	329	6.71	1.71	--
BR-03	05/16/13	--	596	23.2	4.92	1.83	--
BR-03	11/13/13	--	653	18.2	--	2.04	--
BR-03	05/08/14	--	519	15.3	1.66	1.72	--
BR-03	10/29/14	--	381	37.0	1.73	1.74	--
BR-04	11/19/00	--	10,000	600	140	17 J	25 J
BR-04	03/24/01	--	9,000	400	95 J	--	--
BR-04	06/19/01	--	4,300	320	61 J	--	--
BR-04	09/17/01	--	5,000	420	100 J	--	--
BR-04	12/17/01	1.2	5,700	430	79.9	9	27.4
BR-04	03/12/02	--	5,750	384	77	8.1	23.4
BR-04	06/10/02	--	4,570	338	49	--	--
BR-04	09/23/02	--	3,310	551	63.1	8.3	32.2
BR-04	12/09/02	--	5,300	535	77.6	8.3	27.1
BR-04	03/23/03	1.8	4,630	473	52	6.8	14.8
BR-04	06/13/03	--	302	1,280	19.5	3.6	1.2
BR-04	09/21/03	--	2,540	560	61	5.4	32.2
BR-04	12/14/03	--	3,650	507	51.9	6.2	14.3
BR-04	06/19/04	--	102	1,420	45.8	6.4	3.0
BR-04	12/05/04	--	4,090	2,810	90.0	15.3	8.3
BR-04	06/28/05	--	6.6	937	22.5	1.6	1.2
BR-04	12/03/05	--	16.4	127	2.21	--	--
BR-04	07/20/06	--	3,940	6,410	147	21.3	12.9
BR-04	12/09/06	--	5.32	2,030	24.1	3.17	5.21
BR-04	05/01/07	--	56.9	446	12.7	1.09	--
BR-04	12/12/07	--	8.64	240	4.36	--	3.07
BR-04	05/04/08	--	332	647	17.7	2.83	1.37
BR-04	11/06/08	--	7.04	490	8.51	--	3.28
BR-04	05/06/09	--	498	163	10.9	1.59	--
BR-04	10/21/09	--	25.1	167	5.24	--	1.72

See notes at end of table

Table 4 (Continued)
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BR-04	05/12/10	--	325	321	11.7	1.37	--
BR-04	05/03/11	--	--	--	--	--	--
BR-04	11/01/11	--	4.29	5.02	--	--	--
BR-04	05/15/12	--	55.1	76.6	2.9	--	2.72
BR-04	10/31/12	--	4.9	4.77	--	--	--
BR-04	05/15/13	--	1,430	1,370	97.4	9.47	72.5
BR-04	11/12/13	--	638	1,320	66.9	9.96	77
BR-04	05/07/14	--	757	1,370	88.7	11.5	68.0
BR-04	10/29/14	--	514	955	77.4	9.33	55.1
BR-10	11/18/00	--	4,000	450	27 J	--	--
BR-10	03/28/01	--	4,700	980	110 J	--	--
BR-10	06/18/01	--	8,500	1,000	--	--	--
BR-10	09/17/01	--	8,700	1,700	160 J	--	--
BR-10	12/16/01	--	5,350	1,200	82.8	3.4	5.6
BR-10	03/11/02	--	3,745	1,090	78.2	3.9	5.5
BR-10	06/09/02	--	5,100	1,290	64.6	4.7	5.3
BR-10	09/22/02	--	--	120	9.8	--	--
BR-10	12/09/02	--	3,060	750	60.1	2.3	--
BR-10	03/22/03	--	2,580	886	42.2	2.5	3.1
BR-10	06/13/03	--	2,950	1,080	61.7	3.2	5.1
BR-10	09/21/03	--	2,250	400	49.4	2	16.1
BR-10	12/13/03	--	1,420	442	36.4	1.4	8.8
BR-10	06/19/04	--	1,520	507	62.9	2.9	6.8
BR-10	12/04/04	--	1,270	436	41.2	1.8	5.0
BR-10	06/27/05	1.3	558	166	17.3	--	1.3
BR-10	12/03/05	1.62	474	122	11.1	--	--
BR-10	07/20/06	--	52.3	12.2	1.53	--	--
BR-10	12/08/06	--	28.2	15.0	1.26	--	--
BR-10	05/02/07	1.01	226	57.8	5.87	--	--
BR-10	12/12/07	--	17.8	3.83	--	--	--
BR-10	05/04/08	2.94	357	94.6	10.7	--	1.40
BR-10	11/05/08	--	8.44	3.02	--	--	--
BR-10	05/05/09	1.67	235	66.1	10.3	--	1.07
BR-10	10/20/09	--	48	22	2.79	--	--
BR-10	05/11/10	1.72	277	77.3	14.0	--	--
BR-10	05/03/11	1.36	725	312	26.3	--	2.79
BR-10	11/01/11	1.35	417	231	25.3	--	2.87
BR-10	05/15/12	1.28	532	192	24	--	1.13
BR-10	10/31/12	--	7.28	2.21	--	--	--
BR-10	05/15/13	--	517	153	26	--	--
BR-10	11/12/13	1.76	444	173	29	1.11	2.17
BR-10	05/07/14	--	329	189	32.8	--	1.02
BR-10	10/29/14	1.33	345	299	46.2	1.49	2.72

See notes at end of table.

Table 4 (Continued)
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BR-15	11/19/00	--	2,700	54 J	--	--	--
BR-15 (DUP)	11/19/00	--	2,700	49 J	--	--	--
BR-15	03/26/01	--	2,500	33 J	--	--	--
BR-15	06/18/01	--	2,300	49 J	--	--	--
BR-15	09/16/01	--	4,800	110 J	--	--	--
BR-15	12/16/01	--	6,590	189	28.2	2	1.1
BR-15	03/11/02	--	5,500	172	36.6	2.2	--
BR-15	06/09/02	--	5,800	373	36.9	4.6	3.8
BR-15	09/22/02	--	4,390	555	40.3	7.5	5.4
BR-15	12/08/02	--	4,740	177	43.6	2.8	--
BR-15	03/22/03	--	2,500	404	21.9	4.3	1.2
BR-15	06/13/03	--	1,180	1,390	24.8	8.4	3.9
BR-15	09/21/03	--	1,230	580	35.3	6.9	8.3
BR-15	12/13/03	--	2,000	194	24.9	2.8	--
BR-15	12/12/07	--	212	380	2.81	1.48	15.7
BR-15	05/04/08	--	43.4	449	2.94	1.38	28.2
BR-15	11/06/08	--	4.08	4.04	--	--	--
BR-15	05/06/09	--	261	105	1.33	--	6.40
BR-15	10/20/09	--	38.0	19.3	--	--	--
BR-15	05/12/10	--	167	123	2.12	--	3.11
BR-15	05/04/11	--	1.74	27.2	--	--	25.9
BR-15	11/02/11	--	1.01	8.81	--	--	10.8
BR-15	05/16/12	--	--	--	--	--	--
BR-15	11/01/12	--	--	--	--	--	--
BR-15	05/14/13	--	--	1.53	--	--	7.51
BR-15	11/12/13	--	--	--	1.02	--	8.9
BR-15	05/07/14	--	1.64	8.33	2.47	--	41.1
BR-15	10/28/14	--	--	1.28	1.77	--	11.3

Notes:
-- = no detections
µg/L = micrograms per liter
1,1-DCE = 1,1-dichloroethene
cis-1,2-DCE = cis-1,2-dichloroethene
trans-1,2-DCE = trans-1,2-dichloroethene
DUP = duplicate
ID = identification
J = estimated value
TCE = trichloroethene
VOC = volatile organic compound

Prepared by NG on 12/01/14
Checked by KJD on 12/02/14

APPENDIX D

LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS

MAY 2014
LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

May 20, 2014

Joe Deatherage
AMEC Environment & Infrastructure, Inc.
9725 Cogdill Road
Knoxville, TN 37923
USA

RE: **FRM TAYLOR INSTRUMENTS**
Microseeps Workorder: 12135

Dear Joe Deatherage:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, May 09, 2014. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbin Robl 05/20/2014
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 16

CERTIFICATE OF ANALYSIS

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
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LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	NELAP: State of Florida, Department of Health, Bureau of Laboratories
Accreditation ID:	E87832
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: State of Louisiana, Department of Environmental Quality
Accreditation ID:	04104
Scope:	Solid and Chemical Materials; Non-Potable Water
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, Microseeps is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

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SAMPLE SUMMARY

Workorder: 12135 FRM TAYLOR INSTRUMENTS

Lab ID	Sample ID	Matrix	Date Collected	Date Received
121350001	OB-04	Water	5/7/2014 10:50	5/9/2014 12:00
121350002	OB-08	Water	5/7/2014 11:50	5/9/2014 12:00
121350003	TW-04	Water	5/7/2014 10:00	5/9/2014 12:00
121350004	OB-06	Water	5/7/2014 12:45	5/9/2014 12:00
121350005	TW-17	Water	5/8/2014 09:45	5/9/2014 12:00
121350006	W-5	Water	5/8/2014 09:50	5/9/2014 12:00
121350007	TW-20	Water	5/8/2014 09:50	5/9/2014 12:00

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ANALYTICAL RESULTS

Workorder: 12135 FRM TAYLOR INSTRUMENTS

Lab ID: **121350001** Date Received: 5/9/2014 12:00 Matrix: Water

Sample ID: **OB-04** Date Collected: 5/7/2014 10:50

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.10 U**	mg/l	0.10	0.013	1			5/14/2014 22:09	KB	
Acetic Acid	**5.6**	mg/l	0.070	0.0050	1			5/14/2014 22:09	KB	
Propionic Acid	**0.51**	mg/l	0.050	0.0080	1			5/14/2014 22:09	KB	
Formic Acid	**0.26**	mg/l	0.10	0.0040	1			5/14/2014 22:09	KB	
Butyric Acid	**0.19**	mg/l	0.050	0.011	1			5/14/2014 22:09	KB	
Pyruvic Acid	**0.074J**	mg/l	0.15	0.014	1			5/14/2014 22:09	KB	
i-Pentanoic Acid	**0.080J**	mg/l	0.15	0.0090	1			5/14/2014 22:09	KB	
Pentanoic Acid	**0.070 U**	mg/l	0.070	0.011	1			5/14/2014 22:09	KB	
i-Hexanoic Acid	**0.10 U**	mg/l	0.10	0.029	1			5/14/2014 22:09	KB	
Hexanoic Acid	**0.50 U**	mg/l	0.50	0.22	1			5/14/2014 22:09	KB	

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ANALYTICAL RESULTS

Workorder: 12135 FRM TAYLOR INSTRUMENTS

Lab ID: **121350002** Date Received: 5/9/2014 12:00 Matrix: Water

Sample ID: **OB-08** Date Collected: 5/7/2014 11:50

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.065J**	mg/l	0.10	0.013	1			5/14/2014 22:55	KB	
Acetic Acid	**0.42**	mg/l	0.070	0.0050	1			5/14/2014 22:55	KB	
Propionic Acid	**0.058**	mg/l	0.050	0.0080	1			5/14/2014 22:55	KB	
Formic Acid	**0.18**	mg/l	0.10	0.0040	1			5/14/2014 22:55	KB	
Butyric Acid	**0.040J**	mg/l	0.050	0.011	1			5/14/2014 22:55	KB	
Pyruvic Acid	**0.15 U**	mg/l	0.15	0.014	1			5/14/2014 22:55	KB	
i-Pentanoic Acid	**0.15 U**	mg/l	0.15	0.0090	1			5/14/2014 22:55	KB	
Pentanoic Acid	**0.070 U**	mg/l	0.070	0.011	1			5/14/2014 22:55	KB	
i-Hexanoic Acid	**0.10 U**	mg/l	0.10	0.029	1			5/14/2014 22:55	KB	
Hexanoic Acid	**0.50 U**	mg/l	0.50	0.22	1			5/14/2014 22:55	KB	

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ANALYTICAL RESULTS

Workorder: 12135 FRM TAYLOR INSTRUMENTS

Lab ID: **121350003** Date Received: 5/9/2014 12:00 Matrix: Water

Sample ID: **TW-04** Date Collected: 5/7/2014 10:00

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.050J**	mg/l	0.10	0.013	1			5/14/2014 23:41	KB	
Acetic Acid	**0.067J**	mg/l	0.070	0.0050	1			5/14/2014 23:41	KB	
Propionic Acid	**0.027J**	mg/l	0.050	0.0080	1			5/14/2014 23:41	KB	
Formic Acid	**0.11**	mg/l	0.10	0.0040	1			5/14/2014 23:41	KB	
Butyric Acid	**0.050 U**	mg/l	0.050	0.011	1			5/14/2014 23:41	KB	
Pyruvic Acid	**0.15 U**	mg/l	0.15	0.014	1			5/14/2014 23:41	KB	
i-Pentanoic Acid	**0.15 U**	mg/l	0.15	0.0090	1			5/14/2014 23:41	KB	
Pentanoic Acid	**0.070 U**	mg/l	0.070	0.011	1			5/14/2014 23:41	KB	
i-Hexanoic Acid	**0.10 U**	mg/l	0.10	0.029	1			5/14/2014 23:41	KB	
Hexanoic Acid	**0.50 U**	mg/l	0.50	0.22	1			5/14/2014 23:41	KB	
RISK - MICR										
Analysis Desc: EPA RSK175			Analytical Method: EPA RSK175							
Methane	**920**	ug/l	1.0	0.39	5			5/16/2014 10:38	AK	
Ethane	**0.20 U**	ug/l	0.20	0.0050	1			5/16/2014 09:06	AK	
Ethene	**0.20 U**	ug/l	0.20	0.0060	1			5/16/2014 09:06	AK	

CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS

Workorder: 12135 FRM TAYLOR INSTRUMENTS

Lab ID: **121350004** Date Received: 5/9/2014 12:00 Matrix: Water

Sample ID: **OB-06** Date Collected: 5/7/2014 12:45

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G		Analytical Method: AM23G								
Lactic Acid	**1.0 U**	mg/l	1.0	0.13	10			5/15/2014 20:18	KB	
Acetic Acid	**33**	mg/l	0.70	0.050	10			5/15/2014 20:18	KB	
Propionic Acid	**2.4**	mg/l	0.50	0.080	10			5/15/2014 20:18	KB	
Formic Acid	**1.7**	mg/l	1.0	0.040	10			5/15/2014 20:18	KB	
Butyric Acid	**2.4**	mg/l	0.50	0.11	10			5/15/2014 20:18	KB	
Pyruvic Acid	**0.28**	mg/l	0.15	0.014	1			5/15/2014 00:28	KB	
i-Pentanoic Acid	**0.17**	mg/l	0.15	0.0090	1			5/15/2014 00:28	KB	
Pentanoic Acid	**0.048J**	mg/l	0.070	0.011	1			5/15/2014 00:28	KB	
i-Hexanoic Acid	**0.10 U**	mg/l	0.10	0.029	1			5/15/2014 00:28	KB	
Hexanoic Acid	**0.73**	mg/l	0.50	0.22	1			5/15/2014 00:28	KB	
RISK - MICR										
Analysis Desc: EPA RSK175		Analytical Method: EPA RSK175								
Methane	**23000**	ug/l	20	7.8	100			5/16/2014 10:49	AK	
Ethane	**5.4**	ug/l	0.20	0.0050	1			5/16/2014 09:16	AK	
Ethene	**3.1**	ug/l	0.20	0.0060	1			5/16/2014 09:16	AK	

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ANALYTICAL RESULTS

Workorder: 12135 FRM TAYLOR INSTRUMENTS

Lab ID: **121350005** Date Received: 5/9/2014 12:00 Matrix: Water

Sample ID: **TW-17** Date Collected: 5/8/2014 09:45

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**1.9J**	mg/l	10	1.3	100			5/15/2014 21:50	KB	
Acetic Acid	**120**	mg/l	7.0	0.50	100			5/15/2014 21:50	KB	
Propionic Acid	**9.5**	mg/l	5.0	0.80	100			5/15/2014 21:50	KB	
Formic Acid	**5.1**	mg/l	1.0	0.040	10			5/15/2014 21:04	KB	
Butyric Acid	**11**	mg/l	0.50	0.11	10			5/15/2014 21:04	KB	
Pyruvic Acid	**1.0**	mg/l	0.15	0.014	1			5/15/2014 01:14	KB	
i-Pentanoic Acid	**0.68**	mg/l	0.15	0.0090	1			5/15/2014 01:14	KB	
Pentanoic Acid	**0.22**	mg/l	0.070	0.011	1			5/15/2014 01:14	KB	
i-Hexanoic Acid	**0.10 U**	mg/l	0.10	0.029	1			5/15/2014 01:14	KB	
Hexanoic Acid	**4.3**	mg/l	0.50	0.22	1			5/15/2014 01:14	KB	
RISK - MICR										
Analysis Desc: EPA RSK175			Analytical Method: EPA RSK175							
Methane	**21000**	ug/l	20	7.8	100			5/16/2014 11:00	AK	
Ethane	**9.2**	ug/l	0.20	0.0050	1			5/16/2014 09:50	AK	
Ethene	**12**	ug/l	0.20	0.0060	1			5/16/2014 09:50	AK	

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ANALYTICAL RESULTS

Workorder: 12135 FRM TAYLOR INSTRUMENTS

Lab ID: **121350006** Date Received: 5/9/2014 12:00 Matrix: Water

Sample ID: **W-5** Date Collected: 5/8/2014 09:50

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G		Analytical Method: AM23G								
Lactic Acid	**0.070J**	mg/l	0.10	0.013	1			5/15/2014 22:36	KB	
Acetic Acid	**0.12**	mg/l	0.070	0.0050	1			5/15/2014 22:36	KB	
Propionic Acid	**0.029J**	mg/l	0.050	0.0080	1			5/15/2014 22:36	KB	
Formic Acid	**0.14**	mg/l	0.10	0.0040	1			5/15/2014 22:36	KB	
Butyric Acid	**0.050 U**	mg/l	0.050	0.011	1			5/15/2014 22:36	KB	
Pyruvic Acid	**0.15 U**	mg/l	0.15	0.014	1			5/15/2014 22:36	KB	
i-Pentanoic Acid	**0.15 U**	mg/l	0.15	0.0090	1			5/15/2014 22:36	KB	
Pentanoic Acid	**0.070 U**	mg/l	0.070	0.011	1			5/15/2014 22:36	KB	
i-Hexanoic Acid	**0.10 U**	mg/l	0.10	0.029	1			5/15/2014 22:36	KB	
Hexanoic Acid	**0.50 U**	mg/l	0.50	0.22	1			5/15/2014 22:36	KB	
RISK - MICR										
Analysis Desc: EPA RSK175		Analytical Method: EPA RSK175								
Methane	**110**	ug/l	0.20	0.078	1			5/16/2014 10:00	AK	
Ethane	**0.10J**	ug/l	0.20	0.0050	1			5/16/2014 10:00	AK	
Ethene	**0.60**	ug/l	0.20	0.0060	1			5/16/2014 10:00	AK	

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ANALYTICAL RESULTS

Workorder: 12135 FRM TAYLOR INSTRUMENTS

Lab ID: **121350007** Date Received: 5/9/2014 12:00 Matrix: Water

Sample ID: **TW-20** Date Collected: 5/8/2014 09:50

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: EPA RSK175			Analytical Method: EPA RSK175							
Methane	**0.096J**	ug/l	0.20	0.078	1			5/16/2014 10:11	AK	
Ethane	**0.0078J**	ug/l	0.20	0.0050	1			5/16/2014 10:11	AK	
Ethene	**0.021J**	ug/l	0.20	0.0060	1			5/16/2014 10:11	AK	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 12135 FRM TAYLOR INSTRUMENTS

DEFINITIONS/QUALIFIERS

Disclaimer :	The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20GAx, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.
MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).

Microseeps/Pace Analytical Energy Services, LLC
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QUALITY CONTROL DATA

Workorder: 12135 FRM TAYLOR INSTRUMENTS

QC Batch: EDON/2119 Analysis Method: AM23G

QC Batch Method: AM23G

Associated Lab Samples: 121350001, 121350002, 121350003, 121350004, 121350005

METHOD BLANK: 27755

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
EDonors				
Lactic Acid	mg/l	0.016J	0.10	
Acetic Acid	mg/l	0.033J	0.070	
Propionic Acid	mg/l	0.025J	0.050	
Formic Acid	mg/l	0.088J	0.10	
Butyric Acid	mg/l	0.031J	0.050	
Pyruvic Acid	mg/l	0.15 U	0.15	
i-Pentanoic Acid	mg/l	0.15 U	0.15	
Pentanoic Acid	mg/l	0.070 U	0.070	
i-Hexanoic Acid	mg/l	0.10 U	0.10	
Hexanoic Acid	mg/l	0.50 U	0.50	

LABORATORY CONTROL SAMPLE: 27756

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
EDonors						
Lactic Acid	mg/l	2	2.0	98	70-130	
Acetic Acid	mg/l	2	1.9	97	70-130	
Propionic Acid	mg/l	2	1.9	95	70-130	
Formic Acid	mg/l	2	1.8	90	70-130	
Butyric Acid	mg/l	2	2.0	101	70-130	
Pyruvic Acid	mg/l	2	1.9	95	70-130	
i-Pentanoic Acid	mg/l	2	1.9	94	70-130	
Pentanoic Acid	mg/l	2	1.7	87	70-130	
i-Hexanoic Acid	mg/l	2	2.1	107	70-130	
Hexanoic Acid	mg/l	2	1.8	90	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 27757 27758 Original: 121420001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
EDonors											
Lactic Acid	mg/l	0	2	1.9	1.9	97	97	70-130	0	30	

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QUALITY CONTROL DATA

Workorder: 12135 FRM TAYLOR INSTRUMENTS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 27757 27758 Original: 121420001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Acetic Acid	mg/l	1.4	2	3.2	3.2	90	90	70-130	0	30	
Propionic Acid	mg/l	0.14	2	2.0	2.1	95	97	70-130	2.1	30	
Formic Acid	mg/l	0.099	2	1.8	1.8	85	85	70-130	0	30	
Butyric Acid	mg/l	0.054	2	2.0	2.0	97	98	70-130	1	30	
Pyruvic Acid	mg/l	0	2	1.9	1.9	94	94	70-130	0	30	
i-Pentanoic Acid	mg/l	0	2	1.8	1.8	91	92	70-130	1.1	30	
Pentanoic Acid	mg/l	0	2	1.7	1.7	87	86	70-130	1.2	30	
i-Hexanoic Acid	mg/l	0	2	2.2	2.1	108	103	70-130	4.7	30	
Hexanoic Acid	mg/l	0.064	2	2.0	1.9	97	90	70-130	7.5	30	

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QUALITY CONTROL DATA

Workorder: 12135 FRM TAYLOR INSTRUMENTS

QC Batch: DISG/3781 Analysis Method: EPA RSK175

QC Batch Method: EPA RSK175

Associated Lab Samples: 121350003, 121350004, 121350005, 121350006, 121350007

METHOD BLANK: 27801

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	0.20 U	0.20	
Ethane	ug/l	0.20 U	0.20	
Ethene	ug/l	0.20 U	0.20	

LABORATORY CONTROL SAMPLE & LCSD: 27802 27803

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	44	42	42	95	94	85-115	1.1	20	
Ethane	ug/l	83	79	78	95	94	85-115	1.1	20	
Ethene	ug/l	78	75	74	97	95	85-115	2.1	20	

SAMPLE DUPLICATE: 27804 Original: 121350006

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
RISK						
Methane	ug/l	110	130	13	20	
Ethane	ug/l	0.10J	0.12J	17	20	
Ethene	ug/l	0.60	0.56	8.1	20	

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220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA

Workorder: 12135 FRM TAYLOR INSTRUMENTS

QC Batch: EDON/2125 Analysis Method: AM23G

QC Batch Method: AM23G

Associated Lab Samples: 121350004, 121350005, 121350006

METHOD BLANK: 27863

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
EDonors				
Lactic Acid	mg/l	0.029J	0.10	
Acetic Acid	mg/l	0.050J	0.070	
Propionic Acid	mg/l	0.024J	0.050	
Formic Acid	mg/l	0.15	0.10	
Butyric Acid	mg/l	0.039J	0.050	
Pyruvic Acid	mg/l	0.15 U	0.15	
i-Pentanoic Acid	mg/l	0.15 U	0.15	
Pentanoic Acid	mg/l	0.070 U	0.070	
i-Hexanoic Acid	mg/l	0.10 U	0.10	
Hexanoic Acid	mg/l	0.50 U	0.50	

LABORATORY CONTROL SAMPLE: 27864

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
EDonors						
Lactic Acid	mg/l	2	2.0	100	70-130	
Acetic Acid	mg/l	2	2.0	102	70-130	
Propionic Acid	mg/l	2	1.9	96	70-130	
Formic Acid	mg/l	2	1.9	96	70-130	
Butyric Acid	mg/l	2	2.0	103	70-130	
Pyruvic Acid	mg/l	2	2.0	98	70-130	
i-Pentanoic Acid	mg/l	2	2.0	98	70-130	
Pentanoic Acid	mg/l	2	1.7	87	70-130	
i-Hexanoic Acid	mg/l	2	2.3	114	70-130	
Hexanoic Acid	mg/l	2	1.9	94	70-130	

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 12135 FRM TAYLOR INSTRUMENTS

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
121350001	OB-04			AM23G	EDON/2119
121350002	OB-08			AM23G	EDON/2119
121350003	TW-04			AM23G	EDON/2119
121350004	OB-06			AM23G	EDON/2119
121350005	TW-17			AM23G	EDON/2119
121350003	TW-04			EPA RSK175	DISG/3781
121350004	OB-06			EPA RSK175	DISG/3781
121350005	TW-17			EPA RSK175	DISG/3781
121350006	W-5			EPA RSK175	DISG/3781
121350007	TW-20			EPA RSK175	DISG/3781
121350004	OB-06			AM23G	EDON/2125
121350005	TW-17			AM23G	EDON/2125
121350006	W-5			AM23G	EDON/2125

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Pace Analytical®
www.pacelabs.com

Microseeps

12135

Page: 1 of 1

001071

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: AMEC	Report To: Joe Deatherage	Attention: Joe Deatherage
Address: 9725 Cogdill Rd Knoxville, TN 37932	Copy To:	Company Name: AMEC
		Address:
Email To: joe.deatherage@amec.com	Purchase Order No.: C012603122	Pace Quote Reference:
Phone: Fax:	Project Name: Former Taylor Instruments	Pace Project Manager:
Requested Due Date/TAT:	Project Number: 3031-05-2006	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NY

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information — SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	TSP	BAK	Zink Acetate & NaOH	Other	Analysis Test Y/N	VFAs	methane/ethene/ethane	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	OB04	WT	G	—	—	5/7/14	1050		2						X			X				
2	OB-08	WT	G	—	—	5/7/14	1150		2						X			X				
3	TW-04	WT	G	—	—	5/7/14	1000		4					X	X			X	X			
4	OB-06	WT	G	—	—	5/7/14	1245		4					X	X			X	X			
5	TW-17	WT	G	—	—	5/8/14	0945		4					X	X			X	X			
6	W-5	WT	G	—	—	5/8/14	0950		4					X	X			X	X			
7	TW-20	WT	G	—	—	5/8/14	0915		2					X					X			
8																						
9																						
10																						
11																						
12																						

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Courtney Price / AMEC	5/8/14	1500		5.9.14	1200	2	Y	N	

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Courtney Price & Noel Garland

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 05/08/14

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Cooler Receipt Form

Client Name: Amec **Project:** Frm. Taylor Instruments/3031-05-2006 **Lab Work Order:** 12135

A. **Shipping/Container Information** (circle appropriate response)

Courier: (FedEx) UPS USPS Client Other:_____ **Air bill Present:** (Yes) No

Tracking Number: 8048 73272422

Custody Seal on Cooler/Box Present: Yes (No) **Seals Intact:** Yes No

Cooler/Box Packing Material: (Bubble Wrap) Absorbent Foam Other:_____

Type of Ice: (Wet) Blue None **Ice Intact:** (Yes) Melted

Cooler Temperature: 2°C **Radiation Screened:** Yes (No) **Chain of Custody Present:** (Yes) No

Comments:_____

B. **Laboratory Assignment/Log-in** (check appropriate response)

	YES	NO	N/A	Comment Reference non-Conformance
Chain of Custody properly filled out	✓			
Chain of Custody relinquished	✓			
Sampler Name & Signature on COC	✓			
Containers intact	✓			
Were samples in separate bags	✓			
Sample container labels match COC Sample name/date and time collected	✓			
Sufficient volume provided	✓			
Microseeps containers used	✓			
Are containers properly preserved for the requested testing? (as labeled)	✓			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			✓	If yes, see pH form.
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			✓	

Comments:_____

Cooler contents examined/received by : LY **Date:** 5.9.14

Project Manager Review : CT **Date:** 5.12.14

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-52778-1
Client Project/Site: Former Taylor Instruments

For:
AMEC Environment & Infrastructure, Inc.
9725 Cogdill Road
Knoxville, Tennessee 37932

Attn: Mr. Joe Deatherage

Authorized for release by:
5/20/2014 11:05:37 AM

Shali Brown, Project Manager II
(615)301-5031
shali.brown@testamericainc.com

Table of Contents

Sample Summary

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52778-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-52778-1	OB-08	Water	05/07/14 11:50	05/10/14 08:30
490-52778-2	Trip Blank	Water	05/07/14 00:01	05/10/14 08:30

Job ID: 490-52778-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-52778-1

Comments
No additional comments.

Receipt
The samples were received on 5/9/2014 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 0.7º C.

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

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

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: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52778-1

Client Sample ID: OB-08
Date Collected: 05/07/14 11:50
Date Received: 05/10/14 08:30

Lab Sample ID: 490-52778-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/17/14 06:27	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/17/14 06:27	1
Tetrachloroethene	ND		1.00		ug/L			05/17/14 06:27	1
trans-1,2-Dichloroethene	**3.50**		1.00		ug/L			05/17/14 06:27	1
Trichloroethene	ND		1.00		ug/L			05/17/14 06:27	1
Vinyl chloride	**3.03**		1.00		ug/L			05/17/14 06:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*05/17/14 06:27*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*05/17/14 06:27*	*1*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*05/17/14 06:27*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*05/17/14 06:27*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52778-1

Client Sample ID: Trip Blank
Date Collected: 05/07/14 00:01
Date Received: 05/10/14 08:30

Lab Sample ID: 490-52778-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/17/14 03:00	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/17/14 03:00	1
Tetrachloroethene	ND		1.00		ug/L			05/17/14 03:00	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/17/14 03:00	1
Trichloroethene	ND		1.00		ug/L			05/17/14 03:00	1
Vinyl chloride	ND		1.00		ug/L			05/17/14 03:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*05/17/14 03:00*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*05/17/14 03:00*	*1*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*05/17/14 03:00*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*05/17/14 03:00*	*1*

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

Lab Sample ID: MB 490-163156/8
Matrix: Water
Analysis Batch: 163156

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/17/14 02:34	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/17/14 02:34	1
Tetrachloroethene	ND		1.00		ug/L			05/17/14 02:34	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/17/14 02:34	1
Trichloroethene	ND		1.00		ug/L			05/17/14 02:34	1
Vinyl chloride	ND		1.00		ug/L			05/17/14 02:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*05/17/14 02:34*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*05/17/14 02:34*	*1*
Dibromofluoromethane (Surr)	*91*		*70 - 130*		*05/17/14 02:34*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*05/17/14 02:34*	*1*

Lab Sample ID: LCS 490-163156/4
Matrix: Water
Analysis Batch: 163156

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,1-Dichloroethene			50.0	44.70		ug/L		89	79 - 124		
cis-1,2-Dichloroethene			50.0	44.98		ug/L		90	76 - 125		
Tetrachloroethene			50.0	48.58		ug/L		97	80 - 126		
trans-1,2-Dichloroethene			50.0	43.84		ug/L		88	79 - 126		
Trichloroethene			50.0	44.76		ug/L		90	80 - 123		
Vinyl chloride			50.0	44.19		ug/L		88	68 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*82*		*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
Dibromofluoromethane (Surr)	*89*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 490-163156/5
Matrix: Water
Analysis Batch: 163156

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
1,1-Dichloroethene			50.0	44.03		ug/L		88	79 - 124	2	17
cis-1,2-Dichloroethene			50.0	44.24		ug/L		88	76 - 125	2	17
Tetrachloroethene			50.0	48.18		ug/L		96	80 - 126	1	16
trans-1,2-Dichloroethene			50.0	43.63		ug/L		87	79 - 126	0	16
Trichloroethene			50.0	44.24		ug/L		88	80 - 123	1	17
Vinyl chloride			50.0	43.02		ug/L		86	68 - 120	3	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*85*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Dibromofluoromethane (Surr)	*88*		*70 - 130*

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

Lab Sample ID: LCSD 490-163156/5
Matrix: Water
Analysis Batch: 163156

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: 490-52854-C-1 MS
Matrix: Water
Analysis Batch: 163156

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	ND		50.0	44.19		ug/L		88	70 - 142
cis-1,2-Dichloroethene	ND		50.0	42.75		ug/L		85	68 - 138
Tetrachloroethene	ND		50.0	52.93		ug/L		106	72 - 145
trans-1,2-Dichloroethene	ND		50.0	42.28		ug/L		85	66 - 143
Trichloroethene	ND		50.0	43.04		ug/L		86	73 - 144
Vinyl chloride	ND		50.0	45.02		ug/L		90	56 - 129

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*81*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
Dibromofluoromethane (Surr)	*86*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: 490-52854-D-1 MSD
Matrix: Water
Analysis Batch: 163156

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	ND		50.0	45.93		ug/L		92	70 - 142	4	17
cis-1,2-Dichloroethene	ND		50.0	44.27		ug/L		89	68 - 138	3	17
Tetrachloroethene	ND		50.0	54.23		ug/L		108	72 - 145	2	16
trans-1,2-Dichloroethene	ND		50.0	44.32		ug/L		89	66 - 143	5	16
Trichloroethene	ND		50.0	44.73		ug/L		89	73 - 144	4	17
Vinyl chloride	ND		50.0	46.50		ug/L		93	56 - 129	3	17

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
Dibromofluoromethane (Surr)	*85*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

GC/MS VOA

Analysis Batch: 163156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-52778-1	OB-08	Total/NA	Water	8260C	
490-52778-2	Trip Blank	Total/NA	Water	8260C	
490-52854-C-1 MS	Matrix Spike	Total/NA	Water	8260C	
490-52854-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
LCS 490-163156/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-163156/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 490-163156/8	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52778-1

Client Sample ID: OB-08

Lab Sample ID: 490-52778-1

Date Collected: 05/07/14 11:50

Matrix: Water

Date Received: 05/10/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163156	05/17/14 06:27		TAL NSH

Client Sample ID: Trip Blank

Lab Sample ID: 490-52778-2

Date Collected: 05/07/14 00:01

Matrix: Water

Date Received: 05/10/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163156	05/17/14 03:00		TAL NSH

Laboratory References:

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

Method Summary

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52778-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL NSH

Protocol References:

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

Laboratory References:

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

Certification Summary

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52778-1

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11342	03-31-15

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-52778 Chain of Custody

Cooler Received/Opened On 5/9/2014 @ 0830

1. Tracking # 9420 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 94660220

2. Temperature of rep. sample or temp blank when opened: 0.7 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES..NO...NA

If yes, how many and where: (2) front

5. Were the seals intact, signed, and dated correctly? YES..NO...NA

6. Were custody papers inside cooler? YES..NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) MDM

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (intial) ELA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ELA

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ELA

I certify that I attached a label with the unique LIMS number to each container (intial) ELA

21. Were there Non-Conformance issues at login? YES..NO Was a NCM generated? YES..NO..#_____

BIS = Broken in shipment

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

5/20/2014

Client Information	Sampler: Courtney Price/Noel Garland	Lab PM: Brown, Shali	Carrier Tracking No(s):	COC No: 490-513-112.2
Client Contact: Mr. Joe Deatherage	Phone: 865-207-4625	E-Mail: shali.brown@testamericainc.com		Page: 1 of 1
Company: AMEC Environment & Infrastructure, Inc.		Analysis Requested		Job #:
Address: 9725 Cogdill Road	Due Date Requested:			Preservation Codes:
City: Knoxville	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
State, Zip: TN, 37932				
Phone: 865-218-1049(Tel)	PO #: C012603123			Other:
Email: joe.deatherage@amec.com	WO #:			
Project Name: Former Taylor Instruments	Project #:			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B TCE PCE 1,1-DCE cis/trans 1,2 DCE vinyl chloride	Sulfate 300.0	624 VOC's standard list	RUN OB-08 on Full List Instrument	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N	A			
OB-08	5/7/14	1150	G	W			X				3	Loc: 490 52778

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		5/8/14 1600	AMEC		5-9-14 8:30	TAN
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: 0.7

Login Sample Receipt Checklist

Client: AMEC Environment & Infrastructure, Inc.

Job Number: 490-52778-1

Login Number: 52778

List Source: TestAmerica Nashville

List Number: 1

Creator: Abernathy, Eric

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <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 Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-52782-1
Client Project/Site: Former Taylor Instruments

For:
AMEC Environment & Infrastructure, Inc.
9725 Cogdill Road
Knoxville, Tennessee 37932

Attn: Mr. Joe Deatherage

Authorized for release by:
5/28/2014 12:45:12 PM

Shali Brown, Project Manager II
(615)301-5031
shali.brown@testamericainc.com

Table of Contents

Sample Summary

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-52782-1	QATB01	Water	05/07/14 00:01	05/09/14 08:30
490-52782-2	TW-09	Water	05/07/14 17:40	05/09/14 08:30
490-52782-3	OB-06	Water	05/07/14 12:45	05/09/14 08:30
490-52782-4	BR-10	Water	05/07/14 14:00	05/09/14 08:30
490-52782-5	OB-04	Water	05/07/14 10:50	05/09/14 08:30
490-52782-6	BR-04	Water	05/07/14 16:00	05/09/14 08:30
490-52782-7	BR-15	Water	05/07/14 16:25	05/09/14 08:30
490-52782-8	TW-17	Water	05/08/14 09:45	05/09/14 08:30
490-52782-9	TW-20	Water	05/08/14 09:15	05/09/14 08:30
490-52782-10	W-5	Water	05/08/14 09:50	05/09/14 08:30
490-52782-11	BR-01	Water	05/08/14 12:20	05/09/14 08:30
490-52782-12	DUP-01	Water	05/08/14 00:01	05/09/14 08:30
490-52782-13	BR-02	Water	05/08/14 12:00	05/09/14 08:30
490-52782-14	TW-04	Water	05/07/14 10:00	05/09/14 08:30
490-52782-15	BR-03	Water	05/08/14 14:35	05/09/14 08:30
490-52782-16	QARB-01	Water	05/08/14 15:15	05/09/14 08:30
490-52782-17	QAFB-01	Water	05/08/14 14:25	05/09/14 08:30

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Job ID: 490-52782-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-52782-1

Comments
No additional comments.

Receipt
The samples were received on 5/9/2014 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.7º C.

GC/MS VOA
Method(s) 8260C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 163889.

Method(s) 8260C: The following volatile sample was re-analyzed from a vial containing headspace: QATB01 (490-52782-1). The initial run of vial A was unusable due to a power outage, and the initial run of vial B was contaminated with carryover from a previously analyzed sample.

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

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

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

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

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: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: QATB01
Date Collected: 05/07/14 00:01
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/20/14 20:07	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/20/14 20:07	1
Tetrachloroethene	ND		1.00		ug/L			05/20/14 20:07	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/20/14 20:07	1
Trichloroethene	ND		1.00		ug/L			05/21/14 19:18	1
Vinyl chloride	ND		1.00		ug/L			05/20/14 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 130*		*05/20/14 20:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*78*		*70 - 130*		*05/21/14 19:18*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*05/20/14 20:07*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*05/21/14 19:18*	*1*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*05/20/14 20:07*	*1*
Dibromofluoromethane (Surr)	*86*		*70 - 130*		*05/21/14 19:18*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/20/14 20:07*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/21/14 19:18*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: TW-09
Date Collected: 05/07/14 17:40
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/20/14 21:24	1
cis-1,2-Dichloroethene	**4.15**		1.00		ug/L			05/20/14 21:24	1
Tetrachloroethene	ND		1.00		ug/L			05/20/14 21:24	1
trans-1,2-Dichloroethene	**3.47**		1.00		ug/L			05/20/14 21:24	1
Trichloroethene	**6.06**		1.00		ug/L			05/20/14 21:24	1
Vinyl chloride	**2.09**		1.00		ug/L			05/20/14 21:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 130*		*05/20/14 21:24*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*05/20/14 21:24*	*1*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*05/20/14 21:24*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/20/14 21:24*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: OB-06
Date Collected: 05/07/14 12:45
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/20/14 21:50	1
cis-1,2-Dichloroethene	**6.80**		1.00		ug/L			05/20/14 21:50	1
Tetrachloroethene	ND		1.00		ug/L			05/20/14 21:50	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/20/14 21:50	1
Trichloroethene	**35.5**		1.00		ug/L			05/20/14 21:50	1
Vinyl chloride	**2.51**		1.00		ug/L			05/20/14 21:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*77*		*70 - 130*		*05/20/14 21:50*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*05/20/14 21:50*	*1*
Dibromofluoromethane (Surr)	*88*		*70 - 130*		*05/20/14 21:50*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/20/14 21:50*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**127**		5.00		mg/L			05/24/14 14:08	5

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: BR-10
Date Collected: 05/07/14 14:00
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/21/14 00:51	1
cis-1,2-Dichloroethene	**189**		1.00		ug/L			05/21/14 00:51	1
Tetrachloroethene	ND		1.00		ug/L			05/21/14 00:51	1
trans-1,2-Dichloroethene	**32.8**		1.00		ug/L			05/21/14 00:51	1
Trichloroethene	**329**		10.0		ug/L			05/21/14 20:10	10
Vinyl chloride	**1.02**		1.00		ug/L			05/21/14 00:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*77*		*70 - 130*		*05/21/14 00:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 130*		*05/21/14 20:10*	*10*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*05/21/14 00:51*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*05/21/14 20:10*	*10*
Dibromofluoromethane (Surr)	*87*		*70 - 130*		*05/21/14 00:51*	*1*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*05/21/14 20:10*	*10*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/21/14 00:51*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/21/14 20:10*	*10*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: OB-04
Date Collected: 05/07/14 10:50
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/20/14 22:16	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/20/14 22:16	1
Tetrachloroethene	ND		1.00		ug/L			05/20/14 22:16	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/20/14 22:16	1
Trichloroethene	**1.46**		1.00		ug/L			05/20/14 22:16	1
Vinyl chloride	**1.21**		1.00		ug/L			05/20/14 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*78*		*70 - 130*		*05/20/14 22:16*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*05/20/14 22:16*	*1*
Dibromofluoromethane (Surr)	*88*		*70 - 130*		*05/20/14 22:16*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*05/20/14 22:16*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: BR-04
Date Collected: 05/07/14 16:00
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	**11.5**		1.00		ug/L			05/21/14 02:34	1
cis-1,2-Dichloroethene	**1370**		10.0		ug/L			05/21/14 02:08	10
Tetrachloroethene	ND		1.00		ug/L			05/21/14 02:34	1
trans-1,2-Dichloroethene	**88.7**		1.00		ug/L			05/21/14 02:34	1
Trichloroethene	**757**		10.0		ug/L			05/21/14 02:08	10
Vinyl chloride	**68.0**		1.00		ug/L			05/21/14 02:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*78*		*70 - 130*		*05/21/14 02:08*	*10*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 130*		*05/21/14 02:34*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*05/21/14 02:08*	*10*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*05/21/14 02:34*	*1*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*05/21/14 02:08*	*10*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*05/21/14 02:34*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/21/14 02:08*	*10*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/21/14 02:34*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: BR-15
Date Collected: 05/07/14 16:25
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/20/14 22:42	1
cis-1,2-Dichloroethene	**8.33**		1.00		ug/L			05/20/14 22:42	1
Tetrachloroethene	ND		1.00		ug/L			05/20/14 22:42	1
trans-1,2-Dichloroethene	**2.47**		1.00		ug/L			05/20/14 22:42	1
Trichloroethene	**1.64**		1.00		ug/L			05/20/14 22:42	1
Vinyl chloride	**41.1**		1.00		ug/L			05/20/14 22:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 130*		*05/20/14 22:42*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*05/20/14 22:42*	*1*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*05/20/14 22:42*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*05/20/14 22:42*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: TW-17
Date Collected: 05/08/14 09:45
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/20/14 23:08	1
cis-1,2-Dichloroethene	**112**		1.00		ug/L			05/20/14 23:08	1
Tetrachloroethene	ND		1.00		ug/L			05/20/14 23:08	1
trans-1,2-Dichloroethene	**4.21**		1.00		ug/L			05/20/14 23:08	1
Trichloroethene	**1.38**		1.00		ug/L			05/20/14 23:08	1
Vinyl chloride	**48.0**		1.00		ug/L			05/20/14 23:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*78*		*70 - 130*		*05/20/14 23:08*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*05/20/14 23:08*	*1*
Dibromofluoromethane (Surr)	*87*		*70 - 130*		*05/20/14 23:08*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/20/14 23:08*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**4.29**		1.00		mg/L			05/23/14 03:32	1

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: TW-20
Date Collected: 05/08/14 09:15
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/20/14 23:33	1
cis-1,2-Dichloroethene	**4.48**		1.00		ug/L			05/20/14 23:33	1
Tetrachloroethene	ND		1.00		ug/L			05/20/14 23:33	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/20/14 23:33	1
Trichloroethene	**48.4**		1.00		ug/L			05/20/14 23:33	1
Vinyl chloride	ND		1.00		ug/L			05/20/14 23:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 130*		*05/20/14 23:33*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*05/20/14 23:33*	*1*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*05/20/14 23:33*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/20/14 23:33*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**44.7**		1.00		mg/L			05/23/14 03:52	1

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: W-5
Date Collected: 05/08/14 09:50
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/20/14 23:59	1
cis-1,2-Dichloroethene	**49.7**		1.00		ug/L			05/20/14 23:59	1
Tetrachloroethene	ND		1.00		ug/L			05/20/14 23:59	1
trans-1,2-Dichloroethene	**7.35**		1.00		ug/L			05/20/14 23:59	1
Trichloroethene	**182**		1.00		ug/L			05/20/14 23:59	1
Vinyl chloride	**14.9**		1.00		ug/L			05/20/14 23:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*78*		*70 - 130*		*05/20/14 23:59*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*05/20/14 23:59*	*1*
Dibromofluoromethane (Surr)	*90*		*70 - 130*		*05/20/14 23:59*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/20/14 23:59*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**118**		5.00		mg/L			05/24/14 14:28	5

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: BR-01
Date Collected: 05/08/14 12:20
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	**7.70**		1.00		ug/L			05/21/14 01:43	1
cis-1,2-Dichloroethene	**1570**		10.0		ug/L			05/21/14 01:17	10
Tetrachloroethene	ND		1.00		ug/L			05/21/14 01:43	1
trans-1,2-Dichloroethene	**61.4**		1.00		ug/L			05/21/14 01:43	1
Trichloroethene	**98.9**		1.00		ug/L			05/21/14 01:43	1
Vinyl chloride	**377**		10.0		ug/L			05/21/14 01:17	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*77*		*70 - 130*		*05/21/14 01:17*	*10*
1,2-Dichloroethane-d4 (Surr)	*78*		*70 - 130*		*05/21/14 01:43*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*05/21/14 01:17*	*10*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*05/21/14 01:43*	*1*
Dibromofluoromethane (Surr)	*90*		*70 - 130*		*05/21/14 01:17*	*10*
Dibromofluoromethane (Surr)	*91*		*70 - 130*		*05/21/14 01:43*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*05/21/14 01:17*	*10*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/21/14 01:43*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: DUP-01
Date Collected: 05/08/14 00:01
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-12
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/21/14 00:25	1
cis-1,2-Dichloroethene	**52.1**		1.00		ug/L			05/21/14 00:25	1
Tetrachloroethene	ND		1.00		ug/L			05/21/14 00:25	1
trans-1,2-Dichloroethene	**7.71**		1.00		ug/L			05/21/14 00:25	1
Trichloroethene	**177**		1.00		ug/L			05/21/14 00:25	1
Vinyl chloride	**15.3**		1.00		ug/L			05/21/14 00:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*77*		*70 - 130*		*05/21/14 00:25*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*05/21/14 00:25*	*1*
Dibromofluoromethane (Surr)	*90*		*70 - 130*		*05/21/14 00:25*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/21/14 00:25*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: BR-02
Date Collected: 05/08/14 12:00
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-13
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	**46.4**		1.00		ug/L			05/20/14 18:49	1
cis-1,2-Dichloroethene	**5860**		100		ug/L			05/21/14 21:01	100
Tetrachloroethene	ND		1.00		ug/L			05/20/14 18:49	1
trans-1,2-Dichloroethene	**238**		100		ug/L			05/21/14 21:01	100
Trichloroethene	**25200**		1000		ug/L			05/21/14 21:27	1000
Vinyl chloride	**103**		1.00		ug/L			05/20/14 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 130*		*05/20/14 18:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 130*		*05/21/14 21:01*	*100*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 130*		*05/21/14 21:27*	*1000*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*05/20/14 18:49*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*05/21/14 21:01*	*100*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*05/21/14 21:27*	*1000*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*05/20/14 18:49*	*1*
Dibromofluoromethane (Surr)	*86*		*70 - 130*		*05/21/14 21:01*	*100*
Dibromofluoromethane (Surr)	*87*		*70 - 130*		*05/21/14 21:27*	*1000*
Toluene-d8 (Surr)	*97*		*70 - 130*		*05/20/14 18:49*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/21/14 21:01*	*100*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/21/14 21:27*	*1000*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: TW-04
Date Collected: 05/07/14 10:00
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-14
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/21/14 19:44	1
cis-1,2-Dichloroethene	**2.08**		1.00		ug/L			05/21/14 19:44	1
Tetrachloroethene	ND		1.00		ug/L			05/21/14 19:44	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/21/14 19:44	1
Trichloroethene	ND		1.00		ug/L			05/21/14 19:44	1
Vinyl chloride	ND		1.00		ug/L			05/21/14 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*78*		*70 - 130*		*05/21/14 19:44*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*05/21/14 19:44*	*1*
Dibromofluoromethane (Surr)	*87*		*70 - 130*		*05/21/14 19:44*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*05/21/14 19:44*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**236**		5.00		mg/L			05/24/14 14:48	5

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: BR-03
Date Collected: 05/08/14 14:35
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-15
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	**1.72**		1.00		ug/L			05/21/14 07:18	1
cis-1,2-Dichloroethene	**15.3**		1.00		ug/L			05/21/14 07:18	1
Tetrachloroethene	ND		1.00		ug/L			05/21/14 07:18	1
trans-1,2-Dichloroethene	**1.66**		1.00		ug/L			05/21/14 07:18	1
Trichloroethene	**519**		10.0		ug/L			05/21/14 20:35	10
Vinyl chloride	ND		1.00		ug/L			05/21/14 07:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*76*		*70 - 130*		*05/21/14 07:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*77*		*70 - 130*		*05/21/14 20:35*	*10*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*05/21/14 07:18*	*1*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*05/21/14 20:35*	*10*
Dibromofluoromethane (Surr)	*88*		*70 - 130*		*05/21/14 07:18*	*1*
Dibromofluoromethane (Surr)	*88*		*70 - 130*		*05/21/14 20:35*	*10*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/21/14 07:18*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/21/14 20:35*	*10*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: QARB-01
Date Collected: 05/08/14 15:15
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-16
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/20/14 20:33	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/20/14 20:33	1
Tetrachloroethene	ND		1.00		ug/L			05/20/14 20:33	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/20/14 20:33	1
Trichloroethene	ND		1.00		ug/L			05/20/14 20:33	1
Vinyl chloride	ND		1.00		ug/L			05/20/14 20:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*78*		*70 - 130*		*05/20/14 20:33*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*05/20/14 20:33*	*1*
Dibromofluoromethane (Surr)	*88*		*70 - 130*		*05/20/14 20:33*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/20/14 20:33*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: QAFB-01
Date Collected: 05/08/14 14:25
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-17
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/20/14 20:58	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/20/14 20:58	1
Tetrachloroethene	ND		1.00		ug/L			05/20/14 20:58	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/20/14 20:58	1
Trichloroethene	ND		1.00		ug/L			05/20/14 20:58	1
Vinyl chloride	ND		1.00		ug/L			05/20/14 20:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*78*		*70 - 130*		*05/20/14 20:58*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*05/20/14 20:58*	*1*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*05/20/14 20:58*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*05/20/14 20:58*	*1*

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

Lab Sample ID: MB 490-163885/7
Matrix: Water
Analysis Batch: 163885

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/20/14 18:23	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/20/14 18:23	1
Tetrachloroethene	ND		1.00		ug/L			05/20/14 18:23	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/20/14 18:23	1
Trichloroethene	ND		1.00		ug/L			05/20/14 18:23	1
Vinyl chloride	ND		1.00		ug/L			05/20/14 18:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 130*		*05/20/14 18:23*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*05/20/14 18:23*	*1*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*05/20/14 18:23*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*05/20/14 18:23*	*1*

Lab Sample ID: LCS 490-163885/3
Matrix: Water
Analysis Batch: 163885

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	50.0	57.90		ug/L		116	79 - 124
cis-1,2-Dichloroethene	50.0	54.24		ug/L		108	76 - 125
Tetrachloroethene	50.0	51.42		ug/L		103	80 - 126
trans-1,2-Dichloroethene	50.0	55.10		ug/L		110	79 - 126
Trichloroethene	50.0	51.78		ug/L		104	80 - 123
Vinyl chloride	50.0	51.57		ug/L		103	68 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*89*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 490-163885/4
Matrix: Water
Analysis Batch: 163885

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
1,1-Dichloroethene	50.0	58.85		ug/L		118	79 - 124	2	17
cis-1,2-Dichloroethene	50.0	53.31		ug/L		107	76 - 125	2	17
Tetrachloroethene	50.0	51.17		ug/L		102	80 - 126	0	16
trans-1,2-Dichloroethene	50.0	54.25		ug/L		109	79 - 126	2	16
Trichloroethene	50.0	51.48		ug/L		103	80 - 123	1	17
Vinyl chloride	50.0	51.79		ug/L		104	68 - 120	0	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
Dibromofluoromethane (Surr)	*89*		*70 - 130*

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

Lab Sample ID: LCSD 490-163885/4
Matrix: Water
Analysis Batch: 163885

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: 490-52782-6 MS
Matrix: Water
Analysis Batch: 163885

Client Sample ID: BR-04
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	11.5		50.0	71.50		ug/L		120	70 - 142
cis-1,2-Dichloroethene	1130		50.0	1173	E 4	ug/L		76	68 - 138
Tetrachloroethene	ND		50.0	52.11		ug/L		104	72 - 145
trans-1,2-Dichloroethene	88.7		50.0	134.5		ug/L		92	66 - 143
Trichloroethene	685		50.0	716.5	E 4	ug/L		64	73 - 144
Vinyl chloride	68.0		50.0	122.2		ug/L		108	56 - 129

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*88*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: 490-52782-6 MSD
Matrix: Water
Analysis Batch: 163885

Client Sample ID: BR-04
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	11.5		50.0	71.10		ug/L		119	70 - 142	1	17
cis-1,2-Dichloroethene	1130		50.0	1153	E 4	ug/L		36	68 - 138	2	17
Tetrachloroethene	ND		50.0	52.41		ug/L		105	72 - 145	1	16
trans-1,2-Dichloroethene	88.7		50.0	133.7		ug/L		90	66 - 143	1	16
Trichloroethene	685		50.0	701.8	E 4	ug/L		34	73 - 144	2	17
Vinyl chloride	68.0		50.0	118.1		ug/L		100	56 - 129	3	17

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*90*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 490-163889/7
Matrix: Water
Analysis Batch: 163889

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/21/14 06:52	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/21/14 06:52	1
Tetrachloroethene	ND		1.00		ug/L			05/21/14 06:52	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/21/14 06:52	1

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

Lab Sample ID: MB 490-163889/7
Matrix: Water
Analysis Batch: 163889

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		1.00		ug/L			05/21/14 06:52	1
Vinyl chloride	ND		1.00		ug/L			05/21/14 06:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*78*		*70 - 130*		*05/21/14 06:52*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*05/21/14 06:52*	*1*
Dibromofluoromethane (Surr)	*87*		*70 - 130*		*05/21/14 06:52*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*05/21/14 06:52*	*1*

Lab Sample ID: LCS 490-163889/3
Matrix: Water
Analysis Batch: 163889

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	50.0	55.65		ug/L		111	79 - 124
cis-1,2-Dichloroethene	50.0	51.06		ug/L		102	76 - 125
Tetrachloroethene	50.0	48.10		ug/L		96	80 - 126
trans-1,2-Dichloroethene	50.0	52.31		ug/L		105	79 - 126
Trichloroethene	50.0	49.02		ug/L		98	80 - 123
Vinyl chloride	50.0	47.17		ug/L		94	68 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
Dibromofluoromethane (Surr)	*91*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 490-163889/4
Matrix: Water
Analysis Batch: 163889

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
1,1-Dichloroethene	50.0	54.43		ug/L		109	79 - 124	2	17
cis-1,2-Dichloroethene	50.0	50.56		ug/L		101	76 - 125	1	17
Tetrachloroethene	50.0	48.14		ug/L		96	80 - 126	0	16
trans-1,2-Dichloroethene	50.0	51.58		ug/L		103	79 - 126	1	16
Trichloroethene	50.0	49.71		ug/L		99	80 - 123	1	17
Vinyl chloride	50.0	47.07		ug/L		94	68 - 120	0	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*88*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 490-164188/7
Matrix: Water
Analysis Batch: 164188

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/21/14 18:52	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/21/14 18:52	1
Tetrachloroethene	ND		1.00		ug/L			05/21/14 18:52	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/21/14 18:52	1
Trichloroethene	ND		1.00		ug/L			05/21/14 18:52	1
Vinyl chloride	ND		1.00		ug/L			05/21/14 18:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*		*70 - 130*		*05/21/14 18:52*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*05/21/14 18:52*	*1*
Dibromofluoromethane (Surr)	*87*		*70 - 130*		*05/21/14 18:52*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*05/21/14 18:52*	*1*

Lab Sample ID: LCS 490-164188/3
Matrix: Water
Analysis Batch: 164188

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,1-Dichloroethene			50.0	58.38		ug/L		117	79 - 124		
cis-1,2-Dichloroethene			50.0	54.25		ug/L		109	76 - 125		
Tetrachloroethene			50.0	52.99		ug/L		106	80 - 126		
trans-1,2-Dichloroethene			50.0	55.17		ug/L		110	79 - 126		
Trichloroethene			50.0	51.90		ug/L		104	80 - 123		
Vinyl chloride			50.0	54.24		ug/L		108	68 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
Dibromofluoromethane (Surr)	*88*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 490-164188/4
Matrix: Water
Analysis Batch: 164188

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
1,1-Dichloroethene			50.0	55.64		ug/L		111	79 - 124	5	17
cis-1,2-Dichloroethene			50.0	52.47		ug/L		105	76 - 125	3	17
Tetrachloroethene			50.0	51.91		ug/L		104	80 - 126	2	16
trans-1,2-Dichloroethene			50.0	53.39		ug/L		107	79 - 126	3	16
Trichloroethene			50.0	50.24		ug/L		100	80 - 123	3	17
Vinyl chloride			50.0	52.30		ug/L		105	68 - 120	4	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*86*		*70 - 130*

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

Lab Sample ID: LCSD 490-164188/4
Matrix: Water
Analysis Batch: 164188

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: 490-53053-B-1 MS
Matrix: Water
Analysis Batch: 164188

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	ND		50.0	58.95		ug/L		118	70 - 142
cis-1,2-Dichloroethene	ND		50.0	53.78		ug/L		108	68 - 138
Tetrachloroethene	ND		50.0	53.01		ug/L		106	72 - 145
trans-1,2-Dichloroethene	ND		50.0	53.70		ug/L		107	66 - 143
Trichloroethene	ND		50.0	51.82		ug/L		104	73 - 144
Vinyl chloride	ND		50.0	49.85		ug/L		100	56 - 129

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
Dibromofluoromethane (Surr)	*86*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: 490-53053-C-1 MSD
Matrix: Water
Analysis Batch: 164188

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	ND		50.0	56.43		ug/L		113	70 - 142	4	17
cis-1,2-Dichloroethene	ND		50.0	54.96		ug/L		110	68 - 138	2	17
Tetrachloroethene	ND		50.0	52.31		ug/L		105	72 - 145	1	16
trans-1,2-Dichloroethene	ND		50.0	54.57		ug/L		109	66 - 143	2	16
Trichloroethene	ND		50.0	52.29		ug/L		105	73 - 144	1	17
Vinyl chloride	ND		50.0	50.81		ug/L		102	56 - 129	2	17

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*89*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 490-164439/3
Matrix: Water
Analysis Batch: 164439

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		1.00		mg/L			05/23/14 01:11	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 490-164439/4
Matrix: Water
Analysis Batch: 164439

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			50.0	50.27		mg/L		101	90 - 110		

Lab Sample ID: 490-52716-E-2 MS
Matrix: Water
Analysis Batch: 164439

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	1160	E	50.0	1138	E 4	mg/L		-54	80 - 120		

Lab Sample ID: MB 490-164728/3
Matrix: Water
Analysis Batch: 164728

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		1.00		mg/L			05/24/14 08:47	1

Lab Sample ID: LCS 490-164728/4
Matrix: Water
Analysis Batch: 164728

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			50.0	47.44		mg/L		95	90 - 110		

Lab Sample ID: LCSD 490-164728/5
Matrix: Water
Analysis Batch: 164728

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
Sulfate			50.0	47.53		mg/L		95	90 - 110	0	20

GC/MS VOA

Analysis Batch: 163885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-52782-1	QATB01	Total/NA	Water	8260C	
490-52782-2	TW-09	Total/NA	Water	8260C	
490-52782-3	OB-06	Total/NA	Water	8260C	
490-52782-4	BR-10	Total/NA	Water	8260C	
490-52782-5	OB-04	Total/NA	Water	8260C	
490-52782-6	BR-04	Total/NA	Water	8260C	
490-52782-6	BR-04	Total/NA	Water	8260C	
490-52782-6 MS	BR-04	Total/NA	Water	8260C	
490-52782-6 MSD	BR-04	Total/NA	Water	8260C	
490-52782-7	BR-15	Total/NA	Water	8260C	
490-52782-8	TW-17	Total/NA	Water	8260C	
490-52782-9	TW-20	Total/NA	Water	8260C	
490-52782-10	W-5	Total/NA	Water	8260C	
490-52782-11	BR-01	Total/NA	Water	8260C	
490-52782-11	BR-01	Total/NA	Water	8260C	
490-52782-12	DUP-01	Total/NA	Water	8260C	
490-52782-13	BR-02	Total/NA	Water	8260C	
490-52782-16	QARB-01	Total/NA	Water	8260C	
490-52782-17	QAFB-01	Total/NA	Water	8260C	
LCS 490-163885/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-163885/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 490-163885/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 163889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-52782-15	BR-03	Total/NA	Water	8260C	
LCS 490-163889/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-163889/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 490-163889/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 164188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-52782-1	QATB01	Total/NA	Water	8260C	
490-52782-4	BR-10	Total/NA	Water	8260C	
490-52782-13	BR-02	Total/NA	Water	8260C	
490-52782-13	BR-02	Total/NA	Water	8260C	
490-52782-14	TW-04	Total/NA	Water	8260C	
490-52782-15	BR-03	Total/NA	Water	8260C	
490-53053-B-1 MS	Matrix Spike	Total/NA	Water	8260C	
490-53053-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
LCS 490-164188/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-164188/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 490-164188/7	Method Blank	Total/NA	Water	8260C	

HPLC/IC

Analysis Batch: 164439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-52716-E-2 MS	Matrix Spike	Total/NA	Water	300.0	
490-52782-8	TW-17	Total/NA	Water	300.0	

HPLC/IC (Continued)

Analysis Batch: 164439 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-52782-9	TW-20	Total/NA	Water	300.0	
LCS 490-164439/4	Lab Control Sample	Total/NA	Water	300.0	
MB 490-164439/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 164728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-52782-3	OB-06	Total/NA	Water	300.0	
490-52782-10	W-5	Total/NA	Water	300.0	
490-52782-14	TW-04	Total/NA	Water	300.0	
LCS 490-164728/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 490-164728/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 490-164728/3	Method Blank	Total/NA	Water	300.0	

Client Sample ID: QATB01 — **Lab Sample ID: 490-52782-1**
Date Collected: 05/07/14 00:01 — **Matrix: Water**
Date Received: 05/09/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/20/14 20:07		TAL NSH
Total/NA	Analysis	8260C		1	10 mL	10 mL	164188	05/21/14 19:18		TAL NSH

Client Sample ID: TW-09 — **Lab Sample ID: 490-52782-2**
Date Collected: 05/07/14 17:40 — **Matrix: Water**
Date Received: 05/09/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/20/14 21:24		TAL NSH

Client Sample ID: OB-06 — **Lab Sample ID: 490-52782-3**
Date Collected: 05/07/14 12:45 — **Matrix: Water**
Date Received: 05/09/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/20/14 21:50		TAL NSH
Total/NA	Analysis	300.0		5	10 mL	10 mL	164728	05/24/14 14:08		TAL NSH

Client Sample ID: BR-10 — **Lab Sample ID: 490-52782-4**
Date Collected: 05/07/14 14:00 — **Matrix: Water**
Date Received: 05/09/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/21/14 00:51		TAL NSH
Total/NA	Analysis	8260C		10	10 mL	10 mL	164188	05/21/14 20:10		TAL NSH

Client Sample ID: OB-04 — **Lab Sample ID: 490-52782-5**
Date Collected: 05/07/14 10:50 — **Matrix: Water**
Date Received: 05/09/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/20/14 22:16		TAL NSH

Client Sample ID: BR-04 — **Lab Sample ID: 490-52782-6**
Date Collected: 05/07/14 16:00 — **Matrix: Water**
Date Received: 05/09/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	10 mL	10 mL	163885	05/21/14 02:08		TAL NSH
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/21/14 02:34		TAL NSH

Client Sample ID: BR-15 — **Lab Sample ID: 490-52782-7**
Date Collected: 05/07/14 16:25 — **Matrix: Water**
Date Received: 05/09/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/20/14 22:42		TAL NSH

Client Sample ID: TW-17 — **Lab Sample ID: 490-52782-8**
Date Collected: 05/08/14 09:45 — **Matrix: Water**
Date Received: 05/09/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/20/14 23:08		TAL NSH
Total/NA	Analysis	300.0		1	10 mL	10 mL	164439	05/23/14 03:32		TAL NSH

Client Sample ID: TW-20 — **Lab Sample ID: 490-52782-9**
Date Collected: 05/08/14 09:15 — **Matrix: Water**
Date Received: 05/09/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/20/14 23:33		TAL NSH
Total/NA	Analysis	300.0		1	10 mL	10 mL	164439	05/23/14 03:52		TAL NSH

Client Sample ID: W-5 — **Lab Sample ID: 490-52782-10**
Date Collected: 05/08/14 09:50 — **Matrix: Water**
Date Received: 05/09/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/20/14 23:59		TAL NSH
Total/NA	Analysis	300.0		5	10 mL	10 mL	164728	05/24/14 14:28		TAL NSH

Client Sample ID: BR-01 — **Lab Sample ID: 490-52782-11**
Date Collected: 05/08/14 12:20 — **Matrix: Water**
Date Received: 05/09/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	10 mL	10 mL	163885	05/21/14 01:17		TAL NSH
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/21/14 01:43		TAL NSH

Client Sample ID: DUP-01 — **Lab Sample ID: 490-52782-12**
Date Collected: 05/08/14 00:01 — **Matrix: Water**
Date Received: 05/09/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/21/14 00:25		TAL NSH

Lab Chronicle

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Client Sample ID: BR-02

Date Collected: 05/08/14 12:00
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/20/14 18:49		TAL NSH
Total/NA	Analysis	8260C		100	10 mL	10 mL	164188	05/21/14 21:01		TAL NSH
Total/NA	Analysis	8260C		1000	10 mL	10 mL	164188	05/21/14 21:27		TAL NSH

Client Sample ID: TW-04

Date Collected: 05/07/14 10:00
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	164188	05/21/14 19:44		TAL NSH
Total/NA	Analysis	300.0		5	10 mL	10 mL	164728	05/24/14 14:48		TAL NSH

Client Sample ID: BR-03

Date Collected: 05/08/14 14:35
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163889	05/21/14 07:18	BJM	TAL NSH
Total/NA	Analysis	8260C		10	10 mL	10 mL	164188	05/21/14 20:35		TAL NSH

Client Sample ID: QARB-01

Date Collected: 05/08/14 15:15
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/20/14 20:33		TAL NSH

Client Sample ID: QAFB-01

Date Collected: 05/08/14 14:25
Date Received: 05/09/14 08:30

Lab Sample ID: 490-52782-17
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	163885	05/20/14 20:58		TAL NSH

Laboratory References:

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

Method Summary

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL NSH
300.0	Anions, Ion Chromatography	MCAWW	TAL NSH

Protocol References:

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

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

Laboratory References:

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

Certification Summary

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-52782-1

Laboratory: TestAmerica Nashville

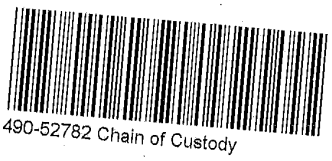
All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	ISO/IEC 17025		0453.07	12-31-15
Alaska (UST)	State Program	10	UST-087	07-24-14
Arizona	State Program	9	AZ0473	05-05-15
Arkansas DEQ	State Program	6	88-0737	04-25-15
California	NELAP	9	1168CA	10-31-14
Connecticut	State Program	1	PH-0220	12-31-15
Florida	NELAP	4	E87358	06-30-14
Illinois	NELAP	5	200010	12-09-14
Iowa	State Program	7	131	05-01-14 *
Kansas	NELAP	7	E-10229	10-31-14
Kentucky (UST)	State Program	4	19	06-30-14
Louisiana	NELAP	6	30613	06-30-14
Maryland	State Program	3	316	03-31-15
Massachusetts	State Program	1	M-TN032	06-30-14
Minnesota	NELAP	5	047-999-345	12-31-14
Mississippi	State Program	4	N/A	06-30-14
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-14
New Hampshire	NELAP	1	2963	10-09-14
New Jersey	NELAP	2	TN965	06-30-14
New York	NELAP	2	11342	03-31-15
North Carolina DENR	State Program	4	387	12-31-14
North Dakota	State Program	8	R-146	06-30-14
Ohio VAP	State Program	5	CL0033	10-16-15
Oklahoma	State Program	6	9412	08-31-14
Oregon	NELAP	10	TN200001	04-29-15
Pennsylvania	NELAP	3	68-00585	06-30-14
Rhode Island	State Program	1	LAO00268	12-30-14
South Carolina	State Program	4	84009 (002)	02-23-17
Tennessee	State Program	4	2008	02-23-17
Texas	NELAP	6	T104704077	08-31-14
USDA	Federal		S-48469	10-30-16
Utah	NELAP	8	TN00032	07-31-14
Virginia	NELAP	3	460152	06-14-14
Washington	State Program	10	C789	07-19-14
West Virginia DEP	State Program	3	219	02-28-15
Wisconsin	State Program	5	998020430	08-31-14
Wyoming (UST)	A2LA	8	453.07	12-31-15

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM


490-52782 Chain of Custody

Cooler Received/Opened On 5/9/2014 @ 0830

1. Tracking # 9420 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 94660220

2. Temperature of rep. sample or temp blank when opened: 0.7 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES..NO...NA

If yes, how many and where: (2) Front

5. Were the seals intact, signed, and dated correctly? YES..NO...NA

6. Were custody papers inside cooler? YES..NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) MBM

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (intial) ECA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..NA

b. Did the bottle labels indicate that the correct preservatives were used YES..NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ECA

17. Were custody papers properly filled out (ink, signed, etc)? YES..NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ECA

I certify that I attached a label with the unique LIMS number to each container (intial) ECA

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 11/28/12

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Courtney Price / Noel Garland	Lab PM: Brown, Shali	Carrier Tracking No(s):	COC No: 490-513-112.2
Client Contact: Mr. Joe Deatherage	Phone: 865-207-4625	E-Mail: shali.brown@testamericainc.com		Page: 1 of 2
Company: AMEC Environment & Infrastructure, Inc.				Job #:
Address: 9725 Cogdill Road	Due Date Requested:			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37932				
Phone: 865-218-1049(Tel)	PO #: C012603123			
Email: joe.deatherage@amec.com	WO #:			
Project Name: Former Taylor Instruments	Project #: 3031-05-2006			
Site:	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B TCE PCE 1,1-DCE cis/trans 1,2 DCE vinyl chloride	Sulfate 300.0	624 VOC's standard list	RUN OB-08 on Full List Instrument	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N	A			
QATB01	—	—	—	W			X				2	
6 BR-04 (MS)	5/7/14	1600	G	W			X				3	
2 3 TW-09	5/7/14	1740	G	W			X				3	
3 4 OB-06	5/7/14	1245	G	W			X	X			4	Loc: 490 52782
4 5 BR-10	5/7/14	1400	G	W			X				3	
5 6 OB-04	5/7/14	1050	G	W			X				3	
6 7 BR-04	5/7/14	1600	G	W			X				3	
7 8 BR-15	5/7/14	1625	G	W			X				3	
8 9 TW-17	5/8/14	0945	G	W			X	X			4	
9 10 TW-20	5/8/14	0915	G	W			X	X			4	
10 11 W-5	5/8/14	0950	G	W			X	X			4	

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

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

Special Instructions/QC Requirements:

DA 5-10-14

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 5/8/14 1600	Company AMEC	Received by:	Date/Time: 5-9-14 8:20	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.7

5/28/2014

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Courtney Price/Noel Garland	Lab PM: Brown, Shali	Carrier Tracking No(s):	COC No: 490-513-112.2
Client Contact: Mr. Joe Deatherage	Phone: 865-207-4625	E-Mail: shali.brown@testamericainc.com		Page: 2 of 2
Company: AMEC Environment & Infrastructure, Inc.				Job #:
Address: 9725 Cogdill Road	Due Date Requested:			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37932				
Phone: 865-218-1049(Tel)	PO #: C012603123			
Email: joe.deatherage@amec.com	WO #:			
Project Name: Former Taylor Instruments	Project #:			
Site:	SSOW#:			

Analysis Requested

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B TCE PCE 1,1-DCE cis/trans 1,2 DCE vinyl chloride	Sulfate 300.0	624 VOC's standard list	RUN OB-08 on Full List Instrument	Total Number of containers	Special Instructions/Note:
				Preservation Code:				A	N	A			
11	BR-01	5/8/14	1220	G	W			X				3	
12	Dup-01	—	—	G	W			X				3	Loc: 490 52782
6	BR-04 MSD	5/7/14	1600	G	W			X				3	
13	BR-02	5/8/14	1200	G	W			X				3	
14	TW-04	5/7/14	1000	G	W			X	X			4	Inc.
15	BR-03	5/8/14	1435	G	W			X				2	
16	QARB-01	5/8/14	1515	G	W			X				3	
17	QAFB-01	5/8/14	1425	G	W			X				3	

Preservation Codes:

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

Other:

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 5/8/14 1600	Company: AMEC	Received by:	Date/Time: 5-9-14 8:20	Company: TAN
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: 0.7

5/28/2014

Login Sample Receipt Checklist

Client: AMEC Environment & Infrastructure, Inc.

Job Number: 490-52782-1

Login Number: 52782

List Source: TestAmerica Nashville

List Number: 1

Creator: Abernathy, Eric

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

OCTOBER 2014
LABORATORY REPORTS AND
CHAIN-OF-CUSTODY FORMS

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

November 14, 2014

Joe Deatherage
AMEC Environment & Infrastructure, Inc.
9725 Cogdill Road
Knoxville, TN 37923
USA

RE: **FRM TAYLOR INSTRUMENTS**
Microseeps Workorder: 13843

Dear Joe Deatherage:

Enclosed are the analytical results for sample(s) received by the laboratory on Thursday, October 30, 2014. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbin Robl 11/14/2014
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 20

CERTIFICATE OF ANALYSIS

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, Microseeps is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

CERTIFICATE OF ANALYSIS

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

SAMPLE SUMMARY

Workorder: 13843 FRM TAYLOR INSTRUMENTS

Lab ID	Sample ID	Matrix	Date Collected	Date Received
138430001	OB-04	Water	10/28/2014 14:00	10/30/2014 11:30
138430002	OB-06	Water	10/28/2014 15:45	10/30/2014 11:30
138430003	TW-04	Water	10/28/2014 11:40	10/30/2014 11:30
138430004	OB-08	Water	10/28/2014 14:08	10/30/2014 11:30
138430005	TW-17	Water	10/29/2014 08:40	10/30/2014 11:30
138430006	W-5	Water	10/29/2014 12:50	10/30/2014 11:30
138430007	TW-20	Water	10/29/2014 11:10	10/30/2014 11:30

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

PROJECT SUMMARY

Workorder: 13843 FRM TAYLOR INSTRUMENTS

Batch Comments

Batch: DISG/4150 - RSK175 QC

The relative percent difference between the sample and sample duplicate exceeded laboratory control limits; reference sample 138430007. Analyte Ethene.

The relative percent difference between the sample and sample duplicate exceeded laboratory control limits; reference sample 138430007. Analyte Ethane. Results for original and duplicate samples were below reporting limits.

The matrix spike and/or spike duplicate, recovery or relative percent difference; accuracy influenced by the concentration of the reference sample 138520046. Analyte Methane. Batch acceptance based on laboratory control sample recovery.

Batch: DISG/4163 - RSK175 QC

All sample concentrations for methane and/or ethene were determined versus an alternate analytical range available with the GC system. The assigned reporting limit was set against the lowest calibration level of 25 ug/L Methane and 50 ug/L Ethene.

The matrix spike and/or spike duplicate, recovery or relative percent difference; accuracy influenced by the concentration of the reference sample 138520052. Analyte Methane. Batch acceptance based on laboratory control sample recovery.

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 13843 FRM TAYLOR INSTRUMENTS

Lab ID: **138430001** Date Received: 10/30/2014 11:30 Matrix: Water

Sample ID: **OB-04** Date Collected: 10/28/2014 14:00

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.20**	mg/l	0.10	0.012	1			11/4/2014 06:19	KB	
Acetic Acid	**4.2**	mg/l	0.070	0.0080	1			11/4/2014 06:19	KB	
Propionic Acid	**0.41**	mg/l	0.050	0.011	1			11/4/2014 06:19	KB	
Formic Acid	**0.23**	mg/l	0.10	0.0070	1			11/4/2014 06:19	KB	
Butyric Acid	**0.19**	mg/l	0.050	0.0070	1			11/4/2014 06:19	KB	
Pyruvic Acid	**0.052J**	mg/l	0.15	0.0090	1			11/4/2014 06:19	KB	
i-Pentanoic Acid	**0.10J**	mg/l	0.15	0.0080	1			11/4/2014 06:19	KB	
Pentanoic Acid	**0.060J**	mg/l	0.070	0.014	1			11/4/2014 06:19	KB	
i-Hexanoic Acid	**0.20 U**	mg/l	0.20	0.10	1			11/4/2014 06:19	KB	
Hexanoic Acid	**0.50 U**	mg/l	0.50	0.12	1			11/4/2014 06:19	KB	

CERTIFICATE OF ANALYSIS

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 13843 FRM TAYLOR INSTRUMENTS

Lab ID: **138430002** Date Received: 10/30/2014 11:30 Matrix: Water

Sample ID: **OB-06** Date Collected: 10/28/2014 15:45

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.15**	mg/l	0.10	0.012	1			11/4/2014 07:06	KB	
Acetic Acid	**14**	mg/l	0.70	0.080	10			11/4/2014 19:37	KB	
Propionic Acid	**1.4**	mg/l	0.050	0.011	1			11/4/2014 07:06	KB	
Formic Acid	**0.49**	mg/l	0.10	0.0070	1			11/4/2014 07:06	KB	
Butyric Acid	**0.68**	mg/l	0.050	0.0070	1			11/4/2014 07:06	KB	
Pyruvic Acid	**0.068J**	mg/l	0.15	0.0090	1			11/4/2014 07:06	KB	
i-Pentanoic Acid	**0.12J**	mg/l	0.15	0.0080	1			11/4/2014 07:06	KB	
Pentanoic Acid	**0.060J**	mg/l	0.070	0.014	1			11/4/2014 07:06	KB	
i-Hexanoic Acid	**0.20 U**	mg/l	0.20	0.10	1			11/4/2014 07:06	KB	
Hexanoic Acid	**0.14J**	mg/l	0.50	0.12	1			11/4/2014 07:06	KB	
RISK - MICR										
Analysis Desc: EPA RSK175			Analytical Method: EPA RSK175							
Methane	**17000**	ug/l	120	120	5			11/7/2014 09:21	AK	
Ethene	**2.0**	ug/l	0.20	0.0060	1			11/3/2014 10:32	AK	

CERTIFICATE OF ANALYSIS

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 13843 FRM TAYLOR INSTRUMENTS

Lab ID: **138430003** Date Received: 10/30/2014 11:30 Matrix: Water

Sample ID: **TW-04** Date Collected: 10/28/2014 11:40

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G		Analytical Method: AM23G								
Lactic Acid	**0.13**	mg/l	0.10	0.012	1			11/4/2014 07:54	KB	
Acetic Acid	**0.61**	mg/l	0.070	0.0080	1			11/4/2014 07:54	KB	
Propionic Acid	**0.072**	mg/l	0.050	0.011	1			11/4/2014 07:54	KB	
Formic Acid	**0.18**	mg/l	0.10	0.0070	1			11/4/2014 07:54	KB	
Butyric Acid	**0.050 U**	mg/l	0.050	0.0070	1			11/4/2014 07:54	KB	
Pyruvic Acid	**0.15 U**	mg/l	0.15	0.0090	1			11/4/2014 07:54	KB	
i-Pentanoic Acid	**0.15 U**	mg/l	0.15	0.0080	1			11/4/2014 07:54	KB	
Pentanoic Acid	**0.070 U**	mg/l	0.070	0.014	1			11/4/2014 07:54	KB	
i-Hexanoic Acid	**0.20 U**	mg/l	0.20	0.10	1			11/4/2014 07:54	KB	
Hexanoic Acid	**0.50 U**	mg/l	0.50	0.12	1			11/4/2014 07:54	KB	
RISK - MICR										
Analysis Desc: EPA RSK175		Analytical Method: EPA RSK175								
Methane	**9100**	ug/l	120	120	5			11/7/2014 09:28	AK	
Ethene	**0.0095J**	ug/l	0.20	0.0060	1			11/3/2014 10:43	AK	

CERTIFICATE OF ANALYSIS

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 13843 FRM TAYLOR INSTRUMENTS

Lab ID: **138430004** Date Received: 10/30/2014 11:30 Matrix: Water

Sample ID: **OB-08** Date Collected: 10/28/2014 14:08

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.46**	mg/l	0.10	0.012	1			11/4/2014 08:41	KB	
Acetic Acid	**0.13**	mg/l	0.070	0.0080	1			11/4/2014 08:41	KB	
Propionic Acid	**0.039J**	mg/l	0.050	0.011	1			11/4/2014 08:41	KB	
Formic Acid	**0.12**	mg/l	0.10	0.0070	1			11/4/2014 08:41	KB	
Butyric Acid	**0.050 U**	mg/l	0.050	0.0070	1			11/4/2014 08:41	KB	
Pyruvic Acid	**0.15 U**	mg/l	0.15	0.0090	1			11/4/2014 08:41	KB	
i-Pentanoic Acid	**0.15 U**	mg/l	0.15	0.0080	1			11/4/2014 08:41	KB	
Pentanoic Acid	**0.070 U**	mg/l	0.070	0.014	1			11/4/2014 08:41	KB	
i-Hexanoic Acid	**0.20 U**	mg/l	0.20	0.10	1			11/4/2014 08:41	KB	
Hexanoic Acid	**0.50 U**	mg/l	0.50	0.12	1			11/4/2014 08:41	KB	

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Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 13843 FRM TAYLOR INSTRUMENTS

Lab ID: **138430005** Date Received: 10/30/2014 11:30 Matrix: Water

Sample ID: **TW-17** Date Collected: 10/29/2014 08:40

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**10 U**	mg/l	10	1.2	100			11/4/2014 21:13	KB	
Acetic Acid	**260**	mg/l	7.0	0.80	100			11/4/2014 21:13	KB	
Propionic Acid	**18**	mg/l	5.0	1.1	100			11/4/2014 21:13	KB	
Formic Acid	**12**	mg/l	1.0	0.070	10			11/4/2014 20:25	KB	
Butyric Acid	**27**	mg/l	0.50	0.070	10			11/4/2014 20:25	KB	
Pyruvic Acid	**1.9**	mg/l	1.5	0.090	10			11/4/2014 20:25	KB	
i-Pentanoic Acid	**1.5**	mg/l	1.5	0.080	10			11/4/2014 20:25	KB	
Pentanoic Acid	**0.93**	mg/l	0.70	0.14	10			11/4/2014 20:25	KB	
i-Hexanoic Acid	**2.0 U**	mg/l	2.0	1.0	10			11/4/2014 20:25	KB	
Hexanoic Acid	**8.2**	mg/l	5.0	1.2	10			11/4/2014 20:25	KB	
RISK - MICR										
Analysis Desc: EPA RSK175			Analytical Method: EPA RSK175							
Methane	**16000**	ug/l	120	120	5			11/7/2014 09:36	AK	
Ethene	**1.6**	ug/l	0.20	0.0060	1			11/3/2014 10:53	AK	

CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS

Workorder: 13843 FRM TAYLOR INSTRUMENTS

Lab ID: **138430006** Date Received: 10/30/2014 11:30 Matrix: Water

Sample ID: **W-5** Date Collected: 10/29/2014 12:50

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.15**	mg/l	0.10	0.012	1			11/4/2014 10:16	KB	
Acetic Acid	**0.066J**	mg/l	0.070	0.0080	1			11/4/2014 10:16	KB	
Propionic Acid	**0.050 U**	mg/l	0.050	0.011	1			11/4/2014 10:16	KB	
Formic Acid	**0.16**	mg/l	0.10	0.0070	1			11/4/2014 10:16	KB	
Butyric Acid	**0.050 U**	mg/l	0.050	0.0070	1			11/4/2014 10:16	KB	
Pyruvic Acid	**0.15 U**	mg/l	0.15	0.0090	1			11/4/2014 10:16	KB	
i-Pentanoic Acid	**0.15 U**	mg/l	0.15	0.0080	1			11/4/2014 10:16	KB	
Pentanoic Acid	**0.070 U**	mg/l	0.070	0.014	1			11/4/2014 10:16	KB	
i-Hexanoic Acid	**0.20 U**	mg/l	0.20	0.10	1			11/4/2014 10:16	KB	
Hexanoic Acid	**0.50 U**	mg/l	0.50	0.12	1			11/4/2014 10:16	KB	
RISK - MICR										
Analysis Desc: EPA RSK175			Analytical Method: EPA RSK175							
Methane	**850**	ug/l	120	120	5			11/7/2014 09:43	AK	
Ethene	**9.8**	ug/l	0.20	0.0060	1			11/3/2014 11:04	AK	

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ANALYTICAL RESULTS

Workorder: 13843 FRM TAYLOR INSTRUMENTS

Lab ID: **138430007** Date Received: 10/30/2014 11:30 Matrix: Water

Sample ID: **TW-20** Date Collected: 10/29/2014 11:10

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: EPA RSK175			Analytical Method: EPA RSK175							
Methane	**0.40**	ug/l	0.20	0.078	1			11/3/2014 11:14	AK	
Ethene	**0.27**	ug/l	0.20	0.0060	1			11/3/2014 11:14	AK	

CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 13843 FRM TAYLOR INSTRUMENTS

DEFINITIONS/QUALIFIERS

Disclaimer : The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20GAx, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.

MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).

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QUALITY CONTROL DATA

Workorder: 13843 FRM TAYLOR INSTRUMENTS

QC Batch: DISG/4150 Analysis Method: EPA RSK175

QC Batch Method: EPA RSK175

Associated Lab Samples: 138430002, 138430003, 138430005, 138430006, 138430007

METHOD BLANK: 31359

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	0.20 U	0.20	
Ethene	ug/l	0.20 U	0.20	

LABORATORY CONTROL SAMPLE & LCSD: 31360 31361

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	44	44	44	98	99	85-115	1	20	
Ethene	ug/l	78	77	78	99	101	85-115	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 31363 31364 Original: 138520046

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK											
Methane	ug/l	740	44	780	750	93	22	70-130	123	20	
Ethene	ug/l	6.4	78	100	93	122	111	70-130	9.4	20	

SAMPLE DUPLICATE: 31362 Original: 138430007

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
RISK						
Methane	ug/l	0.4	0.35	12	20	
Ethene	ug/l	0.27	0.019J	173	20	

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QUALITY CONTROL DATA

Workorder: 13843 FRM TAYLOR INSTRUMENTS

QC Batch: EDON/2306 Analysis Method: AM23G

QC Batch Method: AM23G

Associated Lab Samples: 138430001, 138430002, 138430003, 138430004, 138430006

METHOD BLANK: 31367

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
EDonors				
Lactic Acid	mg/l	0.10 U	0.10	
Acetic Acid	mg/l	0.023J	0.070	
Propionic Acid	mg/l	0.050 U	0.050	
Formic Acid	mg/l	0.064J	0.10	
Butyric Acid	mg/l	0.050 U	0.050	
Pyruvic Acid	mg/l	0.15 U	0.15	
i-Pentanoic Acid	mg/l	0.15 U	0.15	
Pentanoic Acid	mg/l	0.070 U	0.070	
i-Hexanoic Acid	mg/l	0.20 U	0.20	
Hexanoic Acid	mg/l	0.50 U	0.50	

LABORATORY CONTROL SAMPLE: 31368

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
EDonors						
Lactic Acid	mg/l	2	2.0	99	70-130	
Acetic Acid	mg/l	2	1.9	97	70-130	
Propionic Acid	mg/l	2	2.0	99	70-130	
Formic Acid	mg/l	2	2.0	100	70-130	
Butyric Acid	mg/l	2	1.9	97	70-130	
Pyruvic Acid	mg/l	2	1.9	97	70-130	
i-Pentanoic Acid	mg/l	2	1.9	94	70-130	
Pentanoic Acid	mg/l	2	1.9	94	70-130	
i-Hexanoic Acid	mg/l	2	2.2	109	70-130	
Hexanoic Acid	mg/l	2	1.8	91	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 31369 31370 Original: 138180001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
EDonors											
Lactic Acid	mg/l	0.8	2	2.6	2.6	87	92	70-130	5.6	30	

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QUALITY CONTROL DATA

Workorder: 13843 FRM TAYLOR INSTRUMENTS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 31369 31370 Original: 138180001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Acetic Acid	mg/l	0.15	2	2.1	2.2	98	101	70-130	3	30	
Propionic Acid	mg/l	0	2	1.9	1.9	96	97	70-130	1	30	
Formic Acid	mg/l	0.13	2	1.9	1.9	89	90	70-130	1.1	30	
Butyric Acid	mg/l	0	2	1.7	1.8	86	91	70-130	5.6	30	
Pyruvic Acid	mg/l	0	2	1.8	1.9	92	95	70-130	3.2	30	
i-Pentanoic Acid	mg/l	0	2	1.8	1.8	92	93	70-130	1.1	30	
Pentanoic Acid	mg/l	0	2	1.9	1.9	94	95	70-130	1.1	30	
i-Hexanoic Acid	mg/l	0.11	2	2.3	2.2	109	104	70-130	4.7	30	
Hexanoic Acid	mg/l	0	2	2.0	1.9	99	93	70-130	6.3	30	

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QUALITY CONTROL DATA

Workorder: 13843 FRM TAYLOR INSTRUMENTS

QC Batch: EDON/2311 Analysis Method: AM23G

QC Batch Method: AM23G

Associated Lab Samples: 138430002, 138430005

METHOD BLANK: 31467

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
EDonors				
Lactic Acid	mg/l	0.10 U	0.10	
Acetic Acid	mg/l	0.026J	0.070	
Propionic Acid	mg/l	0.050 U	0.050	
Formic Acid	mg/l	0.061J	0.10	
Butyric Acid	mg/l	0.050 U	0.050	
Pyruvic Acid	mg/l	0.15 U	0.15	
i-Pentanoic Acid	mg/l	0.15 U	0.15	
Pentanoic Acid	mg/l	0.070 U	0.070	
i-Hexanoic Acid	mg/l	0.20 U	0.20	
Hexanoic Acid	mg/l	0.50 U	0.50	

LABORATORY CONTROL SAMPLE: 31468

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
EDonors						
Lactic Acid	mg/l	2	2.0	98	70-130	
Acetic Acid	mg/l	2	1.9	97	70-130	
Propionic Acid	mg/l	2	2.0	100	70-130	
Formic Acid	mg/l	2	1.9	97	70-130	
Butyric Acid	mg/l	2	2.0	102	70-130	
Pyruvic Acid	mg/l	2	2.0	100	70-130	
i-Pentanoic Acid	mg/l	2	2.0	98	70-130	
Pentanoic Acid	mg/l	2	1.9	96	70-130	
i-Hexanoic Acid	mg/l	2	2.0	98	70-130	
Hexanoic Acid	mg/l	2	1.8	92	70-130	

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QUALITY CONTROL DATA

Workorder: 13843 FRM TAYLOR INSTRUMENTS

QC Batch: DISG/4163 Analysis Method: EPA RSK175

QC Batch Method: EPA RSK175

Associated Lab Samples: 138430002, 138430003, 138430005, 138430006

METHOD BLANK: 31522

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	25 U	25	

LABORATORY CONTROL SAMPLE & LCSD: 31523 31524

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	890	900	910	101	102	85-115	0.99	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 31459 31460 Original: 138520052

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK											
Methane	ug/l	4900	890	6500	6600	173	190	70-130	9.4	20	

SAMPLE DUPLICATE: 31525 Original: 138520061

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
RISK						
Methane	ug/l	9000	8800	3.3	20	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 13843 FRM TAYLOR INSTRUMENTS

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
138430002	OB-06			EPA RSK175	DISG/4150
138430003	TW-04			EPA RSK175	DISG/4150
138430005	TW-17			EPA RSK175	DISG/4150
138430006	W-5			EPA RSK175	DISG/4150
138430007	TW-20			EPA RSK175	DISG/4150
138430001	OB-04			AM23G	EDON/2306
138430002	OB-06			AM23G	EDON/2306
138430003	TW-04			AM23G	EDON/2306
138430004	OB-08			AM23G	EDON/2306
138430006	W-5			AM23G	EDON/2306
138430002	OB-06			AM23G	EDON/2311
138430005	TW-17			AM23G	EDON/2311
138430002	OB-06			EPA RSK175	DISG/4163
138430003	TW-04			EPA RSK175	DISG/4163
138430005	TW-17			EPA RSK175	DISG/4163
138430006	W-5			EPA RSK175	DISG/4163

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

13843

Page: 1 of 1

004340

Section A
Required Client Information:

Company: AMEC
Address: 9725 Cogdill Rd
Knoxville, TN 37932
Email To: Joe.Deatherage@amec.com
Phone: 865-218-1049 Fax:
Requested Due Date/TAT:

Section B
Required Project Information:

Report To: Joe Deatherage
Copy To:
Purchase Order No.: C0B26 03122
Project Name: Former Taylor Instruments
Project Number: 3031-05-2006.33

Section C
Invoice Information:

Attention: JOE Deatherage
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ______

Site Location STATE: NY

Section D
Required Client Information

Matrix Codes
MATRIX / CODE

Matrix	Code
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	TSP	BAK	Zinc Acetate & NaOH	Other Na_3PO_4	⬇Analysis Test⬇ Y/N	Am23G - VFAs	Am20G-AX - methylethane										Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	OB-04		G	~~10/28~~	~~1400~~	10/28	1400		2						X				X												
2	OB-06		G			10/28	1545		4						X		X		X	X											
3	~~OB-06~~		~~G~~			~~10/28~~	~~1545~~																								
4	TW-04		G			10/28	1140		4						X		X		X	X											
5	OB-08		G			10/28	1408		2						X				X												
6	TW-17		G			10/29	0840		4						X		X		X	X											
7	W-5		G			10/29	1250		4						X		X		X	X											
8	TW-20		G			10/29	1110		2								X			X											
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	[signature] / AMEC	10/29/14	1730	[signature] PACE	10.30.14	1130	3	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: NOEL GARLAND / JACOB PARKER
SIGNATURE of SAMPLER: [signature] / [signature]
DATE Signed (MM/DD/YY): 10/29/14

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Cooler Receipt Form

Client Name: Amec Project: Frm Taylor/ 3031-05-2006-33 Lab Work Order: 13843

A. Shipping/Container Information (circle appropriate response)

Courier: (FedEx) UPS USPS Client Other:_____ Air bill Present: (Yes) No

Tracking Number: 8064 4289 5000

Custody Seal on Cooler/Box Present: (Yes) No Seals Intact: (Yes) No

Cooler/Box Packing Material: (Bubble Wrap) Absorbent Foam Other:_____

Type of Ice: (Wet) Blue None Ice Intact: (Yes) Melted

Cooler Temperature: 3°C Radiation Screened: Yes (No) Chain of Custody Present: (Yes) No

Comments:_____

B. Laboratory Assignment/Log-in (check appropriate response)

	YES	NO	N/A	Comment Reference non-Conforman
Chain of Custody properly filled out	✓			
Chain of Custody relinquished	✓			
Sampler Name & Signature on COC	✓			
Containers intact	✓			
Were samples in separate bags	✓			
Sample container labels match COC Sample name/date and time collected	✓			
Sufficient volume provided	✓			
Microseeps containers used	✓			
Are containers properly preserved for the requested testing? (as labeled)	✓			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			✓	If yes, see pH form.
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			✓	

Comments:_____

Cooler contents examined/received by: LY Date: 10.30.14

Project Manager Review: AK Date: 10/30/14

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-65109-1
Client Project/Site: Former Taylor Instruments

For:
AMEC Environment & Infrastructure, Inc.
9725 Cogdill Road
Knoxville, Tennessee 37932

Attn: Mr. Joe Deatherage

Authorized for release by:
11/13/2014 2:23:20 PM

Shali Brown, Project Manager II
(615)301-5031
shali.brown@testamericainc.com

Table of Contents

Sample Summary

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65109-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-65109-1	OB-04	Water	10/28/14 14:00	10/31/14 08:30

Glossary

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

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65109-1

Client Sample ID: OB-04
Date Collected: 10/28/14 14:00
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65109-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			11/10/14 16:21	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			11/10/14 16:21	1
Tetrachloroethene	ND		1.00		ug/L			11/10/14 16:21	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/10/14 16:21	1
Trichloroethene	ND		1.00		ug/L			11/10/14 16:21	1
Vinyl chloride	**4.25**		1.00		ug/L			11/10/14 16:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*		*11/10/14 16:21*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*11/10/14 16:21*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*11/10/14 16:21*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/10/14 16:21*	*1*

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

Lab Sample ID: MB 490-204785/7
Matrix: Water
Analysis Batch: 204785

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			11/10/14 13:13	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			11/10/14 13:13	1
Tetrachloroethene	ND		1.00		ug/L			11/10/14 13:13	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/10/14 13:13	1
Trichloroethene	ND		1.00		ug/L			11/10/14 13:13	1
Vinyl chloride	ND		1.00		ug/L			11/10/14 13:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*11/10/14 13:13*	*1*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*		*11/10/14 13:13*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*11/10/14 13:13*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*11/10/14 13:13*	*1*

Lab Sample ID: LCS 490-204785/3
Matrix: Water
Analysis Batch: 204785

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,1-Dichloroethene			50.0	47.03		ug/L		94	79 - 124		
cis-1,2-Dichloroethene			50.0	49.03		ug/L		98	76 - 125		
Tetrachloroethene			50.0	51.44		ug/L		103	80 - 126		
trans-1,2-Dichloroethene			50.0	48.99		ug/L		98	79 - 126		
Trichloroethene			50.0	47.43		ug/L		95	80 - 123		
Vinyl chloride			50.0	51.96		ug/L		104	68 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 490-204785/4
Matrix: Water
Analysis Batch: 204785

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
1,1-Dichloroethene			50.0	45.52		ug/L		91	79 - 124	3	17
cis-1,2-Dichloroethene			50.0	48.12		ug/L		96	76 - 125	2	17
Tetrachloroethene			50.0	49.51		ug/L		99	80 - 126	4	16
trans-1,2-Dichloroethene			50.0	47.37		ug/L		95	79 - 126	3	16
Trichloroethene			50.0	47.02		ug/L		94	80 - 123	1	17
Vinyl chloride			50.0	50.67		ug/L		101	68 - 120	3	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65109-1

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

Lab Sample ID: LCSD 490-204785/4
Matrix: Water
Analysis Batch: 204785

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	102		70 - 130

QC Association Summary

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65109-1

GC/MS VOA

Analysis Batch: 204785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-65109-1	OB-04	Total/NA	Water	8260C	
LCS 490-204785/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-204785/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 490-204785/7	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65109-1

Client Sample ID: OB-04
Date Collected: 10/28/14 14:00
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65109-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	204785	11/10/14 16:21	EML	TAL NSH

Laboratory References:

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

Method Summary

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65109-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL NSH

Protocol References:

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

Laboratory References:

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

Certification Summary

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65109-1

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11342	03-31-15

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-65109 Chain of Custody

Cooler Received/Opened On: 10/30/2014 @ 08:30

1. Tracking # 9980 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 17960357

2. Temperature of rep. sample or temp blank when opened: 5.1 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO (NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) AJT

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) (Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? (YES)...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...(NO)...NA

14. Was there a Trip Blank in this cooler? YES...(NO)...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) DA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) DA

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) DA

I certify that I attached a label with the unique LIMS number to each container (intial) DA

21. Were there Non-Conformance issues at login? YES...(NO) Was a NCM generated? YES...(NO)...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 11/28/12

11/13/2014

Chain of Custody Record

Loc: 490
65109

TestAmerica
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Client Information	Sampler: Noel Garland / Jacob Parker	Lab PM: Brown, Shali	Ca	COC No: 490-513-112.2
Client Contact: Mr. Joe Deatherage	Phone:	E-Mail: shali.brown@testamericainc.com		Page: 1 of 1
Company: AMEC Environment & Infrastructure, Inc.				Job #:
Address: 9725 Cogdill Road	Due Date Requested:			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37932				
Phone: 865-218-1049(Tel)	PO #: ~~G012603123~~ C012603122			
Email: joe.deatherage@amec.com	WO #:			
Project Name: Former Taylor Instruments	Project #: 30310G 2006.33			
Site: Rochester, NY	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B TCE PCE 1,1-DCE cis/trans 1,2 DCE vinyl chloride	Sulfate 300.0	624 VOC's standard list	RUN OB-08 on Full List Instrument	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N	A			
OB-04	10/28/14	1400	G	W	N	Y	X					Hold Sample for possible level IV analysis

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	[signature]	10/29/14 1730	AMEC	[signature]	10-30-14 0830	TAN
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 5.1

11/13/2014

Login Sample Receipt Checklist

Client: AMEC Environment & Infrastructure, Inc.

Job Number: 490-65109-1

Login Number: 65109

List Source: TestAmerica Nashville

List Number: 1

Creator: Armstrong, Daniel

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	5.1C
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.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-65116-1
Client Project/Site: Former Taylor Instruments

For:
AMEC Environment & Infrastructure, Inc.
9725 Cogdill Road
Knoxville, Tennessee 37932

Attn: Mr. Joe Deatherage

Authorized for release by:
11/13/2014 2:55:09 PM

Shali Brown, Project Manager II
(615)301-5031
shali.brown@testamericainc.com

Table of Contents

Sample Summary

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-65116-1	OB-06	Water	10/28/14 15:45	10/31/14 08:30
490-65116-2	OB-08	Water	10/28/14 14:08	10/31/14 08:30
490-65116-3	TW-04	Water	10/28/14 11:40	10/31/14 08:30
490-65116-4	TW-17	Water	10/29/14 08:40	10/31/14 08:30
490-65116-5	TW-09	Water	10/29/14 09:25	10/31/14 08:30
490-65116-6	BR-15	Water	10/28/14 17:07	10/31/14 08:30
490-65116-7	BR-03	Water	10/29/14 14:30	10/31/14 08:30
490-65116-8	W-5	Water	10/29/14 12:50	10/31/14 08:30
490-65116-9	DUP-01	Water	10/29/14 00:01	10/31/14 08:30
490-65116-10	QAFB-01	Water	10/29/14 16:10	10/31/14 08:30
490-65116-11	BR-01	Water	10/29/14 11:10	10/31/14 08:30
490-65116-12	TW-20	Water	10/29/14 11:10	10/31/14 08:30
490-65116-13	BR-02	Water	10/29/14 15:50	10/31/14 08:30
490-65116-14	QARB-01	Water	10/29/14 16:15	10/31/14 08:30
490-65116-15	BR-10	Water	10/29/14 15:40	10/31/14 08:30
490-65116-16	BR-04	Water	10/29/14 13:55	10/31/14 08:30
490-65116-17	Trip Blank	Water	10/28/14 00:01	10/31/14 08:30

Job ID: 490-65116-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-65116-1

Comments
No additional comments.

Receipt
The samples were received on 10/31/2014 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.1° C.

Except:
The following sample(s) was received with headspace in one of the sample vials: OB-06 (490-65116-1) and BR-04 (490-65116-16). More than one vial was received; therefore, these vials were not required for analysis.

GC/MS VOA
Method(s) 8260C: The following sample(s) were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: TW-17 (490-65116-4).

Method(s) 8260C: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) sample(s): BR-04 (490-65116-16 MS). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.

Method(s) 8260C: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample(s): BR-04 (490-65116-16 MS).

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

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

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

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery exceeds the control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F2	MS/MSD RPD exceeds control limits

Glossary

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

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: OB-06
Date Collected: 10/28/14 15:45
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			10/31/14 20:48	1
cis-1,2-Dichloroethene	**7.64**		1.00		ug/L			10/31/14 20:48	1
Tetrachloroethene	ND		1.00		ug/L			10/31/14 20:48	1
trans-1,2-Dichloroethene	**1.05**		1.00		ug/L			10/31/14 20:48	1
Trichloroethene	**38.9**		1.00		ug/L			10/31/14 20:48	1
Vinyl chloride	**5.20**		1.00		ug/L			10/31/14 20:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*10/31/14 20:48*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*10/31/14 20:48*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*		*10/31/14 20:48*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/31/14 20:48*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**146**		5.00		mg/L			11/07/14 14:49	5

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: OB-08
Date Collected: 10/28/14 14:08
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			10/31/14 21:14	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			10/31/14 21:14	1
Tetrachloroethene	ND		1.00		ug/L			10/31/14 21:14	1
trans-1,2-Dichloroethene	**9.57**		1.00		ug/L			10/31/14 21:14	1
Trichloroethene	ND		1.00		ug/L			10/31/14 21:14	1
Vinyl chloride	ND		1.00		ug/L			10/31/14 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*10/31/14 21:14*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*10/31/14 21:14*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*10/31/14 21:14*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/31/14 21:14*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: TW-04
Date Collected: 10/28/14 11:40
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			10/31/14 21:40	1
cis-1,2-Dichloroethene	**8.24**		1.00		ug/L			10/31/14 21:40	1
Tetrachloroethene	ND		1.00		ug/L			10/31/14 21:40	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			10/31/14 21:40	1
Trichloroethene	ND		1.00		ug/L			10/31/14 21:40	1
Vinyl chloride	ND		1.00		ug/L			10/31/14 21:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*10/31/14 21:40*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*10/31/14 21:40*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*10/31/14 21:40*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/31/14 21:40*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**80.5**		1.00		mg/L			11/07/14 03:27	1

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: TW-17
Date Collected: 10/29/14 08:40
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			10/31/14 22:05	1
cis-1,2-Dichloroethene	**1.51**		1.00		ug/L			10/31/14 22:05	1
Tetrachloroethene	ND		1.00		ug/L			10/31/14 22:05	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			10/31/14 22:05	1
Trichloroethene	ND		1.00		ug/L			10/31/14 22:05	1
Vinyl chloride	**4.80**		1.00		ug/L			10/31/14 22:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*10/31/14 22:05*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*10/31/14 22:05*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*10/31/14 22:05*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*10/31/14 22:05*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**1.42**		1.00		mg/L			11/07/14 03:47	1

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: TW-09
Date Collected: 10/29/14 09:25
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			10/31/14 22:31	1
cis-1,2-Dichloroethene	**12.5**		1.00		ug/L			10/31/14 22:31	1
Tetrachloroethene	ND		1.00		ug/L			10/31/14 22:31	1
trans-1,2-Dichloroethene	**9.86**		1.00		ug/L			10/31/14 22:31	1
Trichloroethene	**2.98**		1.00		ug/L			10/31/14 22:31	1
Vinyl chloride	**12.9**		1.00		ug/L			10/31/14 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*10/31/14 22:31*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*10/31/14 22:31*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*10/31/14 22:31*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/31/14 22:31*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: BR-15
Date Collected: 10/28/14 17:07
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			10/31/14 22:57	1
cis-1,2-Dichloroethene	**1.28**		1.00		ug/L			10/31/14 22:57	1
Tetrachloroethene	ND		1.00		ug/L			10/31/14 22:57	1
trans-1,2-Dichloroethene	**1.77**		1.00		ug/L			10/31/14 22:57	1
Trichloroethene	ND		1.00		ug/L			10/31/14 22:57	1
Vinyl chloride	**11.3**		1.00		ug/L			10/31/14 22:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*10/31/14 22:57*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*10/31/14 22:57*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*10/31/14 22:57*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/31/14 22:57*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: BR-03
Date Collected: 10/29/14 14:30
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	**1.74**		1.00		ug/L			11/01/14 02:47	1
cis-1,2-Dichloroethene	**37.0**		1.00		ug/L			11/01/14 02:47	1
Tetrachloroethene	ND		1.00		ug/L			11/01/14 02:47	1
trans-1,2-Dichloroethene	**1.73**		1.00		ug/L			11/01/14 02:47	1
Trichloroethene	**381**		5.00		ug/L			11/01/14 16:35	5
Vinyl chloride	ND		1.00		ug/L			11/01/14 02:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*11/01/14 02:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*11/01/14 16:35*	*5*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*11/01/14 02:47*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*11/01/14 16:35*	*5*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*11/01/14 02:47*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*11/01/14 16:35*	*5*
Toluene-d8 (Surr)	*99*		*70 - 130*		*11/01/14 02:47*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/01/14 16:35*	*5*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: W-5
Date Collected: 10/29/14 12:50
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			11/01/14 03:13	1
cis-1,2-Dichloroethene	**57.9**		1.00		ug/L			11/01/14 03:13	1
Tetrachloroethene	ND		1.00		ug/L			11/01/14 03:13	1
trans-1,2-Dichloroethene	**10.9**		1.00		ug/L			11/01/14 03:13	1
Trichloroethene	**141**		1.00		ug/L			11/01/14 16:09	1
Vinyl chloride	**39.7**		1.00		ug/L			11/01/14 03:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*11/01/14 03:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*11/01/14 16:09*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*11/01/14 03:13*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*11/01/14 16:09*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*11/01/14 03:13*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*11/01/14 16:09*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*11/01/14 03:13*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/01/14 16:09*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**113**		5.00		mg/L			11/07/14 15:09	5

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: DUP-01
Date Collected: 10/29/14 00:01
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			11/01/14 03:38	1
cis-1,2-Dichloroethene	**55.6**		1.00		ug/L			11/01/14 03:38	1
Tetrachloroethene	ND		1.00		ug/L			11/01/14 03:38	1
trans-1,2-Dichloroethene	**10.3**		1.00		ug/L			11/01/14 03:38	1
Trichloroethene	**155**		1.00		ug/L			11/01/14 15:43	1
Vinyl chloride	**33.9**		1.00		ug/L			11/01/14 03:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*11/01/14 03:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*11/01/14 15:43*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*11/01/14 03:38*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*11/01/14 15:43*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*11/01/14 03:38*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*11/01/14 15:43*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/01/14 03:38*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*11/01/14 15:43*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: QAFB-01
Date Collected: 10/29/14 16:10
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			11/01/14 04:04	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			11/01/14 04:04	1
Tetrachloroethene	ND		1.00		ug/L			11/01/14 04:04	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/01/14 04:04	1
Trichloroethene	ND		1.00		ug/L			11/01/14 04:04	1
Vinyl chloride	ND		1.00		ug/L			11/01/14 04:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*11/01/14 04:04*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*11/01/14 04:04*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*11/01/14 04:04*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*11/01/14 04:04*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: BR-01
Date Collected: 10/29/14 11:10
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	**7.62**		1.00		ug/L			11/01/14 04:29	1
cis-1,2-Dichloroethene	**1590**		10.0		ug/L			11/01/14 17:00	10
Tetrachloroethene	ND		1.00		ug/L			11/01/14 04:29	1
trans-1,2-Dichloroethene	**56.6**		1.00		ug/L			11/01/14 04:29	1
Trichloroethene	**86.9**		1.00		ug/L			11/01/14 04:29	1
Vinyl chloride	**320**		10.0		ug/L			11/01/14 17:00	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*11/01/14 04:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*11/01/14 17:00*	*10*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*11/01/14 04:29*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*11/01/14 17:00*	*10*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*11/01/14 04:29*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*11/01/14 17:00*	*10*
Toluene-d8 (Surr)	*102*		*70 - 130*		*11/01/14 04:29*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*11/01/14 17:00*	*10*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: TW-20
Date Collected: 10/29/14 11:10
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-12
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			11/01/14 04:55	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			11/01/14 04:55	1
Tetrachloroethene	ND		1.00		ug/L			11/01/14 04:55	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/01/14 04:55	1
Trichloroethene	**6.11**		1.00		ug/L			11/01/14 04:55	1
Vinyl chloride	ND		1.00		ug/L			11/01/14 04:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*11/01/14 04:55*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*11/01/14 04:55*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*11/01/14 04:55*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*11/01/14 04:55*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**70.3**		1.00		mg/L			11/07/14 04:27	1

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: BR-02
Date Collected: 10/29/14 15:50
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-13
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			11/01/14 05:21	1
cis-1,2-Dichloroethene	**19.7**		1.00		ug/L			11/01/14 05:21	1
Tetrachloroethene	ND		1.00		ug/L			11/01/14 05:21	1
trans-1,2-Dichloroethene	**2.52**		1.00		ug/L			11/01/14 05:21	1
Trichloroethene	**25.3**		1.00		ug/L			11/01/14 05:21	1
Vinyl chloride	ND		1.00		ug/L			11/01/14 05:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*11/01/14 05:21*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*11/01/14 05:21*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*11/01/14 05:21*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/01/14 05:21*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: QARB-01
Date Collected: 10/29/14 16:15
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-14
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			11/01/14 05:46	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			11/01/14 05:46	1
Tetrachloroethene	ND		1.00		ug/L			11/01/14 05:46	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/01/14 05:46	1
Trichloroethene	ND		1.00		ug/L			11/01/14 05:46	1
Vinyl chloride	ND		1.00		ug/L			11/01/14 05:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*11/01/14 05:46*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*11/01/14 05:46*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*		*11/01/14 05:46*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/01/14 05:46*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: BR-10
Date Collected: 10/29/14 15:40
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-15
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.49		1.00		ug/L			11/01/14 06:12	1
cis-1,2-Dichloroethene	299		1.00		ug/L			11/01/14 06:12	1
Tetrachloroethene	1.33		1.00		ug/L			11/01/14 06:12	1
trans-1,2-Dichloroethene	46.2		1.00		ug/L			11/01/14 06:12	1
Trichloroethene	345		1.00		ug/L			11/01/14 06:12	1
Vinyl chloride	2.72		1.00		ug/L			11/01/14 06:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*11/01/14 06:12*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*11/01/14 06:12*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*		*11/01/14 06:12*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*11/01/14 06:12*	*1*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: BR-04
Date Collected: 10/29/14 13:55
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-16
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	**9.33**		1.00		ug/L			11/01/14 06:37	1
cis-1,2-Dichloroethene	**955**		10.0		ug/L			11/01/14 17:26	10
Tetrachloroethene	ND		1.00		ug/L			11/01/14 06:37	1
trans-1,2-Dichloroethene	**77.4**		1.00		ug/L			11/01/14 06:37	1
Trichloroethene	**514**		10.0		ug/L			11/01/14 17:26	10
Vinyl chloride	**55.1**		1.00		ug/L			11/01/14 06:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*11/01/14 06:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*11/01/14 17:26*	*10*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*11/01/14 06:37*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*11/01/14 17:26*	*10*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*11/01/14 06:37*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*11/01/14 17:26*	*10*
Toluene-d8 (Surr)	*101*		*70 - 130*		*11/01/14 06:37*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/01/14 17:26*	*10*

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Client Sample ID: Trip Blank
Date Collected: 10/28/14 00:01
Date Received: 10/31/14 08:30

Lab Sample ID: 490-65116-17
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			11/01/14 07:03	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			11/01/14 07:03	1
Tetrachloroethene	ND		1.00		ug/L			11/01/14 07:03	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/01/14 07:03	1
Trichloroethene	ND		1.00		ug/L			11/01/14 07:03	1
Vinyl chloride	ND		1.00		ug/L			11/01/14 07:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*		*11/01/14 07:03*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*11/01/14 07:03*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*11/01/14 07:03*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/01/14 07:03*	*1*

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

Lab Sample ID: MB 490-202459/7
Matrix: Water
Analysis Batch: 202459

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			10/31/14 14:38	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			10/31/14 14:38	1
Tetrachloroethene	ND		1.00		ug/L			10/31/14 14:38	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			10/31/14 14:38	1
Trichloroethene	ND		1.00		ug/L			10/31/14 14:38	1
Vinyl chloride	ND		1.00		ug/L			10/31/14 14:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*10/31/14 14:38*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*10/31/14 14:38*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*10/31/14 14:38*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/31/14 14:38*	*1*

Lab Sample ID: LCS 490-202459/3
Matrix: Water
Analysis Batch: 202459

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,1-Dichloroethene			50.0	50.74		ug/L		101	79 - 124		
cis-1,2-Dichloroethene			50.0	50.48		ug/L		101	76 - 125		
Tetrachloroethene			50.0	54.89		ug/L		110	80 - 126		
trans-1,2-Dichloroethene			50.0	50.94		ug/L		102	79 - 126		
Trichloroethene			50.0	51.32		ug/L		103	80 - 123		
Vinyl chloride			50.0	48.31		ug/L		97	68 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 490-202459/4
Matrix: Water
Analysis Batch: 202459

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
1,1-Dichloroethene			50.0	50.94		ug/L		102	79 - 124	0	17
cis-1,2-Dichloroethene			50.0	50.72		ug/L		101	76 - 125	0	17
Tetrachloroethene			50.0	53.53		ug/L		107	80 - 126	3	16
trans-1,2-Dichloroethene			50.0	51.70		ug/L		103	79 - 126	1	16
Trichloroethene			50.0	51.41		ug/L		103	80 - 123	0	17
Vinyl chloride			50.0	48.79		ug/L		98	68 - 120	1	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
Dibromofluoromethane (Surr)	*96*		*70 - 130*

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

Lab Sample ID: LCSD 490-202459/4
Matrix: Water
Analysis Batch: 202459

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: 490-65116-2 MS
Matrix: Water
Analysis Batch: 202459

Client Sample ID: OB-08
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	ND		50.0	50.25		ug/L		100	70 - 142
cis-1,2-Dichloroethene	ND		50.0	49.41		ug/L		98	68 - 138
Tetrachloroethene	ND		50.0	51.64		ug/L		103	72 - 145
trans-1,2-Dichloroethene	9.57		50.0	58.37		ug/L		98	66 - 143
Trichloroethene	ND		50.0	50.47		ug/L		100	73 - 144
Vinyl chloride	ND		50.0	48.39		ug/L		95	56 - 129

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: 490-65116-2 MSD
Matrix: Water
Analysis Batch: 202459

Client Sample ID: OB-08
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	ND		50.0	34.99	F2	ug/L		70	70 - 142	36	17
cis-1,2-Dichloroethene	ND		50.0	30.79	F1 F2	ug/L		61	68 - 138	46	17
Tetrachloroethene	ND		50.0	33.58	F1 F2	ug/L		67	72 - 145	42	16
trans-1,2-Dichloroethene	9.57		50.0	43.21	F2	ug/L		67	66 - 143	30	16
Trichloroethene	ND		50.0	33.04	F1 F2	ug/L		65	73 - 144	42	17
Vinyl chloride	ND		50.0	34.18	F2	ug/L		67	56 - 129	34	17

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
Dibromofluoromethane (Surr)	*96*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: MB 490-202638/7
Matrix: Water
Analysis Batch: 202638

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			11/01/14 02:21	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			11/01/14 02:21	1
Tetrachloroethene	ND		1.00		ug/L			11/01/14 02:21	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/01/14 02:21	1

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

Lab Sample ID: MB 490-202638/7
Matrix: Water
Analysis Batch: 202638

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		1.00		ug/L			11/01/14 02:21	1
Vinyl chloride	ND		1.00		ug/L			11/01/14 02:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*11/01/14 02:21*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*11/01/14 02:21*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*11/01/14 02:21*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*11/01/14 02:21*	*1*

Lab Sample ID: LCS 490-202638/3
Matrix: Water
Analysis Batch: 202638

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	50.0	49.88		ug/L		100	79 - 124
cis-1,2-Dichloroethene	50.0	49.67		ug/L		99	76 - 125
Tetrachloroethene	50.0	52.53		ug/L		105	80 - 126
trans-1,2-Dichloroethene	50.0	49.85		ug/L		100	79 - 126
Trichloroethene	50.0	51.30		ug/L		103	80 - 123
Vinyl chloride	50.0	46.06		ug/L		92	68 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
Dibromofluoromethane (Surr)	*96*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 490-202638/4
Matrix: Water
Analysis Batch: 202638

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
1,1-Dichloroethene	50.0	50.34		ug/L		101	79 - 124	1	17
cis-1,2-Dichloroethene	50.0	48.05		ug/L		96	76 - 125	3	17
Tetrachloroethene	50.0	53.06		ug/L		106	80 - 126	1	16
trans-1,2-Dichloroethene	50.0	49.59		ug/L		99	79 - 126	1	16
Trichloroethene	50.0	50.13		ug/L		100	80 - 123	2	17
Vinyl chloride	50.0	45.84		ug/L		92	68 - 120	0	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
Dibromofluoromethane (Surr)	*96*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

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

Lab Sample ID: 490-65116-16 MS
Matrix: Water
Analysis Batch: 202638

Client Sample ID: BR-04
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	9.33		50.0	58.22		ug/L		98	70 - 142
cis-1,2-Dichloroethene	1070	E	50.0	999.8	E 4	ug/L		-149	68 - 138
Tetrachloroethene	ND		50.0	50.18		ug/L		100	72 - 145
trans-1,2-Dichloroethene	77.4		50.0	122.5		ug/L		90	66 - 143
Trichloroethene	667	E	50.0	641.3	E 4	ug/L		-52	73 - 144
Vinyl chloride	55.1		50.0	96.51		ug/L		83	56 - 129

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: 490-65116-16 MSD
Matrix: Water
Analysis Batch: 202638

Client Sample ID: BR-04
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	9.33		50.0	55.73		ug/L		93	70 - 142	4	17
cis-1,2-Dichloroethene	1070	E	50.0	1023	E 4	ug/L		-103	68 - 138	2	17
Tetrachloroethene	ND		50.0	50.01		ug/L		100	72 - 145	0	16
trans-1,2-Dichloroethene	77.4		50.0	118.2		ug/L		82	66 - 143	4	16
Trichloroethene	667	E	50.0	677.3	E 4	ug/L		20	73 - 144	5	17
Vinyl chloride	55.1		50.0	98.91		ug/L		88	56 - 129	2	17

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
Dibromofluoromethane (Surr)	*96*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: MB 490-202748/7
Matrix: Water
Analysis Batch: 202748

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			11/01/14 15:18	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			11/01/14 15:18	1
Tetrachloroethene	ND		1.00		ug/L			11/01/14 15:18	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/01/14 15:18	1
Trichloroethene	ND		1.00		ug/L			11/01/14 15:18	1
Vinyl chloride	ND		1.00		ug/L			11/01/14 15:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*11/01/14 15:18*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*11/01/14 15:18*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*11/01/14 15:18*	*1*

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

Lab Sample ID: MB 490-202748/7
Matrix: Water
Analysis Batch: 202748

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130		11/01/14 15:18	1

Lab Sample ID: LCS 490-202748/3
Matrix: Water
Analysis Batch: 202748

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,1-Dichloroethene			50.0	51.09		ug/L		102	79 - 124		
cis-1,2-Dichloroethene			50.0	50.15		ug/L		100	76 - 125		
Tetrachloroethene			50.0	52.80		ug/L		106	80 - 126		
trans-1,2-Dichloroethene			50.0	51.22		ug/L		102	79 - 126		
Trichloroethene			50.0	50.89		ug/L		102	80 - 123		
Vinyl chloride			50.0	50.51		ug/L		101	68 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		70 - 130
4-Bromofluorobenzene (Surr)	97		70 - 130
Dibromofluoromethane (Surr)	96		70 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCSD 490-202748/4
Matrix: Water
Analysis Batch: 202748

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
1,1-Dichloroethene			50.0	52.25		ug/L		105	79 - 124	2	17
cis-1,2-Dichloroethene			50.0	50.43		ug/L		101	76 - 125	1	17
Tetrachloroethene			50.0	52.74		ug/L		105	80 - 126	0	16
trans-1,2-Dichloroethene			50.0	50.95		ug/L		102	79 - 126	1	16
Trichloroethene			50.0	50.88		ug/L		102	80 - 123	0	17
Vinyl chloride			50.0	50.99		ug/L		102	68 - 120	1	17

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		70 - 130
4-Bromofluorobenzene (Surr)	97		70 - 130
Dibromofluoromethane (Surr)	96		70 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: 490-64940-B-8 MS
Matrix: Water
Analysis Batch: 202748

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,1-Dichloroethene	ND		50.0	34.94		ug/L		70	70 - 142		
cis-1,2-Dichloroethene	ND		50.0	34.28		ug/L		69	68 - 138		
Tetrachloroethene	ND		50.0	35.48	F1	ug/L		71	72 - 145		
trans-1,2-Dichloroethene	ND		50.0	34.93		ug/L		70	66 - 143		

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

Lab Sample ID: 490-64940-B-8 MS
Matrix: Water
Analysis Batch: 202748

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	ND		50.0	33.41	F1	ug/L		67	73 - 144
Vinyl chloride	ND		50.0	34.81		ug/L		70	56 - 129

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
Dibromofluoromethane (Surr)	*94*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: 490-64940-C-8 MSD
Matrix: Water
Analysis Batch: 202748

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	ND		50.0	35.90		ug/L		72	70 - 142	3	17
cis-1,2-Dichloroethene	ND		50.0	35.36		ug/L		71	68 - 138	3	17
Tetrachloroethene	ND		50.0	36.51		ug/L		73	72 - 145	3	16
trans-1,2-Dichloroethene	ND		50.0	35.47		ug/L		71	66 - 143	2	16
Trichloroethene	ND		50.0	34.90	F1	ug/L		70	73 - 144	4	17
Vinyl chloride	ND		50.0	34.65		ug/L		69	56 - 129	0	17

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
Dibromofluoromethane (Surr)	*95*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 490-204114/3
Matrix: Water
Analysis Batch: 204114

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		1.00		mg/L			11/07/14 02:06	1

Lab Sample ID: LCS 490-204114/4
Matrix: Water
Analysis Batch: 204114

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50.0	49.59		mg/L		99	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 490-204114/5
Matrix: Water
Analysis Batch: 204114

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
Sulfate			50.0	49.75		mg/L		99	90 - 110	0	20

Lab Sample ID: 490-65215-G-6 MS
Matrix: Water
Analysis Batch: 204114

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	ND		50.0	52.47		mg/L		105	80 - 120		

Lab Sample ID: 490-65215-G-6 MSD
Matrix: Water
Analysis Batch: 204114

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	ND		50.0	48.37		mg/L		97	80 - 120	8	20

Lab Sample ID: MB 490-204255/6
Matrix: Water
Analysis Batch: 204255

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		1.00		mg/L			11/07/14 11:49	1

Lab Sample ID: LCS 490-204255/7
Matrix: Water
Analysis Batch: 204255

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			50.0	50.96		mg/L		102	90 - 110		

Lab Sample ID: LCSD 490-204255/8
Matrix: Water
Analysis Batch: 204255

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
Sulfate			50.0	51.00		mg/L		102	90 - 110	0	20

Lab Sample ID: 490-65236-I-1 MS
Matrix: Water
Analysis Batch: 204255

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	4.05		50.0	50.55		mg/L		93	80 - 120		

GC/MS VOA

Analysis Batch: 202459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-65116-1	OB-06	Total/NA	Water	8260C	
490-65116-2	OB-08	Total/NA	Water	8260C	
490-65116-2 MS	OB-08	Total/NA	Water	8260C	
490-65116-2 MSD	OB-08	Total/NA	Water	8260C	
490-65116-3	TW-04	Total/NA	Water	8260C	
490-65116-4	TW-17	Total/NA	Water	8260C	
490-65116-5	TW-09	Total/NA	Water	8260C	
490-65116-6	BR-15	Total/NA	Water	8260C	
LCS 490-202459/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-202459/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 490-202459/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 202638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-65116-7	BR-03	Total/NA	Water	8260C	
490-65116-8	W-5	Total/NA	Water	8260C	
490-65116-9	DUP-01	Total/NA	Water	8260C	
490-65116-10	QAFB-01	Total/NA	Water	8260C	
490-65116-11	BR-01	Total/NA	Water	8260C	
490-65116-12	TW-20	Total/NA	Water	8260C	
490-65116-13	BR-02	Total/NA	Water	8260C	
490-65116-14	QARB-01	Total/NA	Water	8260C	
490-65116-15	BR-10	Total/NA	Water	8260C	
490-65116-16	BR-04	Total/NA	Water	8260C	
490-65116-16 MS	BR-04	Total/NA	Water	8260C	
490-65116-16 MSD	BR-04	Total/NA	Water	8260C	
490-65116-17	Trip Blank	Total/NA	Water	8260C	
LCS 490-202638/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-202638/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 490-202638/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 202748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-64940-B-8 MS	Matrix Spike	Total/NA	Water	8260C	
490-64940-C-8 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
490-65116-7	BR-03	Total/NA	Water	8260C	
490-65116-8	W-5	Total/NA	Water	8260C	
490-65116-9	DUP-01	Total/NA	Water	8260C	
490-65116-11	BR-01	Total/NA	Water	8260C	
490-65116-16	BR-04	Total/NA	Water	8260C	
LCS 490-202748/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-202748/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 490-202748/7	Method Blank	Total/NA	Water	8260C	

HPLC/IC

Analysis Batch: 204114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-65116-3	TW-04	Total/NA	Water	300.0	
490-65116-4	TW-17	Total/NA	Water	300.0	

HPLC/IC (Continued)

Analysis Batch: 204114 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-65116-12	TW-20	Total/NA	Water	300.0	
490-65215-G-6 MS	Matrix Spike	Total/NA	Water	300.0	
490-65215-G-6 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 490-204114/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 490-204114/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 490-204114/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 204255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-65116-1	OB-06	Total/NA	Water	300.0	
490-65116-8	W-5	Total/NA	Water	300.0	
490-65236-I-1 MS	Matrix Spike	Total/NA	Water	300.0	
LCS 490-204255/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 490-204255/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 490-204255/6	Method Blank	Total/NA	Water	300.0	

Client Sample ID: OB-06 — **Lab Sample ID: 490-65116-1**
Date Collected: 10/28/14 15:45 — **Matrix: Water**
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202459	10/31/14 20:48	MJH	TAL NSH
Total/NA	Analysis	300.0		5	10 mL		204255	11/07/14 14:49	CLN	TAL NSH

Client Sample ID: OB-08 — **Lab Sample ID: 490-65116-2**
Date Collected: 10/28/14 14:08 — **Matrix: Water**
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202459	10/31/14 21:14	MJH	TAL NSH

Client Sample ID: TW-04 — **Lab Sample ID: 490-65116-3**
Date Collected: 10/28/14 11:40 — **Matrix: Water**
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202459	10/31/14 21:40	MJH	TAL NSH
Total/NA	Analysis	300.0		1	10 mL		204114	11/07/14 03:27	CLN	TAL NSH

Client Sample ID: TW-17 — **Lab Sample ID: 490-65116-4**
Date Collected: 10/29/14 08:40 — **Matrix: Water**
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202459	10/31/14 22:05	MJH	TAL NSH
Total/NA	Analysis	300.0		1	10 mL		204114	11/07/14 03:47	CLN	TAL NSH

Client Sample ID: TW-09 — **Lab Sample ID: 490-65116-5**
Date Collected: 10/29/14 09:25 — **Matrix: Water**
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202459	10/31/14 22:31	MJH	TAL NSH

Client Sample ID: BR-15 — **Lab Sample ID: 490-65116-6**
Date Collected: 10/28/14 17:07 — **Matrix: Water**
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202459	10/31/14 22:57	MJH	TAL NSH

Client Sample ID: BR-03 — **Lab Sample ID: 490-65116-7**
Date Collected: 10/29/14 14:30 — **Matrix: Water**
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202638	11/01/14 02:47	MJH	TAL NSH
Total/NA	Analysis	8260C		5	10 mL	10 mL	202748	11/01/14 16:35	MJH	TAL NSH

Client Sample ID: W-5 — **Lab Sample ID: 490-65116-8**
Date Collected: 10/29/14 12:50 — **Matrix: Water**
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202638	11/01/14 03:13	MJH	TAL NSH
Total/NA	Analysis	8260C		1	10 mL	10 mL	202748	11/01/14 16:09	MJH	TAL NSH
Total/NA	Analysis	300.0		5	10 mL		204255	11/07/14 15:09	CLN	TAL NSH

Client Sample ID: DUP-01 — **Lab Sample ID: 490-65116-9**
Date Collected: 10/29/14 00:01 — **Matrix: Water**
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202638	11/01/14 03:38	MJH	TAL NSH
Total/NA	Analysis	8260C		1	10 mL	10 mL	202748	11/01/14 15:43	MJH	TAL NSH

Client Sample ID: QAFB-01 — **Lab Sample ID: 490-65116-10**
Date Collected: 10/29/14 16:10 — **Matrix: Water**
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202638	11/01/14 04:04	MJH	TAL NSH

Client Sample ID: BR-01 — **Lab Sample ID: 490-65116-11**
Date Collected: 10/29/14 11:10 — **Matrix: Water**
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202638	11/01/14 04:29	MJH	TAL NSH
Total/NA	Analysis	8260C		10	10 mL	10 mL	202748	11/01/14 17:00	MJH	TAL NSH

Client Sample ID: TW-20 — **Lab Sample ID: 490-65116-12**
Date Collected: 10/29/14 11:10 — **Matrix: Water**
Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202638	11/01/14 04:55	MJH	TAL NSH

Client Sample ID: TW-20

Lab Sample ID: 490-65116-12

Date Collected: 10/29/14 11:10

Matrix: Water

Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	10 mL		204114	11/07/14 04:27	CLN	TAL NSH

Client Sample ID: BR-02

Lab Sample ID: 490-65116-13

Date Collected: 10/29/14 15:50

Matrix: Water

Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202638	11/01/14 05:21	MJH	TAL NSH

Client Sample ID: QARB-01

Lab Sample ID: 490-65116-14

Date Collected: 10/29/14 16:15

Matrix: Water

Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202638	11/01/14 05:46	MJH	TAL NSH

Client Sample ID: BR-10

Lab Sample ID: 490-65116-15

Date Collected: 10/29/14 15:40

Matrix: Water

Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202638	11/01/14 06:12	MJH	TAL NSH

Client Sample ID: BR-04

Lab Sample ID: 490-65116-16

Date Collected: 10/29/14 13:55

Matrix: Water

Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202638	11/01/14 06:37	MJH	TAL NSH
Total/NA	Analysis	8260C		10	10 mL	10 mL	202748	11/01/14 17:26	MJH	TAL NSH

Client Sample ID: Trip Blank

Lab Sample ID: 490-65116-17

Date Collected: 10/28/14 00:01

Matrix: Water

Date Received: 10/31/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	10 mL	10 mL	202638	11/01/14 07:03	MJH	TAL NSH

Laboratory References:

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

Method Summary

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL NSH
300.0	Anions, Ion Chromatography	MCAWW	TAL NSH

Protocol References:

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

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

Laboratory References:

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

Certification Summary

Client: AMEC Environment & Infrastructure, Inc.
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-65116-1

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11342	03-31-15

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-65116 Chain of Custody

Cooler Received/Opened On: 10/30/2014 @ 08:30

1. Tracking # 9980 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 17960357

2. Temperature of rep. sample or temp blank when opened: 5.1 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO (NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) AJT

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) (Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? (YES)...NO...NA

b. Was there any observable headspace present in any VOA vial? (YES)...NO...NA

14. Was there a Trip Blank in this cooler? (YES)...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) DA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) DA

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) DA

I certify that I attached a label with the unique LIMS number to each container (intial) DA

21. Were there Non-Conformance issues at login? (YES)...NO Was a NCM generated? (YES)...NO...# 490-148107

*Sample-C-1 has headspace.

*Sample-C-16 has headspace.

BIS = Broken in shipment

Chain of Custody Record

Loc: 490
65116

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: GARLAND / PARKER	Lab PM: Brown, Shali	Carri	COC No: 490-513-112.2
Client Contact: Mr. Joe Deatherage	Phone:	E-Mail: shali.brown@testamericainc.com		Page: 1 of 2
Company: AMEC Environment & Infrastructure, Inc.		Analysis Requested		Job #:
Address: 9725 Cogdill Road	Due Date Requested:			Preservation Codes:
City: Knoxville	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
State, Zip: TN, 37932				
Phone: 865-218-1049(Tel)	PO #: ~~C912603125~~ C012603122			
Email: joe.deatherage@amec.com	WO #:			Other:
Project Name: Former Taylor Instruments	Project #: 30310520006.33			
Site: Rochester, NY	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B TCE PCE 1,1-DCE cis/trans 1,2 DCE vinyl chloride	Sulfate 300.0	624 VOC's standard list	RUN OB-08 on Full List Instrument	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N	A			
1 OB-06	10/28/14	1545	G	W			X	X			5	
2 OB-08	10/28/14	1408	G	W			X				3	
3 TW-04	10/28/14	1140	G	W			X	X			4	
4 TW-17	10/29/14	0840	G	W			X	X			4	
5 TW-09	10/29/14	0925	|	|			X				
6 BR-15	10/28/14	1707	|	|			X				
7 ~~BR-03~~ BR-03	10/29/14	1430	|	|			X				
8 W-5	10/29/14	1250	|	|			X	X			
9 DUP-01	10/29/14	—	|	|			X				
10 QAFB-01	10/29/14	~~1610~~	|	|			X				
11 BR-01	10/29/14	1110	|	|			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
[signature]	10/29/14 1730	AMEC	[signature]	10-30-14 0830	TAN
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: 5.1

11/13/2014

Chain of Custody Record

Loc: 490
65116

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

11/13/2014

Client Information	Sampler: Garland Parker	Lab PM: Brown, Shali	Car	COC No: 490-513-112.2
Client Contact: Mr. Joe Deatherage	Phone:	E-Mail: shali.brown@testamericainc.com		Page: 2 of 2
Company: AMEC Environment & Infrastructure, Inc.		Analysis Requested		Job #:
Address: 9725 Cogdill Road	Due Date 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)
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37932				
Phone: 865-218-1049(Tel)	PO #: ~~C012603123~~ C012603122			
Email: joe.deatherage@amec.com	WO #:			
Project Name: Former Taylor Instruments	Project #: 30310520006.33			
Site: Rochester, NY	SSOW#:			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 TCE PCE 1,1-DCE cis/trans 1,2 DCE vinyl chloride	Sulfate 300.0	624 VOC's standard list	RUN OB-08 on Full List Instrument	Total Number of containers	Special Instructions/Note:
	Preservation Code:							A	N	A			
12	TW-20	10/29/14	1110	G	W			X	X				
13	BR-02	10/29/14	1550					X					
14	QARB-01	10/29/14	1615					X					
15	BR-10	10/29/14	1540					X					
16	BR-04	10/29/14	1355					X					
16F	BR-04 MS	10/29/14	1355					X					
16S	BR-04 MSD	10/29/14	1355					X					
17	TRIP Blank							X					

DAIO 3174

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: 10/29/14 1730	Company	Received by:	Date/Time: 10-30-14 0830	Company TAN
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: 5.1

Login Sample Receipt Checklist

Client: AMEC Environment & Infrastructure, Inc.

Job Number: 490-65116-1

Login Number: 65116

List Source: TestAmerica Nashville

List Number: 1

Creator: Armstrong, Daniel

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	5.1C
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").	False	Headspace larger than 1/4" in one or more vials, one vial with accpt. headspace
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX E

FIELD DATA RECORDS

MAY 2014
FIELD DATA RECORDS

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5-7-14

SITE ID: OB-04

SITE TYPE: Monitor Well

SITE ACTIVITY: START 0845 END 1057

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.3 FT

INITIAL DEPTH TO WATER: 4.02 FT

WELL DEPTH: 16.45 FT

PID AMBIENT AIR: — PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 7.45 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: — PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

DRAWDOWN: 3.43 FT

DRAWDOWN VOLUME: 0.5488 GAL

PRODUCT THICKNESS: — FT

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.11 L/MIN

BEGIN PURGING: 0855

END PURGING: 1046

TOTAL VOL. PURGED: 3.12 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
0906	EC	6.52	0.934	6.4	1.17	11.69	-283.5	5.41	Black tint
0916	1	6.54	0.921	6.6	0.44	11.41	-297.8	6.12	Black Flakes
0935	2	6.60	0.970	47.8	0.15	11.70	-306.7	6.69	Strong odor/dark gray
0944	1	6.60	0.987	11.0	0.13	11.66	-311.7	6.91	light gray
0953	1	6.60	0.994	4.5	0.13	11.84	-307.7	7.17	
1002	1	6.60	1.001	5.3	0.14	12.04	-304.8	7.44	
1011	1	6.59	1.022	5.9	0.13	12.06	-297.3	7.50	
1020	1	6.60	1.047	5.7	0.11	11.99	-299.5	7.48	
1029	1	6.60	1.107	5.6	0.10	12.05	-301.5	7.44	
1037	1	6.59	1.138	6.2	0.10	12.05	-299.5	7.45	
1046	1	6.58	1.157	6.1	0.11	12.02	-295.7	7.46	
1050	—	—	—	Collect	Sample	—	—	—	—

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 14 ft.

SIGNATURE: [signature]

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	1050
[X]	VFAs		1050
[ ]	Sulfate		
[ ]	Methane/ethene		

Total depth = 15.34 ft btoc

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5-7-14

SITE ID: OB-06

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1100 END 1257

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.4 FT

INITIAL DEPTH TO WATER: 3.92 FT

WELL DEPTH: 16.45 FT

PID AMBIENT AIR: — PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 6.47 FT

SCREEN LENGTH: 10 FT

PID WELL MOUTH: — PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

DRAWDOWN: 2.55 FT

DRAWDOWN VOLUME: 0.408 GAL

PRODUCT THICKNESS: — FT

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.125 L/MIN

BEGIN PURGING: 1107

END PURGING: 1239

TOTAL VOL. PURGED: 2.99 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1115	FC	6.83	1.126	0	1.70	12.19	-285.9	5.08	Clear
1123	1	6.82	1.115	0.3	0.26	11.85	-299.2	5.60	
1135	1.5	6.82	1.115	1.5	0.18	11.96	-275.9	6.08	
1143	1	6.81	1.118	1.2	0.18	12.08	-289.0	6.19	
1151	1	6.80	1.118	0.4	0.17	11.72	-271.3	6.31	
1159	1	6.80	1.117	0.2	0.19	12.03	-262.7	6.39	
1207	1	6.72	1.126	0	0.21	12.07	-288.9	6.41	
1215	1	6.77	1.124	0	0.18	11.92	-294.7	6.46	
1223	1	6.77	1.126	0	0.18	12.26	-283.5	6.48	
1231	1	6.76	1.126	0	0.18	12.58	-286.9	6.48	
1239	1	6.74	1.131	0	0.17	12.37	-286.7	6.47	
1245	—	—	—	collect	Sample	—	—	—	—

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (If applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 11.5 ft btoc

SIGNATURE: _____

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	1245
[X]	VFAs		1245
[X]	Sulfate		1245
[X]	Methane/ethene		1245

Total depth = 16.14

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5/7/14

SITE ID: OB-08

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1025 END 1200

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.35 FT

INITIAL DEPTH TO WATER	5.33 FT	WELL DEPTH	25.3 FT	PID AMBIENT AIR	— PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	8.43 FT	SCREEN LENGTH	10 FT	PID WELL MOUTH	— PPM		
DRAWDOWN	3.1 FT	DRAWDOWN VOLUME	0.496 GAL	PRODUCT THICKNESS	— FT		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

PURGE RATE: 0.2 L/MIN (.28/.3/.16?)

BEGIN PURGING: 1034

END PURGING: 1141

TOTAL VOL. PURGED: 3.4 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1036	FC	7.31	0.658	36.0	2.94	12.80	-106.5	6.2	small black flakes
1043	2	7.11	0.675	39.0	0.23	12.31	-119.1	8.25	strong odor
1056	2.5	7.09	0.668	25.5	0.09	12.37	-112.7	8.70	
1102	1	7.08	0.667	18.4	0.13	12.53	-107.3	8.56	
1115	2	7.13	0.689	20.0	0.28	12.41	-123.8	8.50	
1121	1	7.08	0.688	18.1	0.18	12.54	-122.7	8.47	
1126	1	7.07	0.684	16.9	0.08	12.58	-121.5	8.45	
1131	1	7.06	0.681	14.6	0.08	12.64	-120.3	8.44	
1136	1	7.06	0.676	11.9	0.08	12.65	-117.8	8.43	
1141	1	7.05	0.673	8.7	0.08	12.67	-119.2	8.43	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 20

slowed pump

SIGNATURE: _____

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	1150
[X]	VFAs		1150
[ ]	Sulfate		
[ ]	Methane/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5/7/14

SITE ID: TW-04

SITE TYPE: Monitor Well

SITE ACTIVITY: START 0845 END 1015

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): 2.6 FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.25 FT

INITIAL DEPTH TO WATER: 8.58 FT

WELL DEPTH: 17.3 FT

PID AMBIENT AIR: — PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 12.07 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: — PPM

DRAWDOWN: 3.49 FT

DRAWDOWN VOLUME: 0.56 GAL

PRODUCT THICKNESS: — FT

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.150 L/MIN .2/.125/.17

BEGIN PURGING: 0900

END PURGING: 0957

TOTAL VOL. PURGED: 2.56 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
0902	1	7.02	0.627	34.8	1.34	9.48	17.6	10.29	slowed pump
0911	2	7.06	0.636	7.8	0.37	9.63	-30.7	11.06	
0917	1	7.05	0.669	4.6	0.21	9.75	-62.6	11.22	pump as slow as can
0923	1	7.03	0.692	3.2	0.15	9.83	-85.5	11.37	
0934	2	7.01	0.720	2.1	0.08	9.74	-101.3	1203	sped up pump
0941	2	7.00	0.742	1.6	0.10	9.77	-106.9	12.22	slow
0947	1	6.96	0.770	1.2	0.06	9.89	-113.2	12.11	slowed pump
0952	0.75	6.94	0.775	1.2	0.05	9.95	-115.7	12.07	
0957	0.75	6.97	0.768	2.5	0.06	9.98	-112.2	12.07	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 14.8

SIGNATURE: _____

NOTES

	Preservation	Time Collected
[X] VOC (modified list)	HCL	1000
[X] VFAs		
[X] Sulfate		
[X] Methane/ethene		

replaced outer well lock

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5/7/14

SITE ID: TW-09

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1640 END 1745

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.3 FT

INITIAL DEPTH TO WATER: 11.67 FT

WELL DEPTH: 17.70 FT

PID AMBIENT AIR: — PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 12.18 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: — PPM

DRAWDOWN: 0.51 FT

DRAWDOWN VOLUME: 0.08 GAL

PRODUCT THICKNESS: — FT

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

((Initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: .20 L/MIN (.25/.167)

BEGIN PURGING: 1646

END PURGING: 1736

TOTAL VOL. PURGED: 2.8 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1649	1	6.79	0.594	107.1	1.13	10.95	71.0	11.91	*
1654	1	6.78	0.604	27.3	1.26	10.48	50.2	12.03	
1702	2	6.76	0.603	14.2	0.23	10.32	-4.4	12.12	
1706	1	6.77	0.603	9.1	0.21	10.31	-14.1	12.15	
1718	2	6.81	0.605	6.3	0.13	10.39	-27.6	12.19	slowed pump
1725	1	6.81	0.605	5.3	0.16	10.48	-29.2	12.18	
1731	1	6.81	0.604	5.1	0.17	10.45	-32.4	12.18	
1736	1	6.84	0.603	3.8	0.18	10.43	-34.7	12.18	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 15

* rust colored flakes & black flakes - dumped flowcell

SIGNATURE:

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	1740
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

total depth = 17.47'

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5/7/14

SITE ID: TW-17

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1640 END 1025

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): 2.4 FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.25 FT

INITIAL DEPTH TO WATER: 7.32 FT

WELL DEPTH: 17.04 FT

PID AMBIENT AIR: — PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 11.52 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: — PPM

DRAWDOWN: 4.20 FT

DRAWDOWN VOLUME: 0.672 GAL

PRODUCT THICKNESS: — FT

WELL INTEGRITY:

	YES	NO	N/A
CAP	N/A		
CASING			
LOCKED			
COLLAR	N/A		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.166 L/MIN

BEGIN PURGING: 1646

END PURGING: 1749

TOTAL VOL. PURGED: 2.73 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1651	FC	6.70	0.968	3.2	3.07	11.19	-130.2	8.84	
1657	1	6.68	0.942	2.8	1.05	11.05	-112.1	9.80	
1709	2	6.67	0.916	4.0	0.59	10.63	-99.1	11.53	
1721	2	6.67	0.914	5.8	0.43	10.57	-91.9	13.10	
1733	2	6.67	0.922	9.5	0.39	10.37	-96.7	15.00	
1749	2.65	6.68	0.973	20.8	1.30	10.26	-88.3	17.12	Dry
5/7/14	WL @	7.44 -	will sample first		then collect readings				
0945	collect	samples	complete @ 1000		WL @ 9.75				
1006	FC	6.56	1.009	6.1	2.06	11.75	-117.5	10.15	
1013	1	6.48	0.972	5.3	0.29	10.90	-115.3	10.91	
1021	1	6.48	0.957	5.3	0.18	11.07	-110.5	11.52	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 14.75

Based on historical data, purged well dry today and sample tomorrow

SIGNATURE: _____

NOTES

		Preservation	Time Collected
X	VOC (modified list)	HCL	0945
X	VFAs		0945
X	Sulfate		0945
X	Methane/ethene		0945

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5-8-14

SITE ID: TW-20

SITE TYPE: Monitor Well

SITE ACTIVITY: START 0755 END 0925

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): 2.3 FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.27 FT

INITIAL DEPTH TO WATER: 12.30 FT

WELL DEPTH: 17.22 FT

PID AMBIENT AIR: — PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 12.74 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: — PPM

DRAWDOWN: 0.44 FT

DRAWDOWN VOLUME: 0.0704 GAL

PRODUCT THICKNESS: — FT

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.129 L/MIN

BEGIN PURGING: 0804

END PURGING: 0912

TOTAL VOL. PURGED: 2.28 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
0810	FC	6.93	0.927	0.5	3.48	10.00	224.9	12.46	
0818	1	6.98	0.909	0.2	3.92	9.41	215.5	12.58	
0826	1	6.99	0.907	0.1	5.18	9.26	212.2	12.64	
0840	2	7.00	0.903	0.6	5.27	9.05	210.6	12.74	
0847	1	7.00	0.902	0.4	5.16	~~9.22~~	213.4	12.76	
0854	1	6.99	0.901	0.0	5.01	9.16	217.6	12.79	
0903	1	6.99	0.902	0.0	4.99	9.38	223.9	12.76	
0912	1	6.99	0.901	0.0	5.04	9.55	230.3	12.75	
0915	—	—	—	Collect	Sample	—	—	—	—

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 14.75

SIGNATURE: _____

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	0915
[X]	~~VFAs~~		
[X]	Sulfate		0915
[X]	Methane/ethene		0915

Total depth = 17.21 ft btoc

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5/8/14

SITE ID: W-5

SITE TYPE: Monitor Well

SITE ACTIVITY: START 0800 END 0955

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.25 FT

INITIAL DEPTH TO WATER: 5.07 FT

WELL DEPTH: 21.8 FT

PID AMBIENT AIR: — PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 9.48 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: — PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP	X	—	—
CASING	X	—	—
LOCKED	X	—	—
COLLAR	—	—	X

DRAWDOWN: 4.41 FT

DRAWDOWN VOLUME: 0.71 GAL

PRODUCT THICKNESS: — FT

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.142 L/MIN ,166

BEGIN PURGING: 0803

END PURGING: 0935

TOTAL VOL. PURGED: 3.7 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
0807	2	5.80	0.913	2626	4.63	11.09	-9.1	6.61	☆
0819	2	6.65	0.860	31.3	1.83	10.92	-26.0	8.34	pump slow as possible
0831	2	6.64	0.864	7.2	0.41	10.94	-40.0	8.90	
0903	5.3	6.62	0.880	1.8	0.33	11.19	-44.6	9.38	
0921	3	6.62	0.892	1.6	0.30	11.53	-51.1	9.45	
0928	1	6.61	0.901	0.2	0.31	11.82	-50.5	9.48	
0935	1	6.61	0.904	7.3	0.30	11.89	-50.2	9.48	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 19.3

☆ yellow/tan colored water, rust colored flakes

sample clear w/ rust colored flakes

SIGNATURE: [signature]

NOTES

		Preservation	Time Collected
X	VOC (modified list)	HCL	0950
X	VFAs		
X	Sulfate		
X	Methane/ethene		

DUP-01 for VOCs

total depth 21.55' very soft

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5-8-14

SITE ID: BR-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1028 END 1230

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 2.3 FT

PROTECTIVE CASING / WELL DIFFERENCE: NA FT

INITIAL DEPTH TO WATER: 12.85 FT

WELL DEPTH: 38.6 FT

PID AMBIENT AIR: — PPM

WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: 13.64 FT

SCREEN LENGTH: NA FT

PID WELL MOUTH: — PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

DRAWDOWN: 0.79 FT

DRAWDOWN VOLUME: 0.5135 GAL

PRODUCT THICKNESS: — FT

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.143 L/MIN

BEGIN PURGING: 1036

END PURGING: 1217

TOTAL VOL. PURGED: 3.75 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1039	FC	7.06	0.780	56.1	3.07	13.27	-85.9	12.97	light brown
1052	2	6.91	0.837	49.9	0.26	12.67	-87.2	13.27	Emptied F.C.
1107	2	6.83	0.937	18.1	0.31	13.07	-79.1	13.38	
1115	1	6.82	0.919	17.2	0.20	13.00	-74.4	13.47	
1122	1	6.82	0.930	13.8	0.16	13.29	-74.4	13.50	
1129	1	6.78	0.981	7.8	0.13	13.21	-71.4	13.51	
1136	1	6.79	0.952	6.6	0.15	13.21	-71.0	13.54	
1143	1	6.79	0.954	3.6	0.12	13.29	-70.5	13.56	
1157	2	6.77	0.963	2.5	0.11	13.45	-69.3	13.60	
1203	1	6.78	0.936	7.7	0.08	13.35	-68.9	13.65	
1210	1	6.78	0.963	3.8	0.09	13.62	-68.2	13.65	
1217	1	6.77	0.966	0.8	0.10	13.54	-66.8	13.64	
1220	—	—	Collect Sample	—	—	—	—	—	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 23.5 BGS

SIGNATURE:

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	1220
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5/8/14

SITE ID: BR-02

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1000 END 1210

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.45 FT

INITIAL DEPTH TO WATER: 22.10 FT

WELL DEPTH: 44 FT

PID AMBIENT AIR: — PPM

WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: 22.72 FT

SCREEN LENGTH: NA FT

PID WELL MOUTH: — PPM

DRAWDOWN: 0.62 FT

DRAWDOWN VOLUME: 0.4 GAL

PRODUCT THICKNESS: — FT

WELL INTEGRITY:	YES	NO	N/A
CAP	X	—	—
CASING	X	—	—
LOCKED	X	—	—
COLLAR	—	—	X

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: .107 L/MIN (.133/.111/.142)

BEGIN PURGING: 1010

END PURGING: 1156

TOTAL VOL. PURGED: 2.6 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1015	FC	7.52	0.521	58.4	2.38	13.77	-59.8	22.32	
1030	2	7.46	0.494	26.4	0.74	13.37	-45.8	22.47	slowed pump
1039	1	7.45	0.497	27.5	0.70	13.53	-39.6	22.48	
1048	1	7.45	0.498	23.0	0.64	13.58	-36.2	22.54	
1100	1.5	7.52	0.499	22.6	0.62	13.67	-36.2	22.61	
1114	2	7.46	0.499	20.1	0.81	13.75	-50.3	22.67	
1122	1	7.46	0.501	18.8	0.70	13.90	-54.8	22.70	
1130	1	7.44	0.506	14.9	0.59	13.96	-52.5	22.70	
1137	0.75	7.08	0.898	1.8	0.60	14.13	-47.5	22.71	
1143	0.75	7.04	1.010	0.3	0.52	14.23	-47.9	22.71	
1149	0.75	7.03	1.027	0.1	0.50	14.44	-47.6	22.72	
1156	0.75	7.03	1.032	0.5	0.48	14.57	-45.9	22.72	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER _____

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] HIGH DENSITY POLYETHYLENE [ ] OTHER _____

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable): [ ] TEFLON [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 25.4 BGS

SIGNATURE: _____

NOTES

	Preservation	Time Collected
[X] VOC (modified list)	HCL	1200
[ ] VFAs		
[ ] Sulfate		
[ ] Methane/ethene		

Total Depth 41.3'

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5/8/14

SITE ID: BR-03

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1215 END 1445

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): 2.2 FT

PROTECTIVE CASING / WELL DIFFERENCE: — FT

INITIAL DEPTH TO WATER	9.21 FT	WELL DEPTH	40.1 FT	PID AMBIENT AIR	— PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	10.96 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	— PPM		
DRAWDOWN	1.75 FT	DRAWDOWN VOLUME	1.14 GAL	PRODUCT THICKNESS	— FT		

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.166 L/MIN .22/.25/.17/.15/.12

BEGIN PURGING: 1224

END PURGING: 1433

TOTAL VOL. PURGED: 5.5 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1227	fc	4.54	0.622	594.4	4.11	12.58	-192.0	9.60	
1244	4	7.72	0.582	69.1	1.53	12.38	-192.2	10.90	
1253	2	7.67	0.580	56.1	3.00	12.53	-184.2	11.21	
1257	1	17.66	0.585	59.4	1.10	12.85	-194.5	11.35	slowed pump
1321	4	7.62	0.600	46.7	0.48	13.67	-186.6	11.20	
1334	2	7.60	0.599	42.4	0.42	13.64	-185.6	11.10	
1355	3	7.59	0.602	34.8	0.37	13.83	-185.2	11.02	
1420	3	7.58	0.599	28.9	0.34	13.73	-179.2	10.98	
1426	1	7.57	0.596	30.2	0.34	13.61	-174.9	10.97	
1433	1	7.57	0.593	28.9	0.33	13.38	-175.2	10.96	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 23.5 bgs

initial slug very silty red/brown color
some black chunks

SIGNATURE: _____

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	1435
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

Total depth = 40.81 ft btoc

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5-7-14

SITE ID: BR-04

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1412 END

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.25 FT

INITIAL DEPTH TO WATER: 17.02 FT

WELL DEPTH: 44.2 FT

PID AMBIENT AIR: — PPM

WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: 17.02 FT

SCREEN LENGTH: NA FT

PID WELL MOUTH: — PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

DRAWDOWN: 0 FT

DRAWDOWN VOLUME: 0 GAL

PRODUCT THICKNESS: — FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: 0.156 L/MIN

BEGIN PURGING: 1417

END PURGING: 1553

TOTAL VOL. PURGED: 3.88 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1423	FC	7.77	0.931	66.8	1.78	15.16	-286.0	17.02	Yellow/ brown tint
1430	1	7.92	0.921	65.0	0.56	14.70	-325.9	17.02	Emptied F.C.
1443	2	7.03	1.610	43.4	1.34	14.67	-158.8	17.02	light brown
1450	1	7.05	1.600	39.9	0.77	14.52	-151.7	17.02	
1502	2	7.04	1.635	43.7	0.50	14.62	-154.9	17.02	Emptied F.C.
1514	2	7.03	1.705	36.5	1.02	14.46	-131.1	17.02	
1533	3	7.03	1.729	31.3	0.38	14.29	-149.9	17.02	
1540	1	7.03	1.740	31.7	0.35	14.29	-145.2	17.02	
1546	1	7.02	1.746	32.8	0.34	14.25	-141.9	17.02	
1553	1	7.03	1.743	30.9	0.33	14.23	-138.7	17.02	
1600	—	—	—	collect	Sample	—	—	—	—

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 26.5

SIGNATURE:

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	1600
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

Called Joe about turbidity. Will sample because turbidity is stable.

Collect MS/MSD VOC's @ 1600

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5-7-14

SITE ID: BR-10

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1300 END 1410

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

INITIAL DEPTH TO WATER	16.61 FT	WELL DEPTH	47 FT
FINAL DEPTH TO WATER	16.61 FT	SCREEN LENGTH	NA FT
DRAWDOWN	0 FT	DRAWDOWN VOLUME	0 GAL
PROTECTIVE CASING STICKUP (FROM GROUND)	FT	PID AMBIENT AIR	PPM
PROTECTIVE CASING / WELL DIFFERENCE	0.3 FT	PID WELL MOUTH	PPM
WELL DIAMETER	6 IN	PRODUCT THICKNESS	FT

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

PURGE RATE	BEGIN PURGING	END PURGING	TOTAL VOL. PURGED
0.162 L/MIN	1310	1355	1.90 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1314	FC	7.71	0.647	26.1	2.25	14.55	-144.5	16.61	lt. brown
1325	1	7.76	0.625	15.3	0.79	13.98	-140.3	16.61	
1337	2	7.76	0.624	8.0	0.50	13.73	-145.0	16.61	
1343	1	7.75	0.623	6.7	0.44	13.80	-135.0	16.61	
1349	1	7.75	0.623	6.0	0.45	13.88	-132.5	16.61	
1355	1	7.75	0.623	5.5	0.42	13.87	-130.5	16.61	
1400				collect	Sample				

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] HIGH DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[X] OTHER NA
[ ] OTHER _____	[ ] OTHER _____	[X] OTHER NA	

PURGE OBSERVATIONS

Tubing Intake @ 2-5.5

SIGNATURE: _____

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	1400
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5/7/14

SITE ID: BR-15

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1300 END 1640

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND)	— FT	PROTECTIVE CASING / WELL DIFFERENCE	0.35 FT		
INITIAL DEPTH TO WATER	18.37 FT	WELL DEPTH	72 FT	PID AMBIENT AIR	— PPM
WELL DIAMETER	6 IN	FINAL DEPTH TO WATER	21.76 FT	SCREEN LENGTH	NA FT
PID WELL MOUTH	— PPM	DRAWDOWN	3.39 FT	DRAWDOWN VOLUME	5.09 GAL
PRODUCT THICKNESS	— FT				

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED			
COLLAR			X

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: 0.1 L/MIN (.2/.125) BEGIN PURGING: 1306 END PURGING: 1621 TOTAL VOL. PURGED: 6.5 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1308	fc	7.41	0.583	12.3	0.580	16.23	-134.3	18.50	
1318	2	7.25	0.557	8.1	0.38	14.94	-130.8	18.82	
1333	3	7.30	0.555	3.1	0.25	14.93	-133.8	19.30	
1348	3	7.34	0.556	1.7	0.16	15.18	-136.8	19.78	slowed pump
1414	2	7.36	0.557	2.2	0.19	15.35	-133.5	20.38	
1431	2	7.36	0.556	2.4	0.22	15.34	-128.2	20.65	
1448	2	7.35	0.565	1.9	0.23	16.07	-141.8	20.85	
1457	1	7.36	0.563	1.1	0.23	16.03	-142.7	20.94	
1508	1	7.36	0.562	2.2	0.18	15.97	-142.3	21.00	sped pump up
1530	2	7.36	0.552	7.5	0.13	15.29	-149.8	21.20	
1543	2	7.36	0.550	5.6	0.14	15.21	-149.2	21.45	slowed pump
1608	3	7.37	0.546	4.1	0.13	15.02	-154.2	21.75	slowed pump
1614	0.6	7.35	0.550	3.0	0.14	15.41	-150.7	21.76	
1621	0.6	7.37	0.555	2.7	0.15	15.73	-150.8	21.76	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER _____

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] HIGH DENSITY POLYETHYLENE [ ] OTHER _____

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [X] OTHER NA

TYPE OF BLADDER MATERIAL (If applicable): [ ] TEFLON [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 29.5 bgs

SIGNATURE: _____

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	1625
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5/8/14

SITE ID: QAFB-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1420 END 1428

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [ ] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): NA FT

PROTECTIVE CASING / WELL DIFFERENCE: NA FT

INITIAL DEPTH TO WATER: NA FT

WELL DEPTH: NA FT

PID AMBIENT AIR: NA PPM

WELL DIAMETER: NA IN

FINAL DEPTH TO WATER: NA FT

SCREEN LENGTH: NA FT

PID WELL MOUTH: NA PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

DRAWDOWN: NA FT

DRAWDOWN VOLUME: NA GAL

PRODUCT THICKNESS: NA FT

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: NA L/MIN

BEGIN PURGING: NA

END PURGING: NA

TOTAL VOL. PURGED: NA GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
	~~Used Peristaltic pump and clean tubing to collect sample from DI water~~ CAP								
	Collected from DI water								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ _____

SIGNATURE: [signature]

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	1425
[ ]			
[ ]			
[ ]			

Q

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: —

SITE ID: QATB-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START — END —

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- ☐ TOP OF WELL RISER
- ☐ TOP OF PROTECTIVE CASING
- ☐ OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): NA FT

PROTECTIVE CASING / WELL DIFFERENCE: NA FT

INITIAL DEPTH TO WATER: NA FT

WELL DEPTH: NA FT

PID AMBIENT AIR: NA PPM

WELL DIAMETER: NA IN

FINAL DEPTH TO WATER: NA FT

SCREEN LENGTH: NA FT

PID WELL MOUTH: NA PPM

WELL INTEGRITY:	YES	NO	N/A
CAP	—	—	—
CASING	—	—	—
LOCKED	—	—	—
COLLAR	—	—	—

DRAWDOWN: NA FT

DRAWDOWN VOLUME: NA GAL

PRODUCT THICKNESS: NA FT

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: NA L/MIN

BEGIN PURGING: NA

END PURGING: NA

TOTAL VOL. PURGED: NA GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
LAB PROVIDED									

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☐ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ OTHER _____

TYPE OF TUBING
- ☐ TEFLON OR TEFLON LINED
- ☐ HIGH DENSITY POLYETHYLENE
- ☐ OTHER _____

TYPE OF PUMP MATERIAL
- ☐ POLYVINYL CHLORIDE
- ☐ STAINLESS STEEL
- ☐ OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- ☐ TEFLON
- ☐ OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ _____

SIGNATURE: _____

NOTES

		Preservation	Time Collected
X	VOC (modified list)	HCL	

Q

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 5/8/14

SITE ID: QARB-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1513 END 1518

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [ ] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): NA FT

PROTECTIVE CASING / WELL DIFFERENCE: NA FT

INITIAL DEPTH TO WATER: NA FT

WELL DEPTH: NA FT

PID AMBIENT AIR: NA PPM

WELL DIAMETER: NA IN

FINAL DEPTH TO WATER: NA FT

SCREEN LENGTH: NA FT

PID WELL MOUTH: NA PPM

DRAWDOWN: NA FT

DRAWDOWN VOLUME: NA GAL

PRODUCT THICKNESS: NA FT

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

WELL INTEGRITY:	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

PURGE RATE: NA L/MIN

BEGIN PURGING: NA

END PURGING: NA

TOTAL VOL. PURGED: NA GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
Used Peristaltic pump and clean tubing to collect sample from DI water									

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (If applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ _____

SIGNATURE: _____

NOTES

		Preservation	Time Collected
X	VOC (modified list)	HCL	1515

OCTOBER 2014
FIELD DATA RECORDS

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/20/14

SITE ID: BR-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START 0930 END 1120

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 2.3 FT

PROTECTIVE CASING / WELL DIFFERENCE: NA FT

INITIAL DEPTH TO WATER	14.41 FT	WELL DEPTH	38.6 FT	PID AMBIENT AIR	N/A PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	14.90 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	N/A PPM		
DRAWDOWN	1.49 FT	DRAWDOWN VOLUME	1.078 GAL	PRODUCT THICKNESS	N/A FT		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

WELL INTEGRITY:	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED	✓		
COLLAR	✓		

PURGE RATE: ~~0.435~~ 0.1 L/MIN

BEGIN PURGING: 0935

END PURGING: 1110

TOTAL VOL. PURGED: 1.05 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
0943	FC	8.20	0.566	15.7	0.47	13.37	-162.2	14.60	Black Flakes
0949	.75	8.43	0.545	13.2	0.36	13.35	-145.1	14.75	NO ODOR
0958	1	8.56	0.542	9.8	0.31	13.29	-215.0	14.84	"
1008	1	7.79	0.773	3.7	0.57	13.44	-156.5	14.81	"
1015	.75	7.45	0.851	2.9	0.65	13.38	-137.9	14.81	"
1028	.75	7.33	0.895	2.0	0.85	13.37	-131.3	14.83	"
1031	1	7.22	0.956	1.2	0.99	13.32	-118.2	14.84	"
1040	1	7.13	1.017	-0.3	1.15	13.27	-108.2	14.90	"
1049	1	7.06	1.032	-0.6	1.14	13.18	-43.1	14.90	"
1058	1	7.05	1.037	0.1	1.12	13.16	-87.6	14.90	"
1108	1	7.03	1.057	-0.7	1.10	13.10	-84.9	14.84	"
1110	Take Samples								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] HIGH DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[X] OTHER NA
[ ] OTHER	[ ] OTHER	[X] OTHER NA	

PURGE OBSERVATIONS

Tubing Intake @ 23.5

NOTES

		Preservation	Time Collected
[✓]	VOC (modified list)	HCL	1110
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

SIGNATURE:

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/29/14

SITE ID: BR-02

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1438 END

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.45 FT

INITIAL DEPTH TO WATER	23.12 FT	WELL DEPTH	44 FT	PID AMBIENT AIR	N/A PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	23.43 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	N/A PPM		
DRAWDOWN	0.31 FT	DRAWDOWN VOLUME	0.2015 GAL	PRODUCT THICKNESS	N/A FT		

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.099 L/MIN

BEGIN PURGING: 1447

END PURGING: 1544

TOTAL VOL. PURGED: 1.47 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1451	FC	7.64	0.663	21.1	0.81	14.62	-165.0	23.22	No odor
1500	1	7.67	0.634	14.0	0.18	14.55	-179.6	23.33	"
1509	1	7.66	0.634	12.3	0.08	14.20	-177.5	23.36	"
1517	1	7.66	0.633	11.4	0.05	14.02	-180.6	23.40	Slowed Pump
1525	0.75	7.68	0.634	10.9	0.04	13.97	-175.4	23.44	
1534	0.75	7.68	0.635	9.5	0.01	13.94	-168.1	23.44	
1544	0.75	7.67	0.636	9.3	0.00	14.05	-162.1	23.44	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] HIGH DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[X] OTHER NA
[ ] OTHER	[ ] OTHER	[X] OTHER NA	

PURGE OBSERVATIONS

Tubing Intake @ 25.4 BGS

SIGNATURE:

NOTES

		Preservation	Time Collected
[✓]	VOC (modified list)	HCL	1550
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/29/14

SITE ID: BR-03

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1308 END 1435

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 2.2 FT

PROTECTIVE CASING / WELL DIFFERENCE: — FT

INITIAL DEPTH TO WATER: 12.20 FT

WELL DEPTH: 40.1 FT

PID AMBIENT AIR: N/A PPM

WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: 13.11 FT

SCREEN LENGTH: NA FT

PID WELL MOUTH: N/A PPM

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

DRAWDOWN: 0.91 FT

DRAWDOWN VOLUME: 0.5915 GAL

PRODUCT THICKNESS: N/A FT

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.101 L/MIN

BEGIN PURGING: 1323

END PURGING: 1424

TOTAL VOL. PURGED: 1.60 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1327	FC	7.60	0.722	6.9	2.70	13.76	-161.8	12.41	odor - black flakes
1335	1	7.89	0.691	6.5	0.96	13.57	-150.8	12.64	
1343	1	7.96	0.691	5.8	0.94	13.58	-176.3	12.84	slowed pump
1352	0.75	7.78	0.732	4.9	0.78	13.63	-167.9	12.92	no odor
1400	0.75	7.74	0.763	4.4	0.57	13.70	-164.8	12.98	"
1408	0.75	7.70	0.776	3.9	0.31	13.87	-163.3	13.05	"
1416	0.75	7.67	0.782	3.8	0.30	14.25	-165.6	13.08	"
1424	0.75	7.65	0.799	3.8	0.28	13.78	-158.0	13.10	"

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] HIGH DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[X] OTHER NA
[ ] OTHER	[ ] OTHER	[X] OTHER NA	

PURGE OBSERVATIONS

Tubing Intake @ 23.5

SIGNATURE:

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	1430
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/22/14

SITE ID: BR-04

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1220 END 1410

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: .25 FT

INITIAL DEPTH TO WATER	19.03 FT	WELL DEPTH	44.2 FT	PID AMBIENT AIR	N/A PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	19.04 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	N/A PPM		
DRAWDOWN	.01 FT	DRAWDOWN VOLUME	0 GAL	PRODUCT THICKNESS	N/A FT		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

WELL INTEGRITY:

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED	✓		
COLLAR			✓

PURGE RATE: .143 L/MIN

BEGIN PURGING: 1223

END PURGING: 1355

TOTAL VOL. PURGED: 4.9 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1235	FC	7.07	0.483	43.3	0.93	14.66	-174.7	19.05	lightbrown
1243	1	7.30	1.110	22.1	0.07	14.75	-118.3	19.05	"
1249	1	7.14	1.472	9.3	0.02	14.64	-90.9	19.05	clear
1257	1	7.10	1.615	4.6	0.95	14.73	-71.6	19.05	"
1305	1	7.14	1.609	2.7	1.42	14.75	-65.3	19.05	"
1313	1	7.11	1.643	1.2	1.28	14.72	-62.1	19.05	"
1318	1	7.10	1.620	1.0	1.19	14.73	-74.2	19.04	"
1324	1	7.09	1.648	1.5	1.09	14.74	-64.0	19.04	"
1330	1	7.09	1.676	0.1	0.99	14.81	-68.7	19.05	"
1337	1	7.09	1.708	0	0.94	14.75	-66.1	19.05	"
1345	1	7.08	1.723	0.1	0.92	14.73	-64.6	19.04	"
1351	1	7.08	1.717	1.2	0.96	14.73	-66.5	19.03	"
1355	Take Sample								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 26 VS

10/24/14
CAL

Pre	Cal	Post
4.01	pH	4.00
6.44	pH	7.00
1.248	cond	1.415
240.6	ORP	240.1
0.3	DTW	0
158.9	1.26 NTU	126.0

SIGNATURE:

NOTES

	Preservation	Time Collected
[✓] VOC (modified list)	HCL	1355
[ ] VFAs		
[ ] Sulfate		
[ ] Methane/ethene		

MS/MSD
BR-04 (MS)
BR-04 (MSD)

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/29/14

SITE ID: BR-10

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1420 END 1555

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.3 FT

INITIAL DEPTH TO WATER	18.65 FT	WELL DEPTH	47 FT	PID AMBIENT AIR	N/A PPM	WELL DIAMETER	6 IN
FINAL DEPTH TO WATER	18.65 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	N/A PPM		
DRAWDOWN	0 FT	DRAWDOWN VOLUME	0 GAL	PRODUCT THICKNESS	N/A FT		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

WELL INTEGRITY:	YES	NO	N/A
CAP	✓	—	—
CASING	✓	—	—
LOCKED	✓	—	—
COLLAR	—	—	✓

PURGE RATE: 0.111 L/MIN

BEGIN PURGING: 1420

END PURGING: 1540

TOTAL VOL. PURGED: 3.32 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
# 1442	FC	7.71	0.663	52.8	0.73	16.19	-129.4	18.67	Light Brown
1450	1	7.72	0.661	11.3	0.70	15.58	-159.8	18.65	clear
1459	1	7.73	0.662	4.7	0.44	15.44	-169.0	18.65	"
1508	1	7.72	0.664	2.4	0.42	15.18	-166.5	18.65	"
1517	1	7.72	0.667	1.9	0.50	15.01	-166.5	18.65	"
1526	1	7.71	0.668	1.6	0.55	14.91	-166.4	18.65	"
1535	1	7.71	0.671	1.3	0.48	14.92	-166.8	18.65	"
1540	Take Samples								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] HIGH DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[X] OTHER NA
[ ] OTHER	[ ] OTHER	[X] OTHER NA	

PURGE OBSERVATIONS

Tubing Intake @ 25.5

Paused purging for 5 minutes to help

Moved to another well,

SIGNATURE: [signature]

NOTES

		Preservation	Time Collected
[✓]	VOC (modified list)	HCL	1540
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/28/14

SITE ID: BR-15

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1450 END 1715

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.35 FT

INITIAL DEPTH TO WATER	20.20 FT	WELL DEPTH	72 FT	PID AMBIENT AIR	N/A PPM	WELL DIAMETER	6 IN
FINAL DEPTH TO WATER	22.22 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	N/A PPM		
DRAWDOWN	2.02 FT	DRAWDOWN VOLUME	3.03 GAL	PRODUCT THICKNESS	N/A FT		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

WELL INTEGRITY:	YES	NO	N/A
CAP	X	—	—
CASING	X	—	—
LOCKED	X	—	—
COLLAR	—	—	X

PURGE RATE: 0.133 L/MIN

BEGIN PURGING: 1507

END PURGING: 1705

TOTAL VOL. PURGED: 4.08 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1510	FC	7.58	0.758	4.8	1.46	18.63	-116.3	20.30	Slight odor
1525	2	7.41	0.756	4.8	0.83	17.42	-126.1	20.95	
1537	2	7.39	0.740	6.5	0.69	17.73	-132.7	20.82	
1551	2	7.40	0.685	7.7	0.88	17.95	-152.4	21.15	
1610	3	7.57	0.624	8.8	0.96	17.46	-172.5	21.55	
1627	2	7.66	0.624	6.8	0.87	16.85	-166.5	21.85	Slowed pump
1637	1	7.71	0.630	6.0	0.85	17.73	-160.5	21.98	speed pump up
1652	2	7.63	0.637	6.6	0.78	17.24	-149.8	22.20	Slowed pump
1658	0.65	7.61	0.640	6.1	0.69	17.49	-139.6	22.21	
1705	0.65	7.57	0.643	6.0	0.67	17.37	-130.9	22.22	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] HIGH DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[X] OTHER NA
[ ] OTHER	[ ] OTHER	[X] OTHER NA	

PURGE OBSERVATIONS

Tubing Intake @ 29.5 bgs

SIGNATURE:

NOTES

	Preservation	Time Collected
[✓] VOC (modified list)	HCL	1707
[ ] VFAs		
[ ] Sulfate		
[ ] Methane/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/28/14

SITE ID: OB-Ø4

SITE TYPE: Monitor Well

SITE ACTIVITY: START Ø9ØØ END 142Ø

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER ______

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: Ø.3 FT

INITIAL DEPTH TO WATER: 4.48 FT

WELL DEPTH: 16.45 FT

PID AMBIENT AIR: N/A PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 6.75 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: N/A PPM

WELL INTEGRITY:

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED	✓		
COLLAR			✓

DRAWDOWN: 2.27 FT

DRAWDOWN VOLUME: .363 GAL

PRODUCT THICKNESS: N/A FT

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: .125 L/MIN

BEGIN PURGING: 1Ø907 / 1251

END PURGING: 14ØØ

TOTAL VOL. PURGED: 2.243 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units) ±.1	SpC (cond) (mS/cm) 3%	TURBIDITY (NTU) 10%	DISSOLVED O_2 (mg/L) 10%	TEMPERATURE (°C) 10%	REDOX POTENTIAL (mV) 10	WATER LEVEL	Comments
# Ø955	FC	6.54	1.311	2Ø.2	4.16	18.18	-142.5	~~5.69~~	5.95
1Ø11	1	6.15	1.316	36.4	9.97	18.43	-162.3	6.15	
1Ø19 Stop Purge, Pine to deliver new YSI, DO is incorrect									
1254 Restart Purge									
1259	FC	6.73	1.326	83.4	Ø.91	17.5Ø	-1Ø1.5	5.8Ø	Black flecks
13Ø8 ~~1259~~	1	6.77	1.3Ø8	43.Ø	Ø.48	17.52	-12Ø.6	6.1Ø	
1317	1	6.81	1.268	24.3	Ø.39	17.61	-126.7	6.3Ø	
1325	1	6.82	1.286	17.1	Ø.31	17.56	-130.6	6.6Ø	Pumping as
1334	1	6.82	1.299	15.5	Ø.29	17.61	-132.9	6.75	slow as
1342	.75	6.83	1.314	59.6★	Ø.33	17.93	-135.2	6.75	possible
1348	.75	6.83	1.339	62.2★	Ø.26	18.10	-135.9	6.75	
1356	.75	6.85	1.335	74.2	Ø.29	17.95	-138.2	6.73	
1400 Take Samples									

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER ______

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER ______

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 14

pre	Cal	post
4.Ø2	pH4	4.ØØ
7.Ø1	pH7	7.ØØ
Ø3	ØNTU	Ø
220.4	ORP	240.1
1.521	COND	1.413

SIGNATURE: [signature]

NOTES

		Preservation	Time Collected
✓	VOC (modified list)	HCL	14ØØ
✓	VFAs		
	Sulfate		
	Methane/ethene		

stopped Purging due to DO out from normal, Put new membrane on. Restart purging Ø945

★ turbidity is hopping around, will calibrate after this well.

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments, 2014 Semi-Annual Sampling Event

DATE: 10/28/14

SITE ID: CPB-06

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1445 END 1605

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER; [ ] TOP OF PROTECTIVE CASING; [ ] OTHER

INITIAL DEPTH TO WATER	4.52 FT	WELL DEPTH	16.45 FT	PID AMBIENT AIR	N/A PPM
FINAL DEPTH TO WATER	6.43 FT	SCREEN LENGTH	10 FT	PID WELL MOUTH	N/A PPM
DRAWDOWN	1.91 FT	DRAWDOWN VOLUME	.31 GAL	PRODUCT THICKNESS	N/A FT

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.4 FT

WELL DIAMETER: 2 IN

WELL INTEGRITY:	YES	NO	N/A
CAP	✓		
CASING			
LOCKED	✓		
COLLAR			✓

((Initial - final) x 0.16 {2-Inch} or x 0.65 {4-Inch} or x 1.5 {6-Inch})

PURGE RATE: .15 L/MIN

BEGIN PURGING: 1445

END PURGING: 1540

TOTAL VOL. PURGED: 2.54 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1452	FE	6.92	1.017	1.4	1.81	20.70	-39.3	5.60	
1458	.75	6.58	1.052	0.5	1.51	20.31	-34.5	5.91	
1503	.75	6.55	1.041	-0.2	1.46	20.13	-31.5	6.10	Pumping as
1508	.75	6.54	1.038	-0.5	1.55	19.78	-34.0	6.34	slowing as
1513	.75	6.49	1.041	-0.6	1.68	19.87	-41.9	6.40	possible
1519	.75	6.47	1.039	-0.5	1.75	20.26	-54.4	6.50	
1525	.75	6.45	1.044	-0.3	1.77	19.47	-61.6	6.52	
1530	.75	6.44	1.044	-0.1	1.91	20.28	-77.7	6.53	
1534	.75	6.43	1.054	-0.1	1.97	20.20	-84.0	6.55	
1540	.75	6.43	1.057	-0.5	2.04	20.37	-88.2	6.55	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC; [ ] SUBMERSIBLE; [ ] OTHER

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED; [X] HIGH DENSITY POLYETHYLENE; [ ] OTHER

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE; [ ] STAINLESS STEEL; [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable): [ ] TEFLON; [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 11.5

Replaced membrane on old "YSI" + it seems to work.

SIGNATURE: [signature]

NOTES

	Preservation	Time Collected
[✓] VOC (modified list)	HCL	1545
[✓] VFAs		
[✓] Sulfate		↓
[✓] Methane/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event
DATE: 10/28/14
SITE ID: OB-08
SITE TYPE: Monitor Well
SITE ACTIVITY: START 1255 END
JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER
PROTECTIVE CASING STICKUP (FROM GROUND): — FT
PROTECTIVE CASING / WELL DIFFERENCE: 0.35 FT

INITIAL DEPTH TO WATER	7.15 FT	WELL DEPTH	25.3 FT	PID AMBIENT AIR	N/A PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	9.34 FT	SCREEN LENGTH	10 FT	PID WELL MOUTH	N/A PPM		
DRAWDOWN	2.19 FT	DRAWDOWN VOLUME	0.3504 GAL	PRODUCT THICKNESS	N/A FT		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

PURGE RATE: 0.122 L/MIN
BEGIN PURGING: 1307
END PURGING: 1404
TOTAL VOL. PURGED: 1.81 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1310	FC	7.16	1.019	5.7	1.45	18.21	-130.4	7.57	
1324	2	7.17	1.003	4.5	0.92	18.20	-134.5	9.02	Purged as low as possible
1331	1	7.14	0.992	6.6	0.46	18.30	-136.8	9.27	
1339	1	7.13	0.993	8.0	0.46	18.23	-133.2	9.39	
1345	0.65	7.14	0.995	9.7	0.50	18.51	-128.0	9.41	
1351	0.65	7.13	0.991	11.6	0.51	18.73	-126.0	9.40	
1357	0.65	7.12	0.999	12.0	0.53	18.75	-128.9	9.39	
1404	0.65	7.12	1.006	12.2	0.51	18.65	-127.1	9.37	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] HIGH DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[X] OTHER NA
[ ] OTHER	[ ] OTHER	[X] OTHER NA	

PURGE OBSERVATIONS

Tubing Intake @ 20

SIGNATURE:

NOTES

	Preservation	Time Collected
[✓] VOC (modified list)	HCL	1408
[✓] VFAs		1408
[ ] Sulfate		
[ ] Methene/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/28/14

SITE ID: TW-04

SITE TYPE: Monitor Well

SITE ACTIVITY: START 0950 END

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 2.6 FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.25 FT

INITIAL DEPTH TO WATER: 12.02 FT

WELL DEPTH: 17.3 FT

PID AMBIENT AIR: N/A PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 15.05 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: N/A PPM

WELL INTEGRITY: CAP ✓ CASING ✓ LOCKED ✓ COLLAR ✓

DRAWDOWN: 3.03 FT

DRAWDOWN VOLUME: 0.4848 GAL

PRODUCT THICKNESS: N/A FT

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.135 L/MIN

BEGIN PURGING: 1017

END PURGING: 1135

TOTAL VOL. PURGED: 2.74 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1021	FC	6.80	0.771	8.0	4.75	16.10	38.7	12.62	
1028	2	6.97	0.795	6.8	5.65	16.56	-47.1	13.60	
1030	Stopped to replace DO membrane								
1041	FC	7.03	0.774	4.5	2.52	16.17	-69.8	14.12	
1047	1	7.14	0.756	4.1	1.29	15.95	-97.8	14.56	
1103	2	7.20	0.730	3.1	0.93	16.02	-99.3	14.52	
1110	1	7.22	0.708	3.3	0.93	15.92	-111.2	14.95	
1117	1	7.25	0.700	3.1	0.74	15.97	-116.1	14.96	
1125	1	7.30	0.685	3.0	0.57	16.07	-125.6	14.98	
1130	0.65	7.30	0.679	3.0	0.57	16.15	-129.3	15.02	
1135	0.65	7.32	0.669	3.0	0.54	16.08	-133.5	15.04	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [X] PERISTALTIC [ ] SUBMERSIBLE [ ] OTHER

TYPE OF TUBING: [ ] TEFLON OR TEFLON LINED [X] HIGH DENSITY POLYETHYLENE [ ] OTHER

TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable): [ ] TEFLON [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 14.8

YSI calibrate

Before		After
1.377	cond	1.413
0.0	ORP	0.0
161.1	126 ORP	125.9
6.89	7 pH	6.99
3.72	4 pH	4.01
9.92	10 pH	9.99
259.1	ORP	239.9

SIGNATURE:

NOTES

	Preservation	Time Collected
✓ VOC (modified list)	HCL	1140
✓ VFAs		1140
✓ Sulfate		1140
✓ Methane/ethene		1140

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/29/14

SITE ID: TW-09

SITE TYPE: Monitor Well

SITE ACTIVITY: START 0820 END

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND)	— FT	PROTECTIVE CASING / WELL DIFFERENCE	0.3 FT		
INITIAL DEPTH TO WATER	12.91 FT	WELL DEPTH	17.70 FT	PID AMBIENT AIR	N/A PPM
WELL DIAMETER	2 IN	FINAL DEPTH TO WATER	13.32 FT	SCREEN LENGTH	5 FT
PID WELL MOUTH	N/A PPM	DRAWDOWN	0.41 FT	DRAWDOWN VOLUME	0.0656 GAL
PRODUCT THICKNESS	N/A FT				

WELL INTEGRITY:	YES	NO	N/A
CAP	X	—	—
CASING	X	—	—
LOCKED	X	—	—
COLLAR	—	—	X

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.100 L/MIN BEGIN PURGING: 0837 END PURGING: 0921 TOTAL VOL. PURGED: 1.14 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
0841	FC	6.72	1.263	6.1	2.67	14.19	-70.2	13.00	
0851	1	6.91	0.806	4.5	1.52	15.10	-103.0	13.17	Sped pump up
0859	1	6.93	0.778	4.2	0.81	15.28	-107.6	13.32	slowed pump
0910	1	6.92	0.783	4.2	0.78	14.92	-108.2	13.30	
0921	1	6.92	0.785	3.8	0.79	14.99	-108.4	13.32	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] HIGH DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[X] OTHER NA
[ ] OTHER	[ ] OTHER	[X] OTHER NA	

PURGE OBSERVATIONS

Tubing Intake @ 15' BG

Before		After
1.410	cond	1.413
0.1	ONTU	0.0
124.6	126NTU	126.0
7.07	7pH	7.00
3.99	4pH	4.00
9.94	10pH	9.99
287.7	ORP	240.1

SIGNATURE:

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	0925
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/24/14

SITE ID: TW-17

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1620 END 1700

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): 2 FT

PROTECTIVE CASING / WELL DIFFERENCE: .25 FT

INITIAL DEPTH TO WATER: 10.18 FT

WELL DEPTH: 17.04 FT

PID AMBIENT AIR: N/A PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 14.80 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: N/A PPM

DRAWDOWN: 4.0 FT

DRAWDOWN VOLUME: 0.64 GAL

PRODUCT THICKNESS: N/A FT

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

WELL INTEGRITY:	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED			
COLLAR	✓		

PURGE RATE: .11 L/MIN

BEGIN PURGING: 1625

END PURGING: 1652

TOTAL VOL. PURGED: 0.78 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

	Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
9/4	1631	FC	6.49	1.439	63.3	2.41	18.43	-86.6	11.95	
★	1644	1	6.48	1.476	72.9	2.23	18.29	-89.8	12.85	
	1648	1	6.46	1.511	63.6	2.04	17.51	-92.1	14.25	
	1652	.175	6.47	1.536	51.3	2.24	17.27	-90.8	14.88	Dry
9/4	0840	Take Samples for parameters								
	0913	FC	6.64	1.840	92.3	1.72	18.42	-90.2	13.7	
	0921	1	6.64	1.912	86.4	1.80	14.03	-88.3	15.2	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing Intake @ 14.75

★ increased pump speed per historical data
- Well will run dry, will sample tomorrow

10/24/14 - Initial WL - 10.85'

SIGNATURE: _____

NOTES

		Preservation	Time Collected
✓	VOC (modified list)	HCL	0840
✓	VFAs		
✓	Sulfate		
✓	Methane/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/29/14

SITE ID: TW-20

SITE TYPE: Monitor Well

SITE ACTIVITY: START 0932 END 1120

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 2.3 FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.27 FT

INITIAL DEPTH TO WATER: 13.84 FT

WELL DEPTH: 17.22 FT

PID AMBIENT AIR: N/A PPM

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 15.10 FT

SCREEN LENGTH: 5 FT

PID WELL MOUTH: N/A PPM

WELL INTEGRITY:	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

DRAWDOWN: 1.26 FT

DRAWDOWN VOLUME: 0.2016 GAL

PRODUCT THICKNESS: N/A FT

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.085 L/MIN

BEGIN PURGING: 0942

END PURGING: 1105

TOTAL VOL. PURGED: 1.84 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
0946	FC	7.06	0.763	3.1	2.84	12.74	23.2	13.96	No odor
0954	1	7.04	0.837	2.7	1.52	13.02	31.4	14.11	"
1003	1	7.03	0.798	2.6	1.12	12.87	37.3	14.29	Slowed pump
1015	1	7.03	0.799	2.7	1.04	12.68	43.2	14.48	
1025	0.75	7.03	0.854	2.7	0.99	12.70	46.0	14.60	
1035	0.75	7.03	0.852	2.8	1.12	12.66	48.4	14.74	
1044	0.75	7.02	0.869	2.9	1.34	12.62	51.1	14.87	
1054	0.75	7.00	0.870	2.9	~~1.33~~ 2.70	12.45	56.4	14.94	
1105	0.75	7.00	0.884	0.4	1.33	12.52	60.3	14.98	

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] HIGH DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[X] OTHER NA
[ ] OTHER	[ ] OTHER	[X] OTHER NA	

PURGE OBSERVATIONS

Tubing Intake @ 15.20

SIGNATURE:

NOTES

		Preservation	Time Collected
[✓]	VOC (modified list)	HCL	1110
[ ]	VFAs		
[✓]	Sulfate		1110
[✓]	Methane/ethene		1110

Spoke with JOE about drawdown. Decided to sample before well dried.

GW_Sample_Form.xls

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/29/14

SITE ID: W-5

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1130 END

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.25 FT

INITIAL DEPTH TO WATER	7.04 FT	WELL DEPTH	21.8 FT	PID AMBIENT AIR	N/A PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	9.39 FT	SCREEN LENGTH	5 FT	PID WELL MOUTH	N/A PPM		
DRAWDOWN	2.35 FT	DRAWDOWN VOLUME	0.376 GAL	PRODUCT THICKNESS	N/A FT		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

WELL INTEGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

PURGE RATE: 0.104 L/MIN

BEGIN PURGING: 1138

END PURGING: 1242

TOTAL VOL. PURGED: 1.73 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1142	EC	6.73	1.273	4.1	1.61	13.97	-57.1	7.74	Slight Sulfur odor
1158	2	6.71	1.272	3.2	0.78	14.48	-68.6	9.11	" slowed pump
1218	2	6.71	1.280	3.0	0.93	14.41	-64.3	9.33	
1226	0.75	6.70	1.280	3.0	0.89	14.37	-63.0	9.38	NO odor
1234	0.75	6.69	1.281	2.9	0.84	14.37	-62.1	9.40	"
1242	0.75	6.69	1.280	2.9	0.81	14.37	-61.3	9.41	"

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] HIGH DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[X] OTHER NA
[ ] OTHER	[ ] OTHER	[X] OTHER NA	

PURGE OBSERVATIONS

Tubing Intake @ 19.3

SIGNATURE: [signature]

NOTES

	Preservation	Time Collected
[X] VOC (modified list)	HCL	1250
[X] VFAs		1250
[X] Sulfate		1250
[X] Methane/ethene		1250

Dup-01
VOCs only

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/29/14

SITE ID: QAFB-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1607 END 1612

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): NA FT

PROTECTIVE CASING / WELL DIFFERENCE: NA FT

INITIAL DEPTH TO WATER: NA FT

WELL DEPTH: NA FT

PID AMBIENT AIR: N/A PPM

WELL DIAMETER: NA IN

FINAL DEPTH TO WATER: NA FT

SCREEN LENGTH: NA FT

PID WELL MOUTH: N/A PPM

DRAWDOWN: NA FT

DRAWDOWN VOLUME: NA GAL

PRODUCT THICKNESS: N/A FT

WELL INTEGRITY:	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: NA L/MIN

BEGIN PURGING: NA

END PURGING: NA

TOTAL VOL. PURGED: NA GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
1610	collect sample from DI water								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing intake @ _____

SIGNATURE: _____

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	1610
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE: 10/29/14

SITE ID: QARB-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START 1613 END 1618

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): NA FT

PROTECTIVE CASING / WELL DIFFERENCE: NA FT

INITIAL DEPTH TO WATER	NA FT	WELL DEPTH	NA FT	PID AMBIENT AIR	N/A PPM	WELL DIAMETER	NA IN
FINAL DEPTH TO WATER	NA FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	N/A PPM		
DRAWDOWN	NA FT	DRAWDOWN VOLUME	NA GAL	PRODUCT THICKNESS	N/A FT		

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

WELL INTEGRITY:	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

PURGE RATE: NA L/MIN

BEGIN PURGING: NA

END PURGING: NA

TOTAL VOL. PURGED: NA GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
	Poured DI water through clean tubing								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
[X] PERISTALTIC	[ ] TEFLON OR TEFLON LINED	[ ] POLYVINYL CHLORIDE	[ ] TEFLON
[ ] SUBMERSIBLE	[X] HIGH DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[X] OTHER NA
[ ] OTHER _____	[ ] OTHER _____	[X] OTHER NA	

PURGE OBSERVATIONS

Tubing Intake @ _____

SIGNATURE: _____

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	1615
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

AMEC E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING VIA BAILER

PROJECT: Former Taylor Instruments 2014 Semi-Annual Sampling Event

DATE:

SITE ID: QATB-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START — END —

JOB NUMBER: 3031052006.33

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: — FT

INITIAL DEPTH TO WATER: NA FT

WELL DEPTH: — FT

PID AMBIENT AIR: N/A — PPM

WELL DIAMETER: — IN

FINAL DEPTH TO WATER: — FT

SCREEN LENGTH: — FT

PID WELL MOUTH: N/A PPM

DRAWDOWN: — FT

DRAWDOWN VOLUME: — GAL

PRODUCT THICKNESS: N/A FT

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

WELL INTEGRITY:	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

PURGE RATE: — L/MIN

BEGIN PURGING:

END PURGING:

TOTAL VOL. PURGED: — GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (°C)	REDOX POTENTIAL (mV)	WATER LEVEL	Comments
	LAB PROVIDED								

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] OTHER _____

TYPE OF TUBING
- [ ] TEFLON OR TEFLON LINED
- [X] HIGH DENSITY POLYETHYLENE
- [ ] OTHER _____

TYPE OF PUMP MATERIAL
- [ ] POLYVINYL CHLORIDE
- [ ] STAINLESS STEEL
- [X] OTHER NA

TYPE OF BLADDER MATERIAL (if applicable)
- [ ] TEFLON
- [X] OTHER NA

PURGE OBSERVATIONS

Tubing intake @ ~

SIGNATURE: [signature]

NOTES

		Preservation	Time Collected
[X]	VOC (modified list)	HCL	
[ ]	VFAs		
[ ]	Sulfate		
[ ]	Methane/ethene		

APPENDIX F

WELL CONSTRUCTION INFORMATION

Appendix F
Well Construction Information

2014 Annual Progress Report
and Remedial Progress Evaluation
Former Taylor Instruments Site
Rochester, New York

						Screen Interval		Survey Coordinates			Well Material	Completion		
Well ID	Date Installed	Well Purpose/Type	Well Location	Boring Depth	Well Depth	Top	Bottom	Easting	Northing	Elevation	Riser/Screen	Flush-mount	Vault	Stick-up
BR-01	09/02/97	Monitor	Perimeter	42.2	42.2	NA	NA	750364.06	1150086.89	531.92	Stainless / Open	X		
BR-02	09/02/97	Monitor	Perimeter	44.0	44.0	NA	NA	750541.81	1149964.51	532.39	Stainless / Open	X		
BR-03	09/02/97	Monitor	Perimeter	40.1	40.1	NA	NA	750552.93	1149641.68	536.32	Stainless / Open			X
BR-04	09/03/97	Monitor	South Source	44.2	44.2	NA	NA	750322.96	1149422.13	532.68	Stainless / Open	X		
BR-10	07/28/00	Monitor	South Source	47.0	47.0	NA	NA	750426.90	1149411.76	532.29	Iron / Open	X		
BR-15	07/26/00	Monitor	North Source	72.0	72.0	NA	NA	750293.39	1149980.43	531.69	Iron / Open	X		
OB-04	09/05/97	Monitor	South Source	17.5	17.5	2.5	17.5	750329.65	1149422.19	532.80	PVC	X		
OB-06	07/19/00	Monitor	South Source	17.0	17.0	6.8	16.8	750421.89	1149461.50	532.60	PVC	X		
OB-08	07/28/00	Monitor	North Source	25.5	25.3	15.3	25.1	750279.00	1149957.45	531.64	PVC	X		
TW-04	03/15/96	Monitor	Perimeter	17.5	17.3	12.3	17.3	750552.18	1149648.54	536.34	PVC			X
TW-09	03/30/96	Monitor	Perimeter	16.0	16.0	11.0	16.0	750542.22	1149971.84	532.30	PVC	X		
TW-17	03/13/96	Monitor	Perimeter	15.0	15.0	10.0	15.0	750373.39	1150088.34	531.86	PVC			X
TW-20	03/13/96	Monitor	Perimeter	15.0	15.0	10.0	15.0	750547.88	1150118.75	532.42	PVC			X
W-5	09/15/82	Monitor	Perimeter	24.0	20.5	15.5	20.5	750248.88	1150056.27	531.52	PVC	X		

Prepared by/Date: KJD 12/15/10
Checked by/Date: CRW 1/18/11