2017 ANNUAL PROGRESS REPORT

FORMER TAYLOR INSTRUMENTS SITE
95 AMES STREET
ROCHESTER, NEW YORK

PREPARED FOR:

ABB, INC.
131 PHOENIX CROSSING
BLOOMFIELD, CT 06002

PREPARED BY:

AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.
2030 FALLING WATERS ROAD, SUITE 300
KNOXVILLE, TN 37922

AMEC FOSTER WHEELER PROJECT 3031152028

March 2018

amec
foster
wheeler

March 12, 2018

Mr. Frank Sowers
Environmental Engineer II
NYSDEC
Division of Environmental Remediation
6274 East Avon-Lima Road
Avon, NY 14414-9519

Subject: **2017 Annual Progress Report**
Voluntary Cleanup Agreement (VCA) Index B8-0508-97-02
Former Taylor Instruments Facility
Rochester, New York
AMEC Project 3031152028

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 2017 Annual Progress Report. 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: Bernette Schilling, NYSDEC (w/o enclosure [*electronic*])
John Frazer, MCDOH (w/o enclosure)
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Jean McCreary, Nixon Peabody LLP (w/ 1 electronic enclosure)
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Rochester, New York

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Table No. **Description**

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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
mV	millivolt
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OM&M	Operations, Maintenance, and Monitoring
PARCC	precision, accuracy, representativeness, completeness, and comparability
PCE	tetrachloroethene
QC	quality control
RPD	relative percent difference
Site	former Taylor Instruments Site
TCE	trichloroethene
VFA	volatile fatty acid
VC	vinyl chloride
VOC	volatile organic compound

1.0 INTRODUCTION

This annual progress report summarizes the results from groundwater sampling events conducted in May and November 2017. 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 2017 groundwater sampling events were the seventh year of sampling since Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) completed an expanded accelerated bioremediation application using 3-D Microemulsion® (3DMe®) in 2010 as the final required active Site remediation. This continued groundwater sampling is consistent with the objective stated in Amec Foster Wheeler's approved *Revised Work Plan for Accelerated Bioremediation and Permanent Decommissioning of the Remedial Treatment System* (MACTEC, 2010); an expanded accelerated bioremediation application followed by monitored natural attenuation as the final remedy for the Site. 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, 2018).

The first semi-annual groundwater sampling event for 2017 was conducted in May and the second in November. A summary of the sampling event results from 2001-2017, including results for the 2010 3DMe® baseline event, are included in this report.

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

In the 2016 *Periodic Review Report* (Amec Foster Wheeler, 2017), Amec Foster Wheeler requested modifying the sampling frequency from semi-annual (twice a year) to annual (once a year) based on the continued demonstrated plume stability. This request was approved by NYSDEC for the overburden wells but not for the bedrock wells (NYSDEC, 2017). Based on the approval from NYSDEC, Amec Foster Wheeler personnel performed the May and November sampling events to provide an inclusive set of groundwater analytical data for the 2017 reporting period. During the May sampling event of overburden and bedrock wells, 20 samples were collected, while during the November sampling event of bedrock wells only, 12 samples were collected. The samples were submitted to Test America, Inc. for volatile organic compound (VOC) analyses by U.S. Environmental Protection Agency (EPA) Method 8260C (Table 1, Appendix C). As approved by NYSDEC in the revised 2011 *Operations, Maintenance, and Monitoring Manual* (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 2017 sampling events are presented in tables in Appendix C. Additionally, to further assess biological parameters supportive for contaminant degradation, selected samples collected during the May sampling event were also analyzed for methane/ethane by Method EPA RSK175. The methane/ethane samples were analyzed by 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 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 2017 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 2017. The results summary focuses primarily on the most recent results for each location during the 2017 sampling events. 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 2017 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. COCs in three of the eight overburden wells are presently near or below the NYSDEC Class GA standards, including monitoring wells TW-04 and TW-09 along the downgradient eastern property boundary, as shown in Figure 4 (Appendix A). COCs in the North Source Area bedrock well BR-15 are near the NYSDEC Class GA Standards.

As shown in Tables 1 and 2 (Appendix C), during the 2017 sampling events; PCE was not detected at any location above 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 six 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 one overburden monitoring well and three bedrock monitoring wells; 1,1-DCE was not detected at any location above the NYSDEC Class GA Standard of 5 µg/L; 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.

Following the expanded accelerated bioremediation application of 3DMe® in the overburden groundwater, total contaminant mass has been reduced from pre-injection values. Looking at specific COCs, the TCE contaminant mass in overburden wells has decreased steadily from 8.8 µmole/L prior to injection to 1.1 µmole/L in May 2017, demonstrating that the 3DMe® has been effective in reducing site source

contamination. Cis-1,2-DCE and vinyl chloride concentrations increased in source area monitoring wells OB-04 (South Source Area) and OB-08 (North Source Area) and in north plume well TW-17 as compared to October 2017, likely due to an abnormally high water table that was an average of 1.3 feet higher than the previous sampling event in November 2016, with five of the eight overburden monitoring wells having the highest water table since post-injection monitoring began in 2011. It's notable, however, that all three wells have had comparable concentrations post-2010 injection, e.g., OB-04 in 2011 and OB-08/TW-17 in May 2016. Despite these wells having had comparable concentrations post-injection, both the north and south plumes continue to demonstrate stability based on downgradient perimeter concentrations in TW-04 and TW-09 being below the standards. All other COCs are at minimal concentrations or were not detected. The overburden contaminant mass values are depicted on Figure 4 (Appendix A).

While decreases in contaminant mass have been noted in the affected overburden groundwater, the corresponding response in the bedrock groundwater has been slower, although evidence of contaminant biodegradation is apparent. Looking at specific COCs, the TCE contaminant mass has decreased from 14.2 µmole/L in the May 2010 pre-injection baseline event to 12.2 µmole/L in November 2017 a 14% decrease from May 2010; the cis-1,2-DCE contaminant mass has increased from 7.5 µmole/L in May 2010 to 28.4 µmole/L in November 2017, likely influenced by the degradation of TCE; and the vinyl chloride contaminant mass has increased from 0.1 µmole/L in May 2010 to 6.6 µmole/L in November 2017, reflecting biodegradation of TCE and cis-1,2-DCE. All other COCs have had lower concentrations or were not detected. Although historically bedrock concentrations have varied considerably, the overall decreases in TCE contaminant mass in correlation with overall more recent increases in TCE daughter products (cis-1,2-DCE and vinyl chloride) indicate that the bedrock groundwater has been affected by the enhanced contaminant biodegradation in the overburden groundwater. Specific evidence of this is in former North TCE Source Area bedrock well BR-15 where following the 2010 injection COCs have decreased to near or below their NYSDEC Class GA standards.

Seven years after completion of the expanded accelerated bioremediation application using 3DMe® in 2010 as the final required active Site remediation, the overburden groundwater contaminant plume in the southern portion of the Site has been stable for the past few years. As shown in Table 3 (Appendix C), downgradient perimeter monitoring well TW-04 has had COCs below their respective NYSDEC Class GA standards for the past two years. Additionally, COCs in downgradient plume well OB-06 dropped sharply in May 2017 and are now near the NYSDEC Class GA Standards for the first time ever.

The overburden groundwater contaminant plume in the northern portion of the Site is also demonstrating evidence of plume stability, as downgradient perimeter monitoring well TW-09 had COC's below their respective NYSDEC Class GA standards in May 2017, the first time in several years this has occurred. Additionally, downgradient perimeter well TW-20 has seen recent declines in contaminant mass.

The May 2017 field parameter data indicate that enhanced reducing conditions continue to be present based on the following:

- The average pH in the Site overburden wells has been reduced from 7.4 in the 2010 baseline sampling event to a neutral 7.0 in May 2017.
- The average oxygen reduction potential in the Site overburden wells has been reduced from 45 millivolts (mV) (2010 baseline) to -80 mV in May 2017.
- The average dissolved oxygen in the Site overburden wells has been reduced from 1.54 milligrams per liter (mg/L) (2010 baseline) to 1.11 mg/L in May 2017.
- Methane, an indicator of biological activity, is also very robust in most wells for which it was sampled in May 2017, i.e., Site overburden wells TW-04, OB-06, TW-17, and W-5, ranging from 46 µg/L to 27,000 µg/L.

2.3 POTENTIOMETRIC SURFACE

Associated with each monitoring event, a potentiometric surface map was generated to depict groundwater elevations for the overburden groundwater. AutoCAD 2015 was used to plot the potentiometric surface maps in Figures 6 and 8 (Appendix A). The program mathematically calculates contours based upon groundwater elevation measurements collected in the field.

The May and October 2017 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 generally comparable to past groundwater mapping indicating groundwater flow is generally to the northeast. East perimeter well TW-04 had slightly elevated groundwater elevations in 2017, associated with an abnormally high Site-wide water table. This higher elevation resulted in TW-04 appearing to be upgradient of monitoring well OB-04; however, based on historical potentiometric surface mapping TW-04 is located downgradient of OB-04.

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 former 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 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 2017 sampling event and one MS/MSD analysis for the November 2017 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-15 – May 2017

Analyte	MS Value (µg/L)	Recovery (%)	MSD Value (µg/L)	MSD Recovery (%)	RPD	Control Limits (%)	RPD Limit
1,1-Dichloroethene	23.79	119	24.73	124	4	54-150	17
cis-1,2-DCE	24.03	120	23.76	119	1	68-131	17
Tetrachloroethene	22.44	112	22.44	112	0	57-138	16
trans-1,2-DCE	22.82	114	22.38	112	2	59-143	16
Trichloroethene	22.63	110	22.16	108	2	63-135	17
Vinyl Chloride	21.56	108	21.44	107	1	57-150	17

BR-15 – November 2017

Analyte	MS Value (µg/L)	Recovery (%)	MSD Value (µg/L)	MSD Recovery (%)	RPD	Control Limits (%)	RPD Limit
1,1-Dichloroethene	22.81	114	19.36	97	16	54-150	17
cis-1,2-DCE	27.77	113	25.91	103	7	68-131	17
Tetrachloroethene	19.65	98	21.82	109	10	57-138	16
trans-1,2-DCE	23.08	114	20.49	101	12	59-143	16
Trichloroethene	21.98	98	21.87	97	1	63-135	17
Vinyl Chloride	29.03	125	25.16	105	14	57-150	17

The RPDs did not exceed 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 2017 and one duplicate sample for the November 2017 sampling event. Field duplicate precision is presented in the following tables.

W-5 – May 2017

Sample ID	Analyte	Practical Quantitation Limit	Sample Result (µg/L)	Flag	Duplicate Result (µg/L)	Flag	RPD
W-5	cis-1,2-Dichloroethene	1	122		112		8.5
	trans-1,2-Dichloroethene	1	11.7		9.03		25.8
	Trichloroethene	1	78.5		87.4		10.7
	Vinyl Chloride	1	74.2		59.0		22.8

BR-15 – November 2017

Sample ID	Analyte	Practical Quantitation Limit	Sample Result (µg/L)	Flag	Duplicate Result (µg/L)	Flag	RPD
BR-15	cis-1,2-Dichloroethene	1	5.22		5.70		8.8
	trans-1,2-Dichloroethene	1	ND		ND		0
	Trichloroethene	1	2.43		2.33		4.2
	Vinyl Chloride	1	4.06		5.20		24.6

Field duplicate precision was evaluated between the two data sets for detected compounds. The RPDs did not exceed 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 2017 event and one field blank for the November 2017 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 2017 or November 2017.

One trip blank was analyzed during the May 2017 and November 2017 sampling events 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 2017 event and the November 2017 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 sampling events that occurred from 2001-2017 provides an evaluation of the Site remedial progress. The following overall conclusions and recommendations have been reached in this 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. COCs in three of the eight overburden wells are presently near or below the NYSDEC Class GA standards, including TW-04 and TW-09 along the downgradient eastern property boundary.

- Since the 3DMe® injection, the total overburden groundwater contaminant mass has been reduced from pre-injection values. The decrease in contaminant mass indicates that the 3DMe® has enhanced contaminant biodegradation in the overburden monitoring wells.

- Bedrock groundwater has 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 the southern portion of the Site the overburden groundwater contaminant plume has been stable for the past few years, as source area monitoring well OB-04 has had COC's near or below their respective NYSDEC Class GA Standards since May 2012, except for the recent May 2017 event which had an abnormally high water table. Additionally, downgradient perimeter well TW-04 has had COCs below their respective NYSDEC Class GA Standards for the past two years, while COCs in downgradient plume well OB-06 are now near NYSDEC Class GA Standards for the first time ever.

- In the northern portion of the Site the overburden groundwater contaminant plume is also demonstrating evidence of plume stability, as downgradient perimeter well TW-09 has COCs below the NYSDEC Class GA Standards. Downgradient perimeter well TW-20 also has seen recent declines in its contaminant mass.

- Groundwater monitoring events will continue to be conducted semi-annually for the six bedrock wells and annually for the eight overburden 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 *OM&M Manual* (MACTEC, 2011), the groundwater samples will be analyzed for the full suite of

8260C constituents 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.

- As requested by NYSDEC (NYSDEC, 2018), the Site Periodic Review Report is provided in Appendix B of this report.

5.0 REFERENCES

Amec Foster Wheeler, 2017. *2016 Annual Progress report and Remedial Progress Evaluation, Former Taylor Instruments Site, Rochester New York.* March 7.

MACTEC, 2010. *Revised Work Plan for Accelerated Bioremediation and Permanent Decommissioning of the Remedial Treatment System, Former Taylor Instruments Site, Rochester, New York.* June 11.

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).

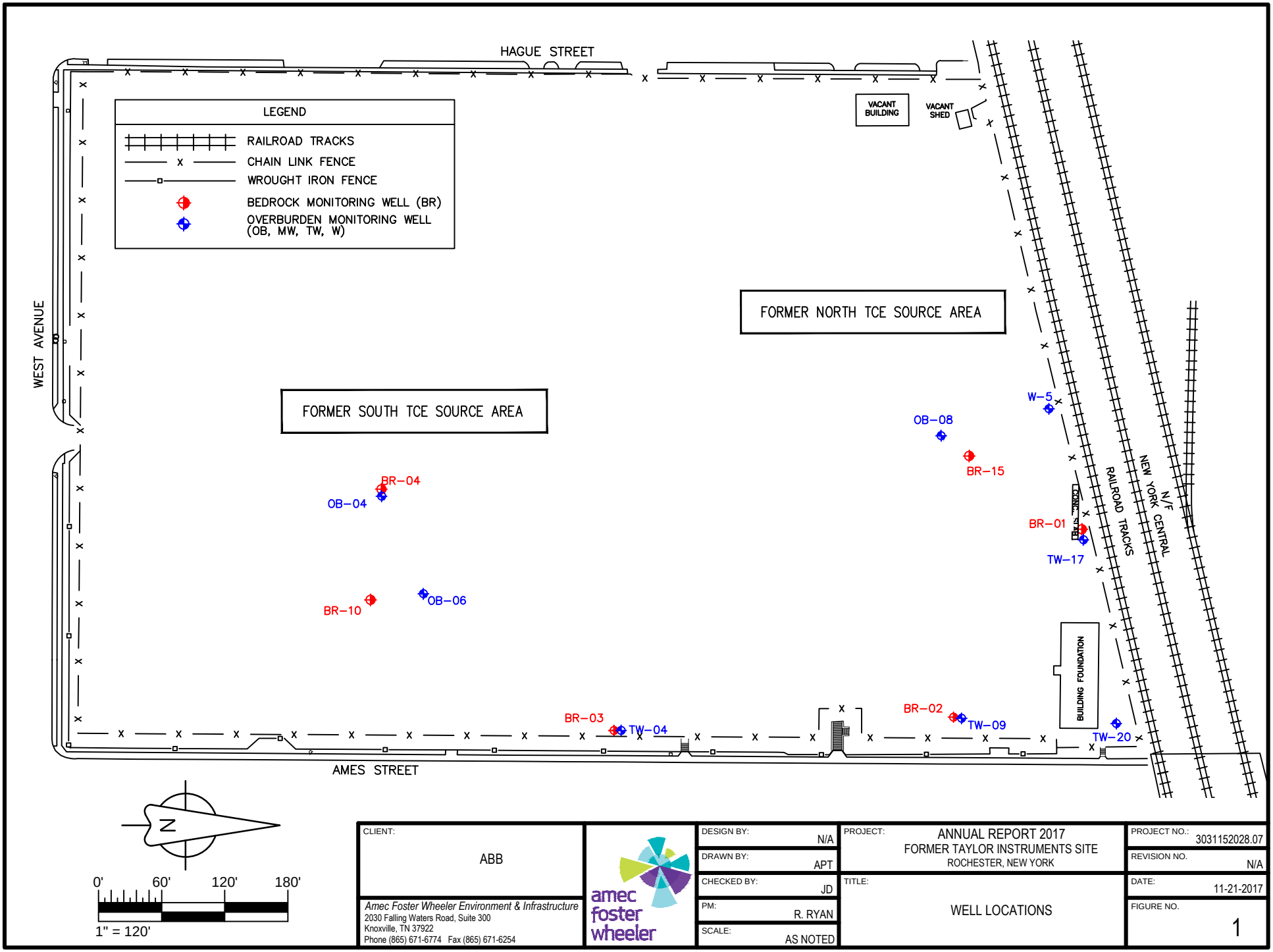
NYSDEC, 2017. *Site Management (SM) Periodic Review Report (PRR) Response Letter, Former Taylor Instruments Facility, Rochester, Monroe County, Site No. V00144.* March 30.

NYSDEC, 2018. *Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal.* Prepared by the New York State Department of Environmental Conservation. January 4.

APPENDIX A

FIGURES

Plotted By: Troxel, Paul Sheet Set: N/A Layout: 01 November 21, 2017 08:27:58am
P:\CADD\Projects\3031\3031152028 ABB Rochester NY\Task 07\2017 Annual Report\F01 Well Locations.dwg



CLIENT: ABB	DESIGN BY: N/A	PROJECT: ANNUAL REPORT 2017 FORMER TAYLOR INSTRUMENTS SITE ROCHESTER, NEW YORK	PROJECT NO.: 3031152028.07
	DRAWN BY: APT		REVISION NO. N/A
	CHECKED BY: JD	TITLE: WELL LOCATIONS	DATE: 11-21-2017
	PM: R. RYAN		FIGURE NO. 1
	SCALE: AS NOTED		

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HAGUE STREET

WEST AVENUE

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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
NS	NOT SAMPLED

SITE ID

Site ID:OB-XX	NYSDEC CLASS GA groundwater standard	(units:ug/L)
Analyte		MAY 08 — DATE SAMPLED
PCE	5	1 U — NOT DETECTED AT THE INDICATED QUANTITATION LIMIT
TCE	5	1 U
cis-1,2-DCE	5	2.1 — DETECTED BELOW NYSDEC CLASS GA STANDARD
trans-1,2-DCE	5	8.07 — DETECTED ABOVE NYSDEC CLASS GA STANDARD
1,1-DCE	5	1 U
Vinyl Chloride	2	47.8

NOTES:

1. HISTORICAL HIGH OBTAINED FROM DATA FROM THE TIME FRAMES OF ACTIVE REMEDIATION OCT/NOV 2000 TO PRESENT.
2. 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-17	Nov-17
PCE	2.41	1 U	1 U	NS
TCE	1,435	601	78.5	NS
cis-1,2-DCE	340	164	122	NS
trans-1,2-DCE	13.1	2.08	11.7	NS
1,1-DCE	1 U	1 U	1 U	NS
Vinyl Chloride	74.2	5.04	74.2	NS

Site ID: OB-04				(units: µg/L)
Analyte	Historical High	Baseline	May-17	Nov-17
PCE	19.9	1 U	1 U	NS
TCE	71,500	5.76	2.63	NS
cis-1,2-DCE	56,000	5.69	225	NS
trans-1,2-DCE	170	1.77	3.57	NS
1,1-DCE	108	1 U	1 U	NS
Vinyl Chloride	145	9.74	72	NS

Site ID: OB-08				(units: µg/L)
Analyte	Historical High	Baseline	May-17	Nov-17
PCE	13.1	1 U	1 U	NS
TCE	40,000	1 U	1 U	NS
cis-1,2-DCE	3,750	30.5	6	NS
trans-1,2-DCE	32	3.44	3.99	NS
1,1-DCE	12.9	1 U	1 U	NS
Vinyl Chloride	249	36	29.2	NS

Site ID: TW-17				(units: µg/L)
Analyte	Historical High	Baseline	May-17	Nov-17
PCE	1 U	1 U	1 U	NS
TCE	1,000	316	35.4	NS
cis-1,2-DCE	556	10.6	192	NS
trans-1,2-DCE	5.92	1 U	4.33	NS
1,1-DCE	1 U	1 U	1 U	NS
Vinyl Chloride	130	1 U	84.5	NS

Site ID: OB-06				(units: µg/L)
Analyte	Historical High	Baseline	May-17	Nov-17
PCE	1 U	1 U	1 U	NS
TCE	5,600	105	3.26	NS
cis-1,2-DCE	240	10.5	2.93	NS
trans-1,2-DCE	9 J	1 U	1 U	NS
1,1-DCE	1.6	1 U	1 U	NS
Vinyl Chloride	20.6	1 U	6.84	NS

Site ID: TW-04				(units: µg/L)
Analyte	Historical High	Baseline	May-17	Nov-17
PCE	1 U	1 U	1 U	NS
TCE	51.1	5.32	1 U	NS
cis-1,2-DCE	79	1 U	1 U	NS
trans-1,2-DCE	1 U	1 U	1 U	NS
1,1-DCE	1 U	1 U	1 U	NS
Vinyl Chloride	1 U	1 U	1 U	NS

Site ID: TW-09				(units: µg/L)
Analyte	Historical High	Baseline	May-17	Nov-17
PCE	1 U	1 U	1 U	NS
TCE	230	56.7	2.49	NS
cis-1,2-DCE	38.9	12.8	1 U	NS
trans-1,2-DCE	34.6	14.3	1 U	NS
1,1-DCE	1 U	1 U	1 U	NS
Vinyl Chloride	21	1 U	1 U	NS

Site ID: TW-20				(units: µg/L)
Analyte	Historical High	Baseline	May-17	Nov-17
PCE	1 U	1 U	1 U	NS
TCE	107	65.9	19.2	NS
cis-1,2-DCE	8.3	2.34	1.99	NS
trans-1,2-DCE	1 U	1 U	1 U	NS
1,1-DCE	1 U	1 U	1 U	NS
Vinyl Chloride	1 U	1 U	1 U	NS

BR-04 OB-04 BR-10 OB-06 BR-03 TW-04 BR-02 TW-09 OB-08 BR-15 W-5 BR-01 TW-17 TW-20

0' 40' 80' 120'

1" = 80'

CLIENT: ABB	DESIGN BY: N/A	PROJECT: ANNUAL REPORT 2017 FORMER TAYLOR INSTRUMENTS SITE ROCHESTER, NEW YORK	PROJECT NO.: 3031152028.07
Amec Foster Wheeler Environment & Infrastructure 2030 Falling Waters Road, Suite 300 Knoxville, TN 37922 Phone (865) 671-6774 Fax (865) 671-6254	DRAWN BY: APT		REVISION NO. N/A
	CHECKED BY: JD	TITLE: VOCs IN OVERBURDEN MONITORING WELLS	DATE: 11-21-2017
	PM: R. RYAN		FIGURE NO. 2
	SCALE: AS NOTED		

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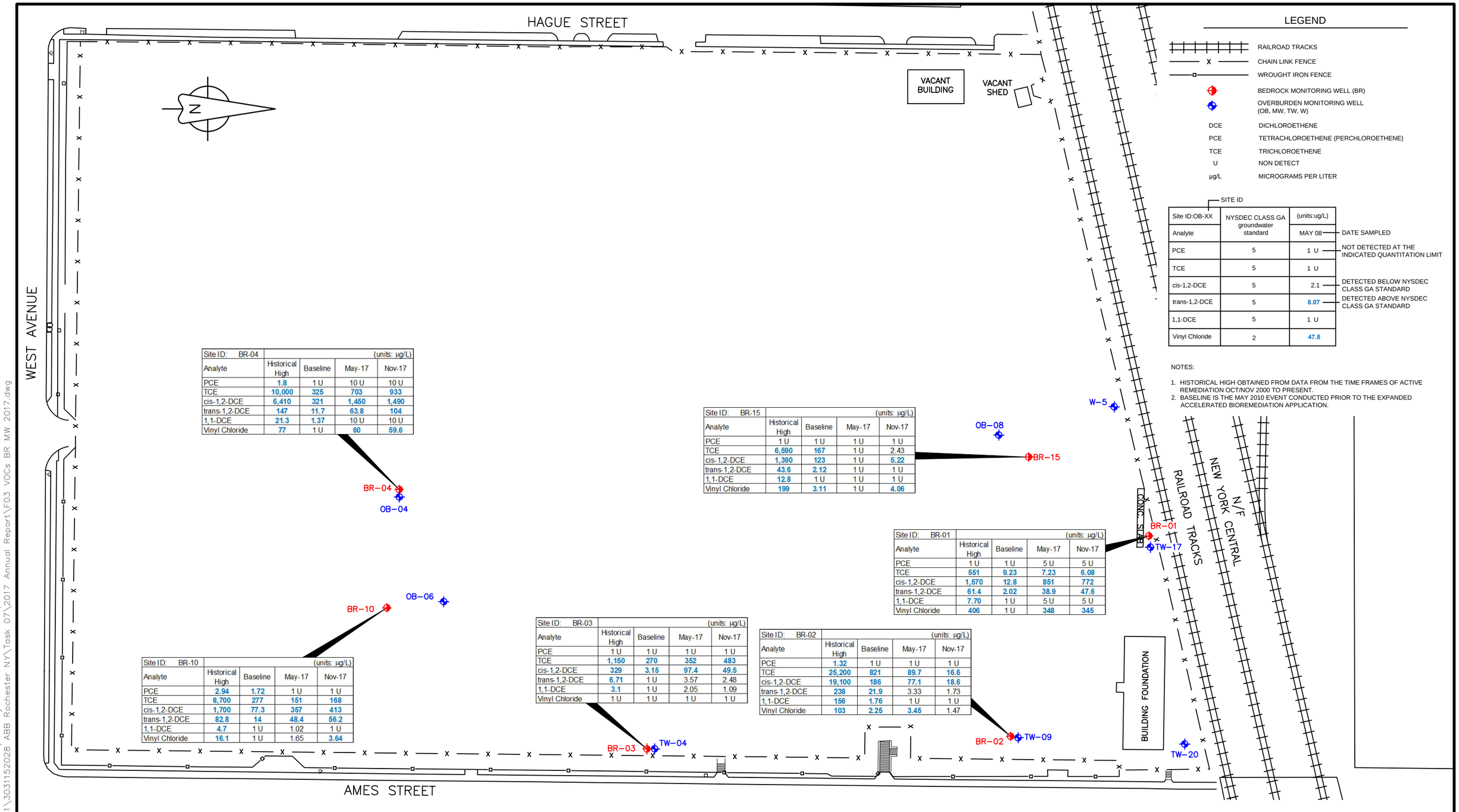

Site ID: BR-04				(units: µg/L)
Analyte	Historical High	Baseline	May-17	Nov-17
PCE	1.8	1 U	10 U	10 U
TCE	10,000	325	703	933
cis-1,2-DCE	6,410	321	1,450	1,490
trans-1,2-DCE	147	11.7	63.8	104
1,1-DCE	21.3	1.37	10 U	10 U
Vinyl Chloride	77	1 U	60	59.6

Site ID: BR-15				(units: µg/L)
Analyte	Historical High	Baseline	May-17	Nov-17
PCE	1 U	1 U	1 U	1 U
TCE	6,590	167	1 U	2.43
cis-1,2-DCE	1,390	123	1 U	5.22
trans-1,2-DCE	43.6	2.12	1 U	1 U
1,1-DCE	12.8	1 U	1 U	1 U
Vinyl Chloride	199	3.11	1 U	4.06

Site ID: BR-01				(units: µg/L)
Analyte	Historical High	Baseline	May-17	Nov-17
PCE	1 U	1 U	5 U	5 U
TCE	551	9.23	7.23	6.08
cis-1,2-DCE	1,570	12.8	851	772
trans-1,2-DCE	61.4	2.02	38.9	47.6
1,1-DCE	7.70	1 U	5 U	5 U
Vinyl Chloride	406	1 U	348	345

Site ID: BR-10				(units: µg/L)
Analyte	Historical High	Baseline	May-17	Nov-17
PCE	2.94	1.72	1 U	1 U
TCE	8,700	277	151	168
cis-1,2-DCE	1,700	77.3	357	413
trans-1,2-DCE	82.8	14	48.4	56.2
1,1-DCE	4.7	1 U	1.02	1 U
Vinyl Chloride	16.1	1 U	1.65	3.64

Site ID: BR-03				(units: µg/L)
Analyte	Historical High	Baseline	May-17	Nov-17
PCE	1 U	1 U	1 U	1 U
TCE	1,150	270	352	483
cis-1,2-DCE	329	3.15	97.4	49.5
trans-1,2-DCE	6.71	1 U	3.57	2.48
1,1-DCE	3.1	1 U	2.05	1.09
Vinyl Chloride	1 U	1 U	1 U	1 U

Site ID: BR-02				(units: µg/L)
Analyte	Historical High	Baseline	May-17	Nov-17
PCE	1.32	1 U	1 U	1 U
TCE	25,200	821	89.7	16.6
cis-1,2-DCE	19,100	186	77.1	18.6
trans-1,2-DCE	238	21.9	3.33	1.73
1,1-DCE	156	1.76	1 U	1 U
Vinyl Chloride	103	2.25	3.45	1.47

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

SITE ID

Site ID:OB-XX	NYSDEC CLASS GA groundwater standard	(units:ug/L)
Analyte		MAY 08 — DATE SAMPLED
PCE	5	1 U — NOT DETECTED AT THE INDICATED QUANTITATION LIMIT
TCE	5	1 U
cis-1,2-DCE	5	2.1 — DETECTED BELOW NYSDEC CLASS GA STANDARD
trans-1,2-DCE	5	8.07 — DETECTED ABOVE NYSDEC CLASS GA STANDARD
1,1-DCE	5	1 U
Vinyl Chloride	2	47.8

NOTES:

1. HISTORICAL HIGH OBTAINED FROM DATA FROM THE TIME FRAMES OF ACTIVE REMEDIATION OCT/NOV 2000 TO PRESENT.
2. BASELINE IS THE MAY 2010 EVENT CONDUCTED PRIOR TO THE EXPANDED ACCELERATED BIOREMEDIATION APPLICATION.

0' 40' 80' 120'
1" = 80'

CLIENT: ABB

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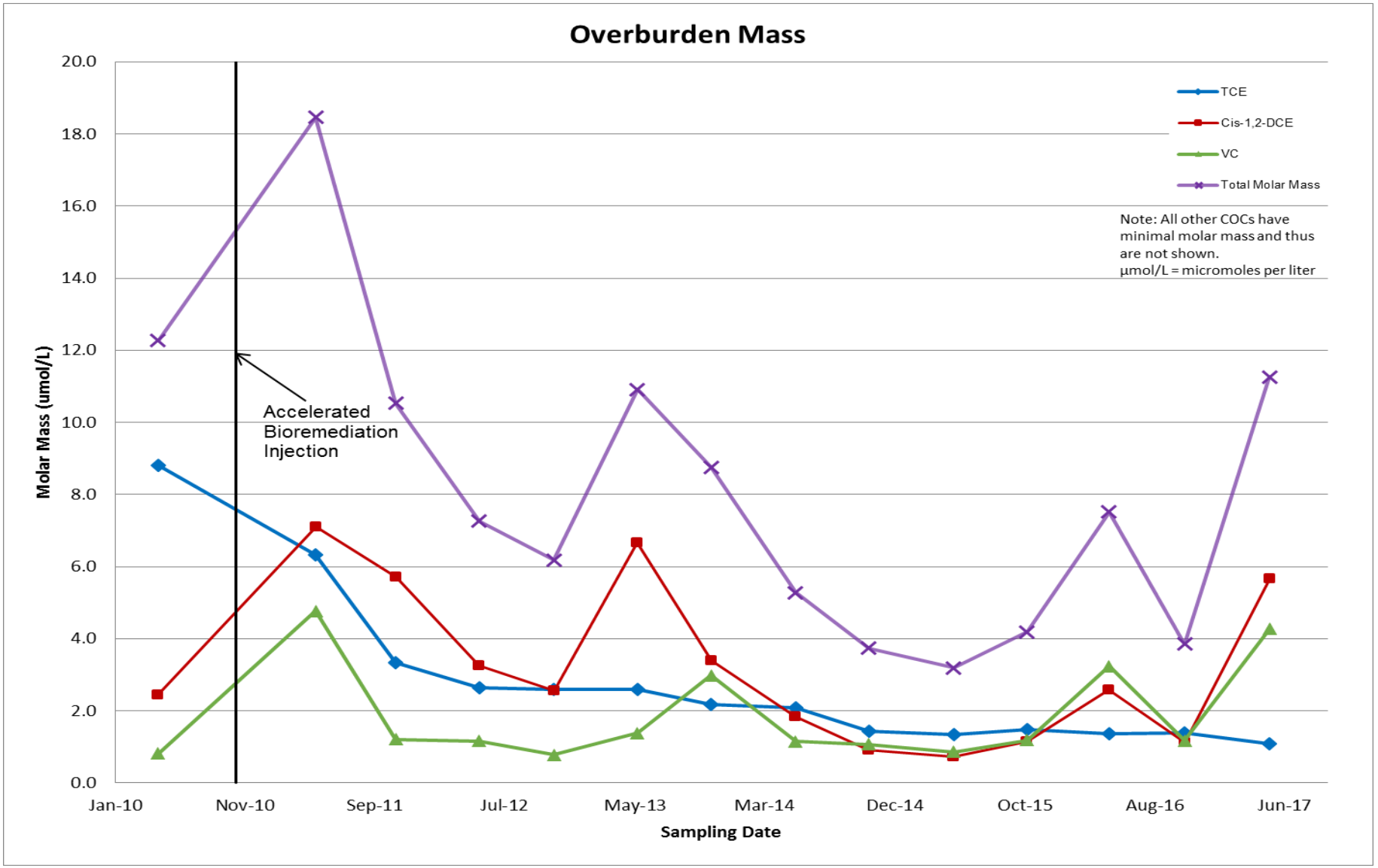
DESIGN BY:	N/A
DRAWN BY:	APT
CHECKED BY:	JD
PM:	R. RYAN
SCALE:	AS NOTED

PROJECT: ANNUAL REPORT 2017
FORMER TAYLOR INSTRUMENTS SITE
ROCHESTER, NEW YORK

TITLE: VOCs IN BEDROCK MONITORING WELLS

PROJECT NO.:	3031152028.07
REVISION NO.	N/A
DATE:	11-21-2017
FIGURE NO.	3



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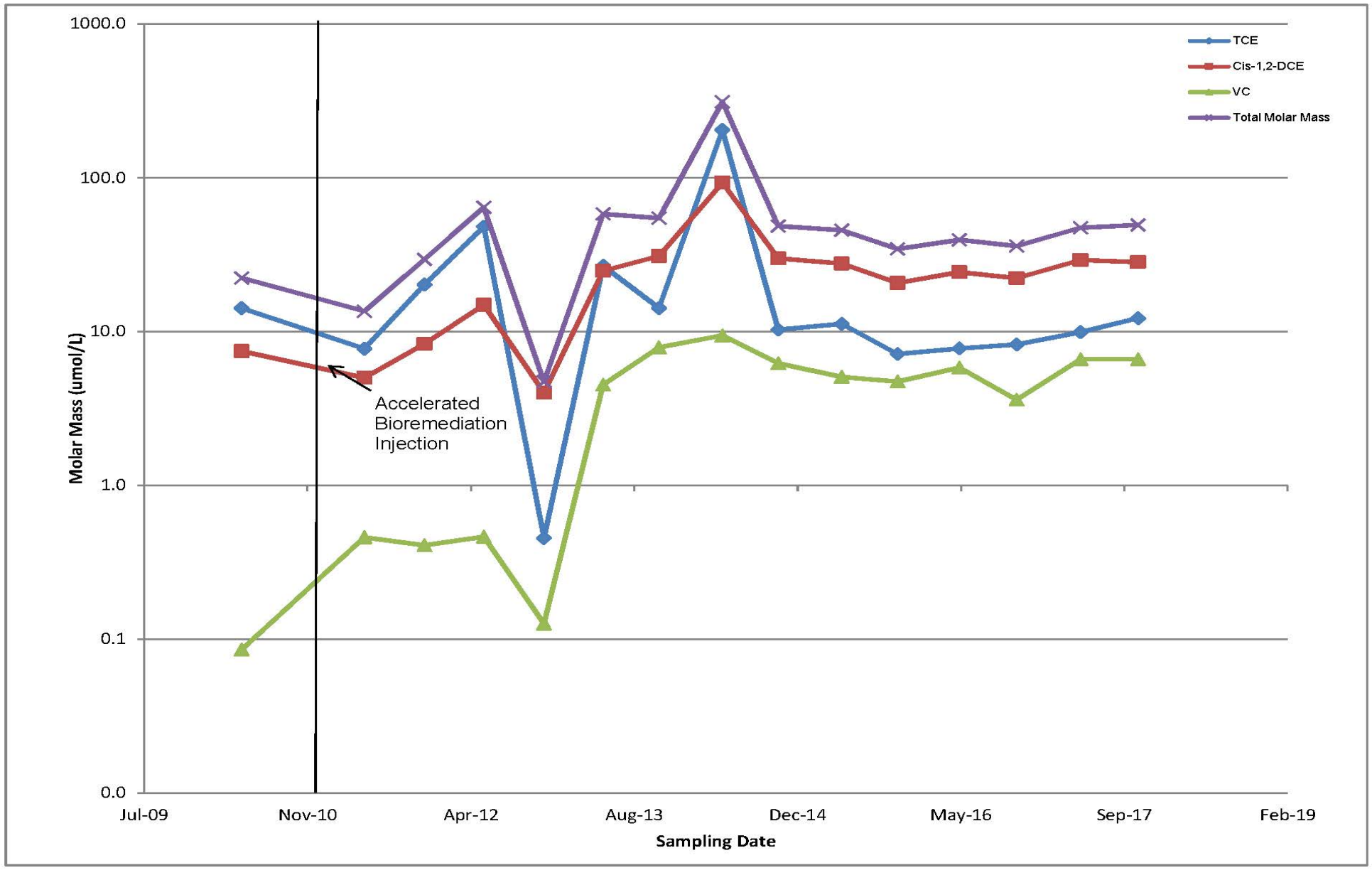
Prepared by/Date: NG 11/22/17

Checked by/Date: KJD 12/06/17

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



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Prepared by/Date: NG 11/22/17

Checked by/Date: KJD 12/06/17

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

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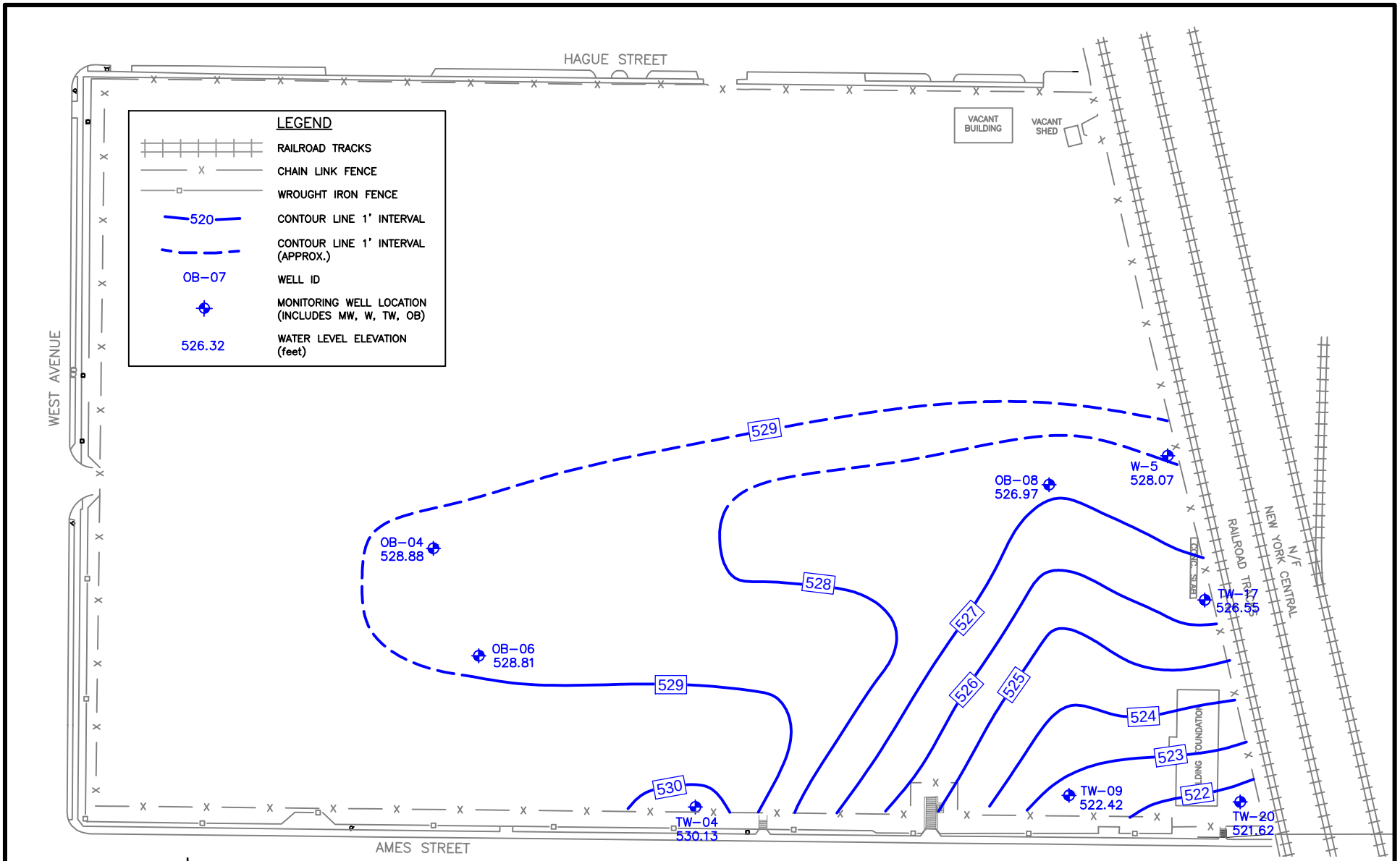
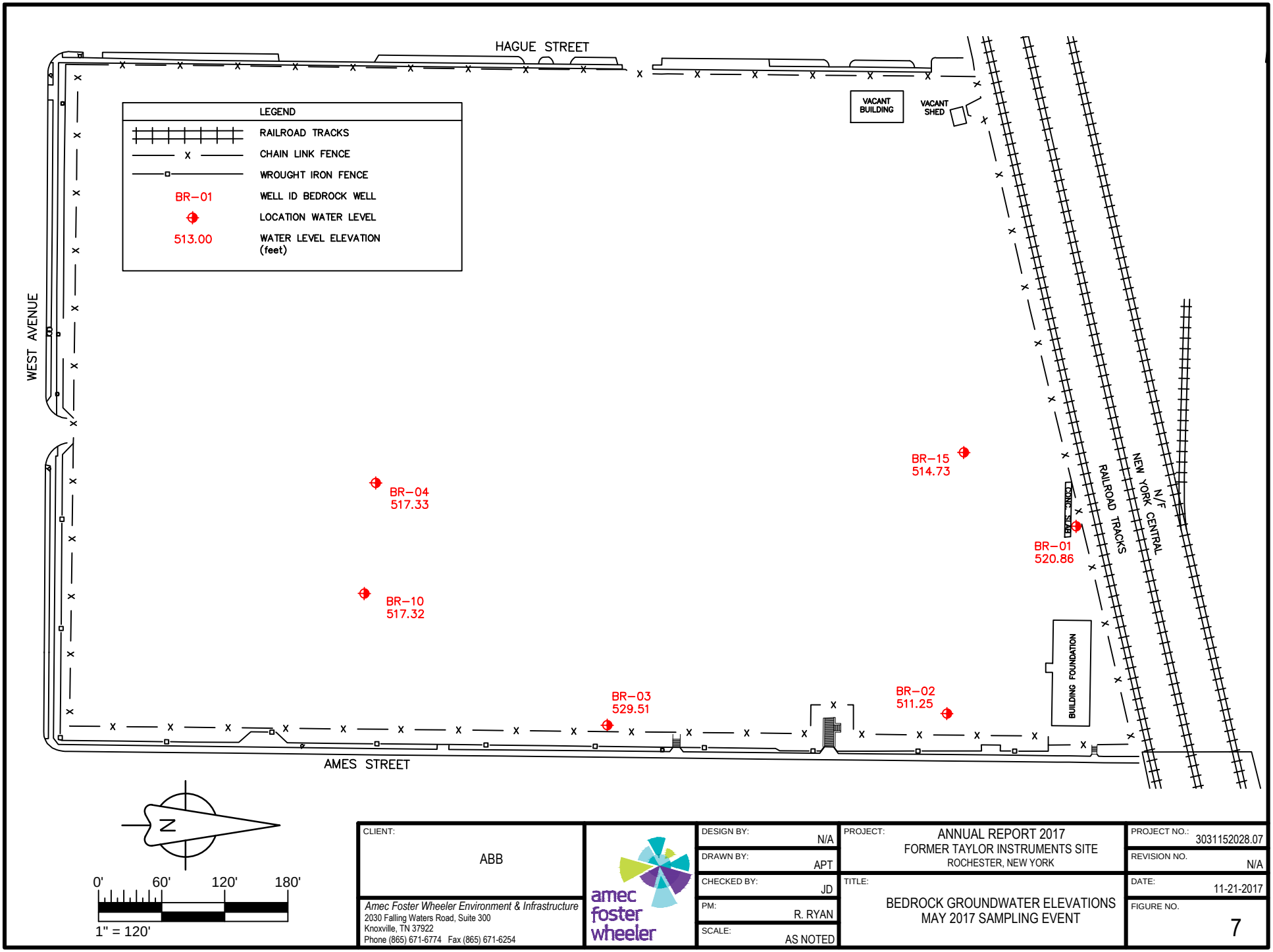


CLIENT: ABB		DESIGN BY: N/A	PROJECT: ANNUAL REPORT 2017 FORMER TAYLOR INSTRUMENTS SITE ROCHESTER, NEW YORK	PROJECT NO.: 3031152028.07
		DRAWN BY: APT		REVISION NO. N/A
Amec Foster Wheeler Environment & Infrastructure 2030 Falling Waters Road, Suite 300 Knoxville, TN 37922 Phone (865) 671-6774 Fax (865) 671-6254	amec foster wheeler	CHECKED BY: JD	TITLE: OVERBURDEN POTENTIOMETRIC SURFACE MAP MAY 2017 SAMPLING EVENT	DATE: 11-21-2017
		PM: R. RYAN		FIGURE NO. 6
		SCALE: AS NOTED		

Plotted By: Troxel, Paul Sheet Set: N/A Layout: 01 November 21, 2017 08:40:54am P:\CADD\Projects\3031\3031152028 ABB Rochester NY\Task 07\2017 Annual Report\F07 BR GW Elev Map May 2017.dwg



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	DRAWN BY: APT		REVISION NO. N/A
	CHECKED BY: JD	TITLE: BEDROCK GROUNDWATER ELEVATIONS MAY 2017 SAMPLING EVENT	DATE: 11-21-2017
	PM: R. RYAN		FIGURE NO. 7
	SCALE: AS NOTED		

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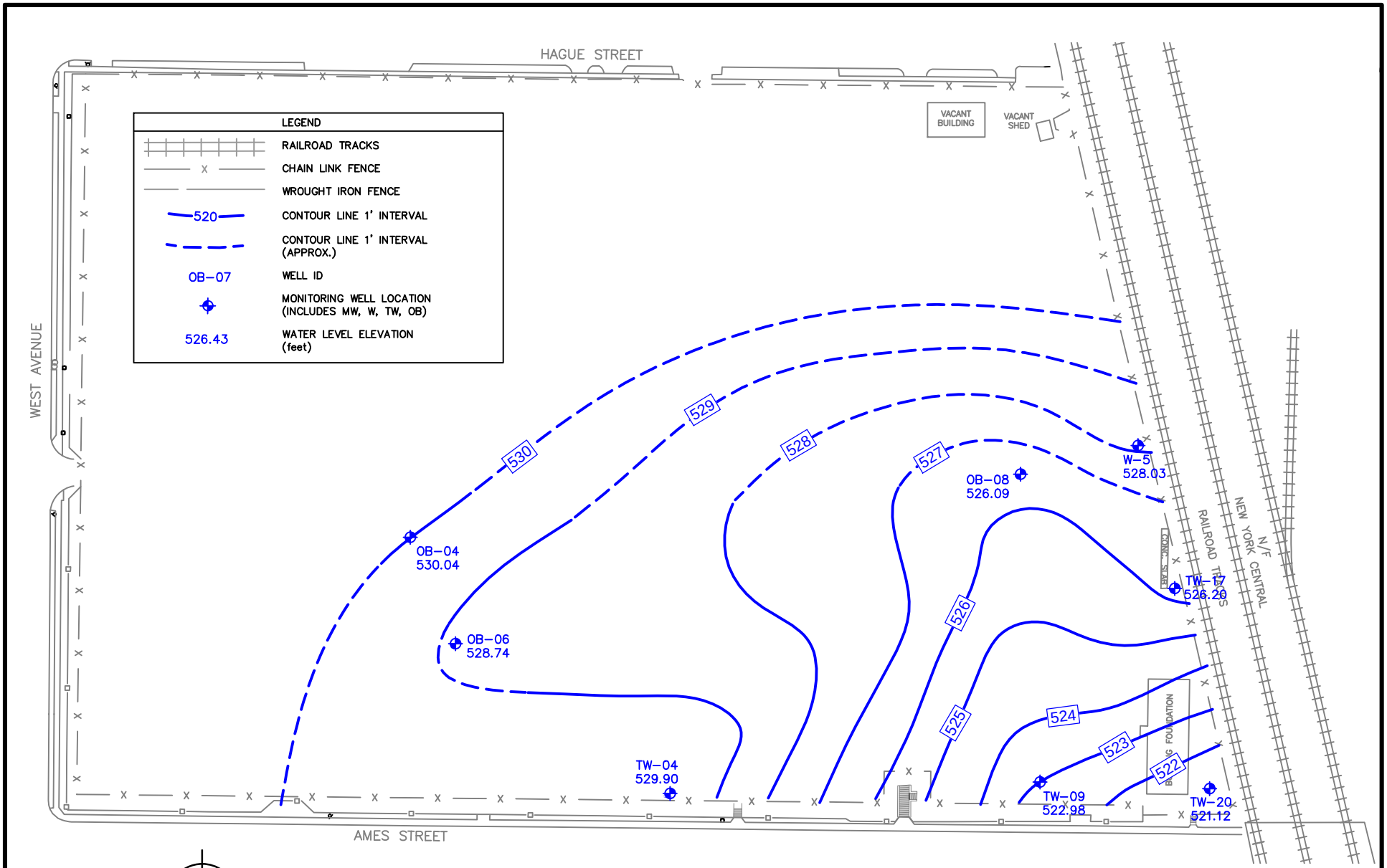

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	DRAWN BY: APT		REVISION NO. N/A
	CHECKED BY: JD	TITLE: OVERBURDEN POTENTIOMETRIC SURFACE MAP NOVEMBER 2017 SAMPLING EVENT	DATE: 11-21-2017
	PM: R. RYAN		FIGURE NO. 8
	SCALE: AS NOTED		

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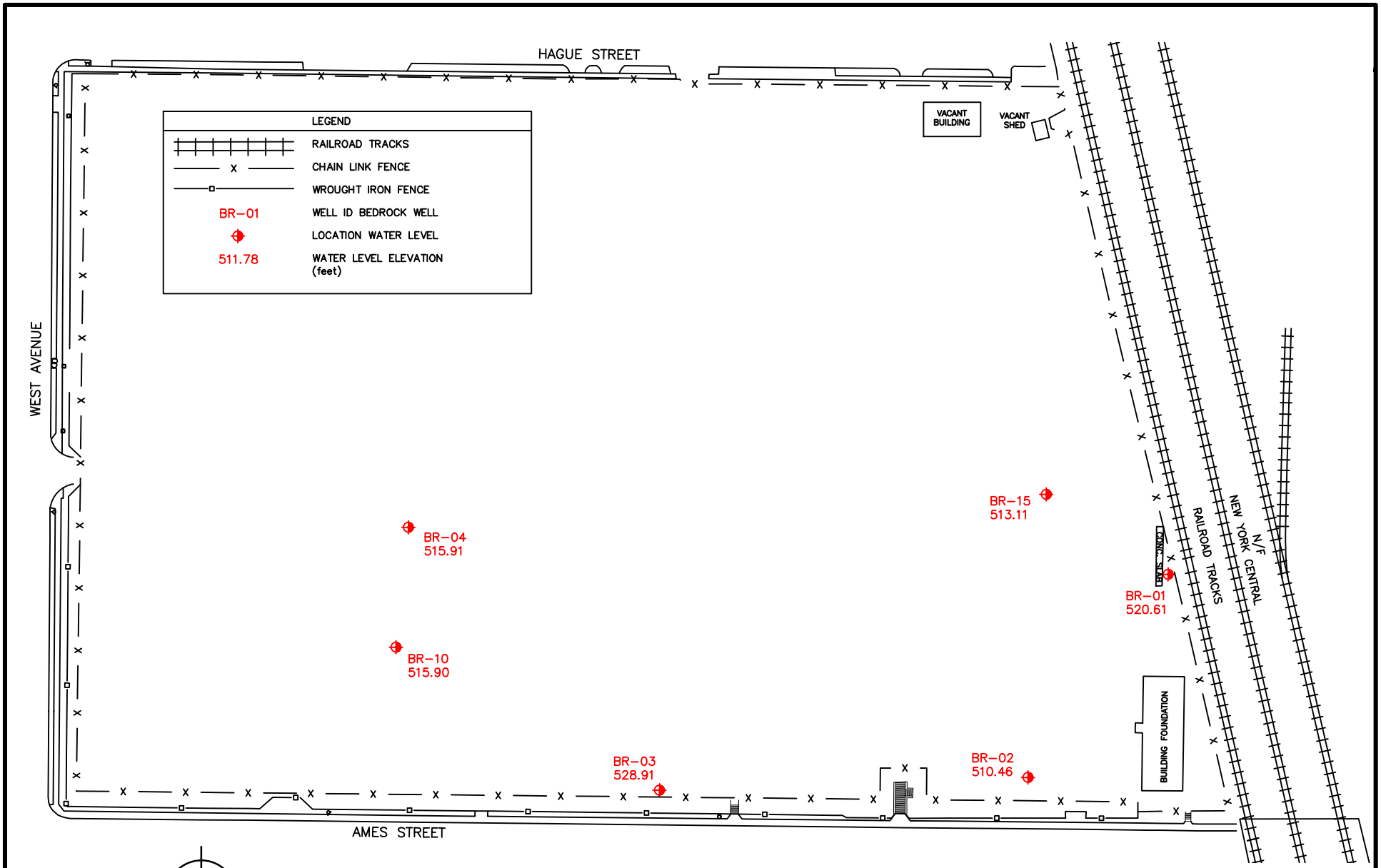
Rochester NY\Task 07\2017 Annual Report\F09 BR GW Elev Map November 2017.dwg



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	DRAWN BY: APT		REVISION NO. N/A
	CHECKED BY: JD	TITLE: BEDROCK GROUNDWATER ELEVATIONS NOVEMBER 2017 SAMPLING EVENT	DATE: 11-21-2017
	PM: R. RYAN		FIGURE NO. 9
	SCALE: AS NOTED		

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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 4, 2018 (NYSDEC, 2018).

Executive Summary

The Site was the location of the former Taylor Instruments Facility that was operated from 1904 to 1993 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 concluding that the System had reached asymptotic contaminant removal rates, in July 2006 Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) (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 Foster Wheeler, 2018]) 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 as a precautionary measure to mitigate sub-slab vapor at the 80 Ames residence 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 2017. Analytical data from the 2017 groundwater sampling events 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. In the southern portion of the Site the overburden groundwater plume is stable based on the groundwater monitoring results from the past few years at downgradient perimeter monitoring well TW-04, as well as recent results from downgradient plume well OB-06. In the northern portion of the Site the overburden groundwater contaminant plume is also demonstrating evidence of plume stability based on recent groundwater monitoring results at downgradient perimeter monitoring wells TW-09 and TW-20.

The 2017 field parameter data indicate that enhanced reducing conditions continue to be present based on the following:

- The average pH in the Site overburden wells has been reduced from 7.4 in the 2010 baseline sampling event to a neutral 7.0 in May 2017.

- The average oxygen reduction potential in the Site overburden wells has been reduced from 45 millivolts (mV) (2010 baseline) to -80 mV in May 2017.

- The average dissolved oxygen in the Site overburden wells has been reduced from 1.54 milligrams per liter (mg/L) (2010 baseline) to 1.11mg/L in May 2017.

- Methane, an indicator of biological activity, is also very robust in most wells for which it was sampled in May 2017, i.e., Site overburden wells TW-04, OB-06, TW-17, and W-5, ranging from 46 micrograms per liter (µg/L) to 27,000 µg/L.

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 Foster Wheeler, 2018]) depicts the current Site layout.

On June 8, 2015 a utility easement agreement was executed with Rochester Gas & Electric for a 75-foot easement on the north end of the Site. The easement as depicted in the easement agreement was provided in the 2015 PRR (Amec Foster Wheeler, 2016).

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

<u>Site Contamination</u>

- 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. Six bedrock groundwater monitoring wells are sampled semi-annually and eight overburden groundwater monitoring wells are sampled 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 are 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 *2018 Annual Progress Report* (Amec Foster Wheeler, 2018).

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 November 2017 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 *2017 Annual Progress Report* (Amec Foster Wheeler, 2018). Amec Foster Wheeler 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 2017 reporting period included two groundwater sampling events; yearly inspection of a SSD system at an off-site residential duplex; and the submittal of the 2017 Annual Progress Report (Amec Foster Wheeler, 2018) to NYSDEC. Amec Foster Wheeler 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 31, 2017 by the installation contractor, Mitigation Tech (National Environmental Health Association National Radon Proficiency Program ID certification #100722). The inspection report is included as Attachment B. During the inspection of the SSD system, Amec Foster Wheeler observed that a small section of concrete slab had been removed in the basement at 215 Danforth Street. The owner of the duplex stated that the concrete had been removed as part of a plumbing project. A smoke test was performed over the damaged concrete and smoke was observed flowing down into the sub-slab. Amec Foster Wheeler repaired the damaged concrete on November 2, 2017 using a non-shrink concrete patch mix. A second smoke test was performed immediately after patching the concrete and no smoke was observed flowing down into the sub-slab, indicating the concrete was repaired sufficiently. A third smoke test was performed on December 12, 2017, after the repaired concrete had fully cured, by Mitigation Tech and no smoke was observed flowing down into the repaired sub-slab, confirming the sufficiency of the concrete repair.

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 2017 Annual Progress Report (Amec Foster

Wheeler, 2018). As indicated in that report, a comparison of analytical data from the 39 sampling events that occurred in 2001-2017 provides an evaluation of the Site remedial progress. The following overall conclusions and recommendations have been reached in this 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. COCs in three of the eight overburden wells are presently near or below the NYSDEC Class GA standards, including TW-04 and TW-09 along the downgradient eastern property boundary.

- Since the 3DMe® injection, the total overburden groundwater contaminant mass has been reduced from pre-injection values. The decrease in contaminant mass indicates that the 3DMe® has enhanced contaminant biodegradation in the overburden monitoring wells.

- Bedrock groundwater has 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 the southern portion of the Site the overburden groundwater contaminant plume has been stable for the past few years, as source area monitoring well OB-04 and downgradient perimeter monitoring well TW-04 generally have had COC's near or below their respective NYSDEC Class GA Standards since May 2012. Additionally, COCs in downgradient plume well OB-06 are now near NYSDEC Class GA Standards for the first time ever.

- In the northern portion of the Site the overburden groundwater contaminant plume is also demonstrating evidence of plume stability, as downgradient perimeter well TW-09 has COCs below the NYSDEC Class GA Standards. Downgradient perimeter well TW-20 also has seen recent declines in its contaminant mass.

- Groundwater monitoring events will continue to be conducted semi-annually for the six bedrock wells and annually for the eight overburden 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 *OM&M Manual* (MACTEC, 2011), the groundwater samples will be analyzed for the full suite of 8260C constituents 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.

References

Amec Foster Wheeler, 2016. *2015 Annual Progress Report and Remedial Progress Evaluation*, Former Taylor Instruments Site, Rochester, New York. Prepared for ABB, Inc. (February).

Amec Foster Wheeler, 2018. *2017 Annual Progress Report and Remedial Progress Evaluation*, Former Taylor Instruments Site, Rochester, New York. Prepared for ABB, Inc. (February).

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, 2018. *Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal*. (January 4).

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®
µg/L	micrograms per liter
µmole/L	micromole per liter
Amec Foster Wheeler	Amec Foster Wheeler 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.
mV	millivolts
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
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
System	DPVE and bedrock groundwater extraction and treatment system
TCE	trichloroethene
VCA	Voluntary Cleanup 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, 2017 to February 14, 2018

	YES	NO
1. Is the information above correct?	X	☐
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?	☐	X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	X	☐
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?	☐	X

Box 2

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

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~~	~~Roderick-Nelson, Jr.~~	~~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
X	☐

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
X	☐

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 B. Christopher (print name) at ABB Inc. Bloomfield, CT 06002 (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
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

3/9/2018
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 2030 Falling Waters Rd, Knoxville, TN 37922 (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 068227 (Required for PE)

Date 12/2018

County of Monroe Sewer Use Permit Renewal

Ck# 711895

COUNTY OF MONROE
SEWER USE PERMIT RENEWAL

Firm Name: ABB Incorporated
95 AmesStreet

Mailing Addr: 131 Phoenix Crossing
Bloomfield, CT 06002

Business Type: Groundwater Remediation

Permit Number: IWC-999
Fee: $ 75.00
Expires: November 30, 2020

W/C Expire: 4/1/2018
District No:

Has there been any revision to the plant sewer system or any change in industrial wastes discharged to the public sewer in the past twelve months

Yes: __ No: X If yes, please explain in a separate letter.

Average monthly consumption for the past twelve (12) months:

Water Account No.(s) NA (cu ft/gal) 80

In consideration of the granting of this renewal permit the undersigned agrees to comply with all the requirements in the Initial Permit as listed under II.

Name of person to be contacted for inspection & sampling purposes:

Type or Print: Joe Deatherage Phone No: 865-218-1049

YOUR PERMIT MUST BE SIGNED AS FOLLOWS:

1. For a corporation: by a responsible corporate officer. A corporate officer means:
   (a) A president, secretary, treasurer or vice - president of the corporation in charge of a principal business function, or any other person who performs similar policy - or decision - making functions for the corporation: or
   (b) The manager of one or more manufacturing, production, or operation facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second - quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

3. By a duly authorized representative of the individual designated in items (1) or (2) above if:

   (a) The authorization is made in writing by the individual described in items (1) or (2),
   (b) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; (A duly authorized representative may thus be either a named individual or any individual occupying named position); and
   (c) The written authorization is submitted to this Department.

Print or Type: Keith Knauer Jase Phone No: 860-969-5302

Signature: [signature] Date: 11/9/17

Title: Chief Counsel and Secretary

Renewal Approved by: [signature] Issued this 17 day of Nov 20 17

Michael J. Garland, P.E.
Director of Environmental Services-PureWaters
Monroe County

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.

11-16-2017

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 listed within the MCSUL and as described in Article III, Section 3.3(d) of the Law.

B.2 Included in Article II, Section 2.1, is the definition of "Normal Sewage". "Normal Sewage" may be discharged to the sewer system in excess of the concentrations outlined in the definition, 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 Monroe County 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 IX, section 9.9 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 Section 9.6. The revocation is immediate upon receipt of notice to the Industrial User. If the revocation or suspension is issued under Section 9.6, a Hearing shall be held as soon as possible.

E. As provided under Article VI, Section 6.1, the Director and/or 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 III, Section 3.3(b) of the MCSUL. pH must be analyzed within 15 minutes of the time of collection as specified in 40 CFR, part 136.

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 III, Section 3.3 of the MCSUL unless Federal limits are more stringent under which the Federal limits will apply.

D. Discharges of wax, fats, oil or grease shall not exceed 100 mg/l as imposed by the Director under Article III, Section 3.3 of the MCSUL.

E. Discharges containing Phenolic compounds shall not exceed 2.13 mg/l as imposed by the Director under Article III, Section 3.3 of the MCSUL 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, section 10.7 of the MCSUL.

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. Reports submitted from industrial users identified as Significant Industrial Users (SIU) must be accompanied by a certification statement as required by 40 CFR part 403 and the MCSUL, Article VI, section 6.12.

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 40 CFR, part 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 VI, Section 6.10(5), 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 Discharge Control Plan (SDCP) 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 (ref. Article IX, section 9.19 – MCSUL). This criteria does NOT apply to the following Monroe County surchargeable parameters: Biochemical Oxygen Demand, Total Suspended Solids, Chlorine Demand and Total Phosphorus.

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 (ref. Article IX, section 9.19 – MCSUL). This criteria does NOT apply to the following Monroe County surchargeable parameters: Biochemical Oxygen Demand, Total Suspended Solids, Chlorine Demand and Total Phosphorus.

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, periodic 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 IX – MCSUL).

Nothing in this permit shall be construed to relieve the permittees from civil/criminal penalties for noncompliance under Article IX, Section 9.7(a)(5) MCSUL. Article IX provides that any person who violates a permit condition is subject to a civil penalty not to exceed $25,000 for any one case and an additional penalty not to exceed $25,000 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, 2017 to February 14, 2018

	YES	NO
1. Is the information above correct?	X	☐
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?	☐	X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	X
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?	☐	X

Box 2

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

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	Roderick Nelson, Jr.	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 St./215 Danforth St., 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
X	☐

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
X	☐

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 B. Christopher (print name) at AECOM (print business address) 131 Phoenix Crossing Bloomfield CT 06002

am certifying as Remedial Party (Owner or Remedial Party)

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

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

3/9/2018 — 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 2030 Falling Waters Rd., Knoxville, TN 37922 (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

State 068227 Required for PE

12/2018
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 18, 2017

Mr. Joe Deatherage, P.E.
Senior Engineer
AMEC Foster Wheeler
2030 Falling Waters Rd., STE 300
Knoxville, TN 37922
Via email: joe.deatherage@amecfw.com

Re: ABB Rochester - Former Taylor Instruments
Project No. 3031152028-01//// WO No. & PO No.: 3031152028.06.
Work site: 80 Ames St./215 Danforth St., Rochester, NY
Inspection Report for Sub-slab Depressurization System

For work completed October 31, 2017 per WO: 3031152028.06.

1. Conducted a visual inspection of the complete System (e.g., vent fan, piping, warning device, labeling on systems, etc.): **SATISFACTORY**
2. Conducted an inspection of all surfaces to which vacuum is applied: **SATISFACTORY (see also note #4)**
3. Inspected all components for condition and proper operation:**SATISFACTORY**
4. Identify and repair any leaks: a 1' x1' section of concrete floor had been removed by home owner for plumbing repairs. Subsequently repaired by Amec Foster Wheeler personnel and smoke tested to demonstrate a sufficient seal.
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**

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

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

APPENDIX C

TABLES

Table 1
Overburden Monitoring Wells with COCs Exceeding NYSDEC Class GA Standards
May 2017*

2017 Annual Progress Report
Former Taylor Instruments Site
Rochester, New York

COC	NYSDEC Class GA Standard	Monitoring Well					
		OB-04	OB-06	OB-08	TW-17	TW-20	W-5
PCE	5	1 U	1 U	1 U	1 U	1 U	1 U
TCE	5	2.63	3.26	1 U	**35.4**	**19.2**	**78.5**
cis-1,2-DCE	5	**225**	2.93	**6.00**	**192**	1.99	**122**
trans-1,2-DCE	5	3.57	1 U	3.99	4.33	1 U	**11.7**
1,1-DCE	5	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	2	**72**	**6.84**	**29.2**	**84.5**	1 U	**74.2**

* Most recent sampling event
All concentrations are in micrograms per liter.

Created by: NG on 12/7/17
Checked by: KJD on 12/7/17

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
November 2017

2017 Annual Progress Report
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	5 U	1 U	1 U	10 U	1 U	1 U
TCE	5	**6.08**	**16.6**	**483**	**933**	**168**	2.43
cis-1,2-DCE	5	**772**	**18.6**	**49.5**	**1490**	**413**	**5.22**
trans-1,2-DCE	5	**47.6**	1.73	2.48	**104**	**56.2**	1 U
1,1-DCE	5	5 U	1 U	1.09	10 U	1 U	1 U
Vinyl Chloride	2	**345**	1.47	1 U	**59.6**	**3.64**	**4.06**

All concentrations are in micrograms per liter.

Created by: NG on 12/7/17
Checked by: KJD on 12/7/17

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 2000-2017 Sampling Events

2017 Annual Progress Report
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	09/13/01	--	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-04	05/12/15	--	1.82	--	--	--	3.7
OB-04	10/27/15	--	2.36	--	--	--	7.3
OB-04	05/03/16	--	1.84	--	--	--	8.03
OB-04	10/25/16	--	1.97	2.52	1.18	--	17.6
OB-04	05/09/17	--	2.63	225	3.57	--	72.0
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	--	--	--

See notes at end of table

Table 3 (Continued)
Summary of VOC Results for Existing Overburden Wells for the 2000-2017 Sampling Events

2017 Annual Progress Report
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-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	--	--	--
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-06	05/12/15	--	22.9	5.14	--	--	3.26
OB-06	10/27/15	--	38.8	9.68	1.09	--	7.63
OB-06	05/03/16	--	40.4	10.6	1.30	1.60	8.50
OB-06	10/26/16	--	50.8	19.3	1.70	1.57	20.6
OB-06	05/10/17	--	3.26	2.93	--	--	6.84
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	--

See notes at end of table

Table 3 (Continued)
Summary of VOC Results for Existing Overburden Wells for the 2000-2017 Sampling Events

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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-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	--	--
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	--	--
OB-08	05/12/15	--	--	--	6.05	--	8.66
OB-08	10/27/15	--	--	--	5.47	--	--
OB-08	05/03/16	--	--	10.7	13.4	--	67.5
OB-08	10/26/16	--	--	--	3.72	--	3.29
OB-08	05/09/17	--	--	6.00	3.99	--	29.2
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	--	--	--

See notes at end of table

Table 3 (Continued)
Summary of VOC Results for Existing Overburden Wells for the 2000-2017 Sampling Events

2017 Annual Progress Report
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)
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	--	--	--
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-04	05/12/15	--	--	1.84	--	--	--
TW-04	10/27/15	--	--	5.18	--	--	--
TW-04	05/03/16	--	--	--	--	--	--
TW-04	10/25/16	--	--	2.67	--	--	--
TW-04	05/09/17	--	--	--	--	--	--
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	--	--	--

See notes at end of table

Table 3 (Continued)
Summary of VOC Results for Existing Overburden Wells for the 2000-2017 Sampling Events

2017 Annual Progress Report
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)
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-09	05/13/15	--	16.4	18.7	11.8	--	9.81
TW-09	10/28/15	--	8.18	38.9	20.8	--	21
TW-09	05/04/16	--	10.8	16.8	6.85	--	6.90
TW-09	10/26/16	--	5.31	3.20	1.07	--	--
TW-09	05/10/17	--	2.49	--	--	--	--
TW-17	11/17/00	--	1,000	7.9J	--	--	--
TW-17	03/23/01	--	530	--	--	--	--
TW-17	06/16/01	--	490	--	--	--	--
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	--	--	--

See notes at end of table

Table 3 (Continued)
Summary of VOC Results for Existing Overburden Wells for the 2000-2017 Sampling Events

2017 Annual Progress Report
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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	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-17	05/13/15	--	--	2.74	--	--	2.1
TW-17	10/29/15	--	1.83	6.59	--	--	3
TW-17	05/03/16	--	13.5	170	2.95	--	84.4
TW-17	10/26/16	--	1.07	24.2	--	--	4.26
TW-17	05/10/17	--	35.4	192	4.33	--	84.5
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	--	--	--	--
TW-04	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	--	--	--

See notes at end of table

Table 3 (Continued)
Summary of VOC Results for Existing Overburden Wells for the 2000-2017 Sampling Events

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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	--	--	--	--
TW-20	05/13/15	--	30.2	2.25	--	--	--
TW-20	10/28/15	--	27.3	--	--	--	--
TW-20	05/04/16	--	26.3	--	--	--	--
TW-20	10/26/16	--	18.6	--	--	--	--
TW-20	05/10/17	--	19.2	1.99	--	--	--
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	--	--
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	--	--	--

See notes at end of table

Table 3 (Continued)
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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
W-5	05/13/15	--	106	40.5	6.15	--	26.1
DUP-01	05/13/15	--	109	42.5	6.11	--	27.0
W-5	10/28/15	--	116	51.5	8.51	--	34.7
DUP-01	10/28/15	--	122	50.6	8.01	--	31.5
W-5	05/04/16	--	85.6	41.6	7.24	--	26.9
DUP-01	05/04/16	--	85.6	42.9	7.55	--	27.4
W-5	10/26/16	--	104	56.9	8.27	--	27.3
DUP-01	10/26/16	--	109	61.6	9.60	--	27.8
W-5	05/10/17		78.5	122	11.7	--	74.2
DUP-01	05/10/17	--	87.4	112	9.03	--	59.0

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 12/07/2017 Checked by KJD on 12/07/2017

Table 4
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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-01	05/14/15	--	40.4	1,240	37.1	--	244
BR-01	10/29/15	--	31.8	906	39.8	4.03	244
BR-01	05/05/16	--	13.0	861	36.8	--	302
BR-01	10/27/16	--	10.9	787	30.0	2.50	158
BR-01	05/11/17	--	7.23	851	38.9	--	348
BR-01	11/01/17	--	6.08	772	47.6	--	345
BR-02	11/18/00	--	1,800	540	31 J	--	--
BR-02	03/21/01	--	1,200	95	--	--	--

See notes at end of table.

Table 4 (Continued)
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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	--	--
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-02	05/14/15	--	506	167	7.23	--	3.41
BR-02	10/29/15	--	16.6	21.7	1.54	--	--
BR-02	05/05/16	--	196	335	15.3	2.59	12.6
BR-02	10/27/16	--	14.9	30.3	1.65	--	--
BR-02	05/11/17	--	89.7	77.1	3.33	--	3.45
BR-02	10/31/17	--	16.6	18.6	1.73	--	1.47
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	--

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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	--	--	--
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-03	05/14/15	--	353	40.6	1.12	1.40	--
BR-03	10/29/15	--	360	76.4	1.77	1.86	--
BR-03	05/04/16	--	225	79.1	1.19	1.58	--
BR-03	10/27/16	--	464	27.1	1.32	2.17	--
BR-03	05/10/17	--	352	97.4	3.57	2.05	--
BR-03	11/01/17	--	483	49.5	2.48	1.09	--
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

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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
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-04	05/14/15	--	437	977	61.6	7.27	52.7
BR-04	10/29/15	--	331	661	64.9	7.78	46.2
BR-04	05/05/16	--	354	831	51.0	6.63	48.5
BR-04	10/27/16	--	441	972	81.9	9.15	62.0
BR-04	05/11/17	--	703	1,450	63.8	--	60.0
BR-04	11/01/17	--	933	1,490	104	--	59.6
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

See notes at end of table.

Table 4 (Continued)
Summary of VOC Results for Existing Bedrock Wells for the 2000-2017 Sampling Events

2017 Annual Progress Report
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)
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
BR-10	05/14/15	--	142	260	38.5	--	--
BR-10	10/29/15	--	201	343	56.5	1.61	3.04
BR-10	05/05/16	--	233	257	43.3	--	--
BR-10	10/27/16	1.19	154	345	50.1	1.50	2.11
BR-10	05/11/17	--	151	357	48.4	1.02	1.65
BR-10	11/01/17	--	168	413	56.2	--	3.64
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	--	--	--

See notes at end of table

Table 4 (Continued)
Summary of VOC Results for Existing Bedrock Wells for the 2000-2017 Sampling Events

2017 Annual Progress Report
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)
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
BR-15	05/13/15	--	--	1.94	--	--	16.9
BR-15	10/28/15	--	--	--	--	--	2.2
BR-15	05/04/16	--	--	--	--	--	1.42
BR-15	10/25/16	--	--	--	--	--	3.0
BR-15	05/09/17	--	--	--	--	--	--
BR-15	10/31/17	--	2.43	5.22	--	--	4.06
DUP-01	10/31/17	--	2.33	5.70	--	--	5.20

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 12/07/17
Checked by KJD on 12/07/17

APPENDIX D

LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS

MAY 2017
LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS

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: 490-128571-1
Client Project/Site: Former Taylor Instruments

For:
AMEC Foster Wheeler E & I, Inc
2030 Falling Waters Road
Ste 300
Knoxville, Tennessee 37922

Attn: Mr. Joe Deatherage

Authorized for release by:
5/26/2017 1:30:40 PM

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

Table of Contents

Sample Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-128571-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-128571-1	TW-04	Water	05/09/17 11:15	05/12/17 09:20
490-128571-2	OB-04	Water	05/09/17 13:10	05/12/17 09:20
490-128571-3	OB-08	Water	05/09/17 15:05	05/12/17 09:20
490-128571-4	BR-15	Water	05/09/17 17:25	05/12/17 09:20
490-128571-5	TW-17	Water	05/10/17 09:34	05/12/17 09:20
490-128571-6	TW-20	Water	05/10/17 11:08	05/12/17 09:20
490-128571-7	TW-09	Water	05/10/17 12:15	05/12/17 09:20
490-128571-8	OB-06	Water	05/10/17 13:20	05/12/17 09:20
490-128571-9	W-5	Water	05/10/17 14:55	05/12/17 09:20
490-128571-10	BR-03	Water	05/10/17 16:53	05/12/17 09:20
490-128571-11	DUP-01	Water	05/10/17 00:01	05/12/17 09:20
490-128571-12	BR-10	Water	05/11/17 09:20	05/12/17 09:20
490-128571-13	BR-04	Water	05/11/17 10:45	05/12/17 09:20
490-128571-14	BR-02	Water	05/11/17 12:28	05/12/17 09:20
490-128571-15	BR-01	Water	05/11/17 13:38	05/12/17 09:20
490-128571-16	QARB-01	Water	05/11/17 14:10	05/12/17 09:20
490-128571-17	QAFB-01	Water	05/11/17 14:15	05/12/17 09:20
490-128571-18	QATB-01	Water	05/11/17 14:20	05/12/17 09:20

Job ID: 490-128571-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-128571-1

Comments
No additional comments.

Receipt
The samples were received on 5/12/2017 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7° C.

GC/MS VOA
Method(s) 8260C: The following sample was diluted due to the nature of the sample matrix: BR-04 (490-128571-13) and BR-01 (490-128571-15). Elevated reporting limits (RLs) are provided.

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

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 is outside acceptance limits.
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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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 Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-128571-1

Client Sample ID: TW-04
Date Collected: 05/09/17 11:15
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-1
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			05/16/17 16:05	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 16:05	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 16:05	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 16:05	1
Trichloroethene	ND		1.00		ug/L			05/16/17 16:05	1
Vinyl chloride	ND		1.00		ug/L			05/16/17 16:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*05/16/17 16:05*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*05/16/17 16:05*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*05/16/17 16:05*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*05/16/17 16:05*	*1*

Client Sample ID: OB-04
Date Collected: 05/09/17 13:10
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-2
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			05/16/17 16:31	1
cis-1,2-Dichloroethene	**225**		1.00		ug/L			05/16/17 16:31	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 16:31	1
trans-1,2-Dichloroethene	**3.57**		1.00		ug/L			05/16/17 16:31	1
Trichloroethene	**2.63**		1.00		ug/L			05/16/17 16:31	1
Vinyl chloride	**72.0**		1.00		ug/L			05/16/17 16:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*05/16/17 16:31*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*05/16/17 16:31*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*05/16/17 16:31*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*05/16/17 16:31*	*1*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-128571-1

Client Sample ID: OB-08
Date Collected: 05/09/17 15:05
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-3
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			05/16/17 16:56	1
cis-1,2-Dichloroethene	**6.00**		1.00		ug/L			05/16/17 16:56	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 16:56	1
trans-1,2-Dichloroethene	**3.99**		1.00		ug/L			05/16/17 16:56	1
Trichloroethene	ND		1.00		ug/L			05/16/17 16:56	1
Vinyl chloride	**29.2**		1.00		ug/L			05/16/17 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*05/16/17 16:56*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*05/16/17 16:56*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*05/16/17 16:56*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*05/16/17 16:56*	*1*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-128571-1

Client Sample ID: BR-15
Date Collected: 05/09/17 17:25
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-4
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			05/16/17 17:21	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 17:21	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 17:21	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 17:21	1
Trichloroethene	ND		1.00		ug/L			05/16/17 17:21	1
Vinyl chloride	ND		1.00		ug/L			05/16/17 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*05/16/17 17:21*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*05/16/17 17:21*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*05/16/17 17:21*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*05/16/17 17:21*	*1*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-128571-1

Client Sample ID: TW-17
Date Collected: 05/10/17 09:34
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-5
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			05/16/17 17:47	1
cis-1,2-Dichloroethene	**192**		1.00		ug/L			05/16/17 17:47	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 17:47	1
trans-1,2-Dichloroethene	**4.33**		1.00		ug/L			05/16/17 17:47	1
Trichloroethene	**35.4**		1.00		ug/L			05/16/17 17:47	1
Vinyl chloride	**84.5**		1.00		ug/L			05/16/17 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*05/16/17 17:47*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*05/16/17 17:47*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*05/16/17 17:47*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*05/16/17 17:47*	*1*

Client Sample ID: TW-20
Date Collected: 05/10/17 11:08
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-6
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			05/16/17 18:12	1
cis-1,2-Dichloroethene	**1.99**		1.00		ug/L			05/16/17 18:12	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 18:12	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 18:12	1
Trichloroethene	**19.2**		1.00		ug/L			05/16/17 18:12	1
Vinyl chloride	ND		1.00		ug/L			05/16/17 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*05/16/17 18:12*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*05/16/17 18:12*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*05/16/17 18:12*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*05/16/17 18:12*	*1*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-128571-1

Client Sample ID: TW-09
Date Collected: 05/10/17 12:15
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-7
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			05/16/17 18:38	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 18:38	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 18:38	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 18:38	1
Trichloroethene	**2.49**		1.00		ug/L			05/16/17 18:38	1
Vinyl chloride	ND		1.00		ug/L			05/16/17 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*05/16/17 18:38*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*05/16/17 18:38*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*05/16/17 18:38*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*05/16/17 18:38*	*1*

Client Sample ID: OB-06
Date Collected: 05/10/17 13:20
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-8
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			05/16/17 19:03	1
cis-1,2-Dichloroethene	**2.93**		1.00		ug/L			05/16/17 19:03	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 19:03	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 19:03	1
Trichloroethene	**3.26**		1.00		ug/L			05/16/17 19:03	1
Vinyl chloride	**6.84**		1.00		ug/L			05/16/17 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*05/16/17 19:03*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*05/16/17 19:03*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*05/16/17 19:03*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*05/16/17 19:03*	*1*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-128571-1

Client Sample ID: W-5
Date Collected: 05/10/17 14:55
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-9
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			05/16/17 19:28	1
cis-1,2-Dichloroethene	**122**		1.00		ug/L			05/16/17 19:28	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 19:28	1
trans-1,2-Dichloroethene	**11.7**		1.00		ug/L			05/16/17 19:28	1
Trichloroethene	**78.5**		1.00		ug/L			05/16/17 19:28	1
Vinyl chloride	**74.2**		1.00		ug/L			05/16/17 19:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*05/16/17 19:28*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*05/16/17 19:28*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*05/16/17 19:28*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*05/16/17 19:28*	*1*

Client Sample ID: BR-03
Date Collected: 05/10/17 16:53
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	**2.05**		1.00		ug/L			05/17/17 13:49	1
cis-1,2-Dichloroethene	**97.4**		1.00		ug/L			05/17/17 13:49	1
Tetrachloroethene	ND		1.00		ug/L			05/17/17 13:49	1
trans-1,2-Dichloroethene	**3.57**		1.00		ug/L			05/17/17 13:49	1
Trichloroethene	**352**		1.00		ug/L			05/17/17 13:49	1
Vinyl chloride	ND		1.00		ug/L			05/17/17 13:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*05/17/17 13:49*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*05/17/17 13:49*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*05/17/17 13:49*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/17/17 13:49*	*1*

Client Sample ID: DUP-01
Date Collected: 05/10/17 00:01
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00		ug/L			05/16/17 20:29	1
cis-1,2-Dichloroethene	**112**		1.00		ug/L			05/16/17 20:29	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 20:29	1
trans-1,2-Dichloroethene	**9.03**		1.00		ug/L			05/16/17 20:29	1
Trichloroethene	**87.4**		1.00		ug/L			05/16/17 20:29	1
Vinyl chloride	**59.0**		1.00		ug/L			05/17/17 13:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*05/16/17 20:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*05/17/17 13:23*	*1*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*		*05/16/17 20:29*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*		*05/17/17 13:23*	*1*
Dibromofluoromethane (Surr)	*89*		*70 - 130*		*05/16/17 20:29*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*05/17/17 13:23*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*05/16/17 20:29*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*05/17/17 13:23*	*1*

Client Sample ID: BR-10
Date Collected: 05/11/17 09:20
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-12
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.02		1.00		ug/L			05/16/17 21:35	1
cis-1,2-Dichloroethene	357		1.00		ug/L			05/16/17 21:35	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 21:35	1
trans-1,2-Dichloroethene	48.4		1.00		ug/L			05/16/17 21:35	1
Trichloroethene	151		1.00		ug/L			05/16/17 21:35	1
Vinyl chloride	1.65		1.00		ug/L			05/16/17 21:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*05/16/17 21:35*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*05/16/17 21:35*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*05/16/17 21:35*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*05/16/17 21:35*	*1*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-128571-1

Client Sample ID: BR-04
Date Collected: 05/11/17 10:45
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-13
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		10.0		ug/L			05/16/17 21:10	10
cis-1,2-Dichloroethene	**1450**		10.0		ug/L			05/16/17 21:10	10
Tetrachloroethene	ND		10.0		ug/L			05/16/17 21:10	10
trans-1,2-Dichloroethene	**63.8**		10.0		ug/L			05/16/17 21:10	10
Trichloroethene	**703**		10.0		ug/L			05/16/17 21:10	10
Vinyl chloride	**60.0**		10.0		ug/L			05/16/17 21:10	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*05/16/17 21:10*	*10*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*05/16/17 21:10*	*10*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*05/16/17 21:10*	*10*
Toluene-d8 (Surr)	*103*		*70 - 130*		*05/16/17 21:10*	*10*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-128571-1

Client Sample ID: BR-02
Date Collected: 05/11/17 12:28
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-14
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			05/16/17 19:54	1
cis-1,2-Dichloroethene	**77.1**		1.00		ug/L			05/16/17 19:54	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 19:54	1
trans-1,2-Dichloroethene	**3.33**		1.00		ug/L			05/16/17 19:54	1
Trichloroethene	**89.7**		1.00		ug/L			05/16/17 19:54	1
Vinyl chloride	**3.45**		1.00		ug/L			05/16/17 19:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*05/16/17 19:54*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*05/16/17 19:54*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*05/16/17 19:54*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*05/16/17 19:54*	*1*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-128571-1

Client Sample ID: BR-01
Date Collected: 05/11/17 13:38
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-15
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		5.00		ug/L			05/16/17 20:45	5
cis-1,2-Dichloroethene	**851**		5.00		ug/L			05/16/17 20:45	5
Tetrachloroethene	ND		5.00		ug/L			05/16/17 20:45	5
trans-1,2-Dichloroethene	**38.9**		5.00		ug/L			05/16/17 20:45	5
Trichloroethene	**7.23**		5.00		ug/L			05/16/17 20:45	5
Vinyl chloride	**348**		5.00		ug/L			05/16/17 20:45	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*05/16/17 20:45*	*5*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*05/16/17 20:45*	*5*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*05/16/17 20:45*	*5*
Toluene-d8 (Surr)	*104*		*70 - 130*		*05/16/17 20:45*	*5*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-128571-1

Client Sample ID: QARB-01
Date Collected: 05/11/17 14:10
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-16
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			05/16/17 15:40	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 15:40	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 15:40	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 15:40	1
Trichloroethene	ND		1.00		ug/L			05/16/17 15:40	1
Vinyl chloride	ND		1.00		ug/L			05/16/17 15:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*05/16/17 15:40*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*05/16/17 15:40*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*05/16/17 15:40*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*05/16/17 15:40*	*1*

Client Sample ID: QAFB-01
Date Collected: 05/11/17 14:15
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-17
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			05/16/17 15:14	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 15:14	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 15:14	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 15:14	1
Trichloroethene	ND		1.00		ug/L			05/16/17 15:14	1
Vinyl chloride	ND		1.00		ug/L			05/16/17 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*05/16/17 15:14*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*05/16/17 15:14*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*05/16/17 15:14*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*05/16/17 15:14*	*1*

Client Sample ID: QATB-01
Date Collected: 05/11/17 14:20
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-18
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			05/16/17 14:49	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 14:49	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 14:49	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 14:49	1
Trichloroethene	ND		1.00		ug/L			05/16/17 14:49	1
Vinyl chloride	ND		1.00		ug/L			05/16/17 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*05/16/17 14:49*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*05/16/17 14:49*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*05/16/17 14:49*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*05/16/17 14:49*	*1*

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

Lab Sample ID: MB 490-430238/8
Matrix: Water
Analysis Batch: 430238

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			05/16/17 13:58	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 13:58	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 13:58	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 13:58	1
Trichloroethene	ND		1.00		ug/L			05/16/17 13:58	1
Vinyl chloride	ND		1.00		ug/L			05/16/17 13:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*05/16/17 13:58*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*05/16/17 13:58*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*05/16/17 13:58*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*05/16/17 13:58*	*1*

Lab Sample ID: LCS 490-430238/3
Matrix: Water
Analysis Batch: 430238

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	20.0	18.50		ug/L		92	79 - 124
cis-1,2-Dichloroethene	20.0	22.48		ug/L		112	76 - 125
Tetrachloroethene	20.0	20.36		ug/L		102	80 - 126
trans-1,2-Dichloroethene	20.0	20.83		ug/L		104	79 - 126
Trichloroethene	20.0	20.06		ug/L		100	80 - 123
Vinyl chloride	20.0	20.58		ug/L		103	68 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 490-430238/4
Matrix: Water
Analysis Batch: 430238

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	20.0	21.44		ug/L		107	79 - 124	15	20
cis-1,2-Dichloroethene	20.0	21.69		ug/L		108	76 - 125	4	15
Tetrachloroethene	20.0	20.21		ug/L		101	80 - 126	1	17
trans-1,2-Dichloroethene	20.0	20.52		ug/L		103	79 - 126	2	15
Trichloroethene	20.0	20.10		ug/L		101	80 - 123	0	14
Vinyl chloride	20.0	19.84		ug/L		99	68 - 120	4	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*

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

Lab Sample ID: LCSD 490-430238/4
Matrix: Water
Analysis Batch: 430238

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: 490-128571-4 MS
Matrix: Water
Analysis Batch: 430238

Client Sample ID: BR-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	ND		20.0	23.79		ug/L		119	54 - 150
cis-1,2-Dichloroethene	ND		20.0	24.03		ug/L		120	68 - 131
Tetrachloroethene	ND		20.0	22.44		ug/L		112	57 - 138
trans-1,2-Dichloroethene	ND		20.0	22.82		ug/L		114	59 - 143
Trichloroethene	ND		20.0	22.63		ug/L		110	63 - 135
Vinyl chloride	ND		20.0	21.56		ug/L		108	57 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: 490-128571-4 MSD
Matrix: Water
Analysis Batch: 430238

Client Sample ID: BR-15
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		20.0	24.73		ug/L		124	54 - 150	4	17
cis-1,2-Dichloroethene	ND		20.0	23.76		ug/L		119	68 - 131	1	17
Tetrachloroethene	ND		20.0	22.44		ug/L		112	57 - 138	0	16
trans-1,2-Dichloroethene	ND		20.0	22.38		ug/L		112	59 - 143	2	16
Trichloroethene	ND		20.0	22.16		ug/L		108	63 - 135	2	17
Vinyl chloride	ND		20.0	21.44		ug/L		107	57 - 150	1	17

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: MB 490-430242/7
Matrix: Water
Analysis Batch: 430242

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			05/16/17 15:10	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 15:10	1
Tetrachloroethene	ND		1.00		ug/L			05/16/17 15:10	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/16/17 15:10	1

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

Lab Sample ID: MB 490-430242/7
Matrix: Water
Analysis Batch: 430242

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			05/16/17 15:10	1
Vinyl chloride	ND		1.00		ug/L			05/16/17 15:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*05/16/17 15:10*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*05/16/17 15:10*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 130*		*05/16/17 15:10*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*05/16/17 15:10*	*1*

Lab Sample ID: LCS 490-430242/3
Matrix: Water
Analysis Batch: 430242

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	20.0	18.80		ug/L		94	79 - 124
cis-1,2-Dichloroethene	20.0	19.26		ug/L		96	76 - 125
Tetrachloroethene	20.0	21.78		ug/L		109	80 - 126
trans-1,2-Dichloroethene	20.0	18.48		ug/L		92	79 - 126
Trichloroethene	20.0	19.62		ug/L		98	80 - 123
Vinyl chloride	20.0	16.49		ug/L		82	68 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
Dibromofluoromethane (Surr)	*93*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 490-430242/4
Matrix: Water
Analysis Batch: 430242

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	20.0	20.02		ug/L		100	79 - 124	6	20
cis-1,2-Dichloroethene	20.0	19.28		ug/L		96	76 - 125	0	15
Tetrachloroethene	20.0	21.44		ug/L		107	80 - 126	2	17
trans-1,2-Dichloroethene	20.0	19.12		ug/L		96	79 - 126	3	15
Trichloroethene	20.0	19.87		ug/L		99	80 - 123	1	14
Vinyl chloride	20.0	17.84		ug/L		89	68 - 120	8	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
Dibromofluoromethane (Surr)	*93*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

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

Lab Sample ID: 490-128536-A-4 MS
Matrix: Water
Analysis Batch: 430242

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		20.0	21.83		ug/L		109	54 - 150
cis-1,2-Dichloroethene	ND		20.0	20.71		ug/L		104	68 - 131
Tetrachloroethene	ND	F2 F1	20.0	121.1	F1	ug/L		605	57 - 138
trans-1,2-Dichloroethene	ND		20.0	20.92		ug/L		105	59 - 143
Trichloroethene	ND		20.0	21.86		ug/L		109	63 - 135
Vinyl chloride	ND		20.0	19.51		ug/L		98	57 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*94*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: 490-128536-A-4 MSD
Matrix: Water
Analysis Batch: 430242

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		20.0	21.26		ug/L		106	54 - 150	3	17
cis-1,2-Dichloroethene	ND		20.0	21.09		ug/L		105	68 - 131	2	17
Tetrachloroethene	ND	F2 F1	20.0	43.71	F1 F2	ug/L		219	57 - 138	94	16
trans-1,2-Dichloroethene	ND		20.0	20.79		ug/L		104	59 - 143	1	16
Trichloroethene	ND		20.0	22.02		ug/L		110	63 - 135	1	17
Vinyl chloride	ND		20.0	19.30		ug/L		97	57 - 150	1	17

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
Dibromofluoromethane (Surr)	*94*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: MB 490-430588/7
Matrix: Water
Analysis Batch: 430588

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			05/17/17 12:57	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			05/17/17 12:57	1
Tetrachloroethene	ND		1.00		ug/L			05/17/17 12:57	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			05/17/17 12:57	1
Trichloroethene	ND		1.00		ug/L			05/17/17 12:57	1
Vinyl chloride	ND		1.00		ug/L			05/17/17 12:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*05/17/17 12:57*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*05/17/17 12:57*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*05/17/17 12:57*	*1*

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

Lab Sample ID: MB 490-430588/7
Matrix: Water
Analysis Batch: 430588

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		70 - 130		05/17/17 12:57	1

Lab Sample ID: LCS 490-430588/3
Matrix: Water
Analysis Batch: 430588

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	20.0	19.62		ug/L		98	79 - 124
cis-1,2-Dichloroethene	20.0	20.15		ug/L		101	76 - 125
Tetrachloroethene	20.0	23.66		ug/L		118	80 - 126
trans-1,2-Dichloroethene	20.0	19.14		ug/L		96	79 - 126
Trichloroethene	20.0	20.88		ug/L		104	80 - 123
Vinyl chloride	20.0	20.38		ug/L		102	68 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	94		70 - 130
Dibromofluoromethane (Surr)	99		70 - 130
Toluene-d8 (Surr)	99		70 - 130

Lab Sample ID: LCSD 490-430588/4
Matrix: Water
Analysis Batch: 430588

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	20.0	19.90		ug/L		100	79 - 124	1	20
cis-1,2-Dichloroethene	20.0	19.95		ug/L		100	76 - 125	1	15
Tetrachloroethene	20.0	22.93		ug/L		115	80 - 126	3	17
trans-1,2-Dichloroethene	20.0	19.29		ug/L		96	79 - 126	1	15
Trichloroethene	20.0	20.71		ug/L		104	80 - 123	1	14
Vinyl chloride	20.0	20.45		ug/L		102	68 - 120	0	15

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
4-Bromofluorobenzene (Surr)	95		70 - 130
Dibromofluoromethane (Surr)	99		70 - 130
Toluene-d8 (Surr)	97		70 - 130

Lab Sample ID: 490-128526-A-1 MS
Matrix: Water
Analysis Batch: 430588

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		20.0	20.99		ug/L		105	54 - 150
cis-1,2-Dichloroethene	ND		20.0	21.64		ug/L		106	68 - 131
Tetrachloroethene	ND		20.0	22.70		ug/L		113	57 - 138
trans-1,2-Dichloroethene	ND		20.0	20.31		ug/L		102	59 - 143

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

Lab Sample ID: 490-128526-A-1 MS
Matrix: Water
Analysis Batch: 430588

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	12.8		20.0	29.07		ug/L		81	63 - 135
Vinyl chloride	ND		20.0	21.65		ug/L		108	57 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: 490-128526-A-1 MSD
Matrix: Water
Analysis Batch: 430588

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		20.0	21.27		ug/L		106	54 - 150	1	17
cis-1,2-Dichloroethene	ND		20.0	21.63		ug/L		106	68 - 131	0	17
Tetrachloroethene	ND		20.0	22.43		ug/L		112	57 - 138	1	16
trans-1,2-Dichloroethene	ND		20.0	20.22		ug/L		101	59 - 143	0	16
Trichloroethene	12.8		20.0	32.08		ug/L		97	63 - 135	10	17
Vinyl chloride	ND		20.0	22.00		ug/L		110	57 - 150	2	17

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

GC/MS VOA

Analysis Batch: 430238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-128571-1	TW-04	Total/NA	Water	8260C	
490-128571-2	OB-04	Total/NA	Water	8260C	
490-128571-3	OB-08	Total/NA	Water	8260C	
490-128571-4	BR-15	Total/NA	Water	8260C	
490-128571-5	TW-17	Total/NA	Water	8260C	
490-128571-6	TW-20	Total/NA	Water	8260C	
490-128571-7	TW-09	Total/NA	Water	8260C	
490-128571-8	OB-06	Total/NA	Water	8260C	
490-128571-9	W-5	Total/NA	Water	8260C	
490-128571-12	BR-10	Total/NA	Water	8260C	
490-128571-13	BR-04	Total/NA	Water	8260C	
490-128571-14	BR-02	Total/NA	Water	8260C	
490-128571-15	BR-01	Total/NA	Water	8260C	
490-128571-16	QARB-01	Total/NA	Water	8260C	
490-128571-17	QAFB-01	Total/NA	Water	8260C	
490-128571-18	QATB-01	Total/NA	Water	8260C	
MB 490-430238/8	Method Blank	Total/NA	Water	8260C	
LCS 490-430238/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-430238/4	Lab Control Sample Dup	Total/NA	Water	8260C	
490-128571-4 MS	BR-15	Total/NA	Water	8260C	
490-128571-4 MSD	BR-15	Total/NA	Water	8260C	

Analysis Batch: 430242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-128571-11	DUP-01	Total/NA	Water	8260C	
MB 490-430242/7	Method Blank	Total/NA	Water	8260C	
LCS 490-430242/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-430242/4	Lab Control Sample Dup	Total/NA	Water	8260C	
490-128536-A-4 MS	Matrix Spike	Total/NA	Water	8260C	
490-128536-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	

Analysis Batch: 430588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-128571-10	BR-03	Total/NA	Water	8260C	
490-128571-11	DUP-01	Total/NA	Water	8260C	
MB 490-430588/7	Method Blank	Total/NA	Water	8260C	
LCS 490-430588/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-430588/4	Lab Control Sample Dup	Total/NA	Water	8260C	
490-128526-A-1 MS	Matrix Spike	Total/NA	Water	8260C	
490-128526-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	

Client Sample ID: TW-04

Lab Sample ID: 490-128571-1

Date Collected: 05/09/17 11:15

Matrix: Water

Date Received: 05/12/17 09:20

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	430238	05/16/17 16:05	NC	TAL NSH

Client Sample ID: OB-04

Lab Sample ID: 490-128571-2

Date Collected: 05/09/17 13:10

Matrix: Water

Date Received: 05/12/17 09:20

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	430238	05/16/17 16:31	NC	TAL NSH

Client Sample ID: OB-08

Lab Sample ID: 490-128571-3

Date Collected: 05/09/17 15:05

Matrix: Water

Date Received: 05/12/17 09:20

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	430238	05/16/17 16:56	NC	TAL NSH

Client Sample ID: BR-15

Lab Sample ID: 490-128571-4

Date Collected: 05/09/17 17:25

Matrix: Water

Date Received: 05/12/17 09:20

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	430238	05/16/17 17:21	NC	TAL NSH

Client Sample ID: TW-17

Lab Sample ID: 490-128571-5

Date Collected: 05/10/17 09:34

Matrix: Water

Date Received: 05/12/17 09:20

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	430238	05/16/17 17:47	NC	TAL NSH

Client Sample ID: TW-20

Lab Sample ID: 490-128571-6

Date Collected: 05/10/17 11:08

Matrix: Water

Date Received: 05/12/17 09:20

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	430238	05/16/17 18:12	NC	TAL NSH

Client Sample ID: TW-09
Date Collected: 05/10/17 12:15
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-7
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	430238	05/16/17 18:38	NC	TAL NSH

Client Sample ID: OB-06
Date Collected: 05/10/17 13:20
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-8
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	430238	05/16/17 19:03	NC	TAL NSH

Client Sample ID: W-5
Date Collected: 05/10/17 14:55
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-9
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	430238	05/16/17 19:28	NC	TAL NSH

Client Sample ID: BR-03
Date Collected: 05/10/17 16:53
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-10
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	430588	05/17/17 13:49	SW1	TAL NSH

Client Sample ID: DUP-01
Date Collected: 05/10/17 00:01
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-11
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	430242	05/16/17 20:29	P1B	TAL NSH
Total/NA	Analysis	8260C		1	10 mL	10 mL	430588	05/17/17 13:23	SW1	TAL NSH

Client Sample ID: BR-10
Date Collected: 05/11/17 09:20
Date Received: 05/12/17 09:20

Lab Sample ID: 490-128571-12
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	430238	05/16/17 21:35	NC	TAL NSH

Client Sample ID: BR-04 — **Lab Sample ID: 490-128571-13**
Date Collected: 05/11/17 10:45 — **Matrix: Water**
Date Received: 05/12/17 09:20

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	430238	05/16/17 21:10	NC	TAL NSH

Client Sample ID: BR-02 — **Lab Sample ID: 490-128571-14**
Date Collected: 05/11/17 12:28 — **Matrix: Water**
Date Received: 05/12/17 09:20

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	430238	05/16/17 19:54	NC	TAL NSH

Client Sample ID: BR-01 — **Lab Sample ID: 490-128571-15**
Date Collected: 05/11/17 13:38 — **Matrix: Water**
Date Received: 05/12/17 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	10 mL	10 mL	430238	05/16/17 20:45	NC	TAL NSH

Client Sample ID: QARB-01 — **Lab Sample ID: 490-128571-16**
Date Collected: 05/11/17 14:10 — **Matrix: Water**
Date Received: 05/12/17 09:20

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	430238	05/16/17 15:40	NC	TAL NSH

Client Sample ID: QAFB-01 — **Lab Sample ID: 490-128571-17**
Date Collected: 05/11/17 14:15 — **Matrix: Water**
Date Received: 05/12/17 09:20

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	430238	05/16/17 15:14	NC	TAL NSH

Client Sample ID: QATB-01 — **Lab Sample ID: 490-128571-18**
Date Collected: 05/11/17 14:20 — **Matrix: Water**
Date Received: 05/12/17 09:20

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	430238	05/16/17 14:49	NC	TAL NSH

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

Method Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-128571-1

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

Accreditation/Certification Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-128571-1

Laboratory: TestAmerica Nashville

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11342	03-31-18

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-128571 Chain of Custody

Cooler Received/Opened On 05-12-2017 @ 09:20

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 1640 (last 4 digits, FedEx) Courier: _FedEx_

IR Gun ID 31470366 pH Strip Lot_____ Chlorine Strip Lot_____

2. Temperature of rep. sample or temp blank when opened: 1.1 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, 1 Side

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 (initial) _____

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 #_____

Sample ID # 490-128571-18

I certify that I unloaded the cooler and answered questions 7-14 (initial) AA

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 (initial) HG

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 (initial) HG

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

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 12/15/15

TestAmerica Nashville

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

5/26/2017

Client Information	Sampler: Noel Garland	Lab PM: Brown, Shali	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Joe Deatherage	Phone: 865-207-9713	E-Mail: shali.brown@testamericainc.com		Page: Page 1 of 2
Company: AMEC Environment & Infrastructure, Inc.		Analysis Requested		Job #:
Address: 9725 Cogdill Road	Due Date Requested: STANDARD			Preservation Codes:
City: Knoxville	TAT Requested (days): Standard TAT			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:
State, Zip: TN, 37932	PO #:			
Phone: 865-218-1049(Tel)	WO #: 30311152028.08			
Email: joe.deatherage@amec.com	Project #: 49001213			
Project Name: Former Taylor Instruments	SSOW#:			
Site: Rochester, NY				

Loc: 490
128571

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)	8260B TCE PCE 1,1-DCE cis/trans 1,2 DCE vinyl chloride	624 Standard list	Total Number of containers	Special Instructions/Note:
			Preservation Code:			A	A		
1 TW-04	5-09-17	11:15	G	Water		X		3	
2 OB-04		13:10		Water		X		3	
3 OB-08		15:05		Water		X		3	
4 BR-15		17:25		Water		X		3	
5 TW-17	5-10-17	09:34		Water		X		3	
6 TW-20		11:08		Water		X		3	
7 TW-09		12:15		Water		X		3	
8 OB-06		13:20		Water		X		3	
9 W-5		14:55		Water		X		3	
10 BR-03		16:53		Water		X		3	
11 DUP-01				Water		X		3	

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]	5-11-17 16:40	Amec FW	[signature] 7.7	5/12/17 0920	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:

TestAmerica Nashville

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

5/26/2017

Client Information	Sampler: Noel Gorlan	Lab PM: Brown, Shali	Carrier Tracking No(s):	COC No:
Client Contact: Mr. Joe Deatherage	Phone: 865-202-9213	E-Mail: shali.brown@testamericainc.com		Page: 2 of 2
Company: AMEC Environment & Infrastructure, Inc.				Job #:
Address: 9725 Cogdill Road	Due Date Requested:	Analysis Requested		
City: Knoxville	TAT Requested (days): Standard TAT			Preservation Codes:
State, Zip: TN, 37932	PO #:			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)
Phone: 865-218-1049(Tel)	WO #: 3031152028.08			Other:
Email: joe.deatherage@amec.com	Project #: 49001213			
Project Name: Former Taylor Instruments	SSOW#:			
Site: Rochester, NY				

Loc: 490
128571

	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	624 Standard list	Total Number of containers	Special Instructions/Note:
				Preservation Code:		X	X	A	A	X	
1	MS (BR-15)	5-9-17	17:25	G	Water			X		3	matrix spike
2	MSD (BR-15)	5-9-17	17:25		Water			X		3	matrix spike Duplicate
12	BR-10	5-11-17	09:20		Water			X		3	
13	BR-04		10:45		Water			X		3	
14	BR-02		12:28		Water			X		3	
15	BR-01		13:38		Water			X		3	
	~~Blind~~		~~14:00~~		~~Water~~				X	3	MH 5-11-2017
16	QARB-01		14:10		Water			X		3	
17	QAFB-01		14:15		Water			X		3	
18	QA TB-01		14:20		Water			X		3	
					Water						

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: [signature]	Date/Time: 5-11-17 16:40	Company: Amec FW	Received by: [signature] 2.7	Date/Time: 5/12/17 0920	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:

Login Sample Receipt Checklist

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 490-128571-1

Login Number: 128571
List Number: 1
Creator: Gundi, Hozar K

List Source: TestAmerica Nashville

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.	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	
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 (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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

May 23, 2017

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

RE: **FRM. TAYLOR INSTRUMENTS**

Pace Workorder: 22658

Dear Joe Deatherage:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, May 12, 2017. 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,

Ruth Welsh 05/23/2017
Ruth.Welsh@pacelabs.com

Customer Service Representative

Enclosures

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

Total Number of Pages 15

CERTIFICATE OF ANALYSIS

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:	West Virginia Department of Environmental Protection, Division of Water and Waste Management
Accreditation ID:	395
Scope:	Non-Potable Water
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, PAES is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

CERTIFICATE OF ANALYSIS

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

SAMPLE SUMMARY

Workorder: 22658 FRM. TAYLOR INSTRUMENTS

Lab ID	Sample ID	Matrix	Date Collected	Date Received
226580001	TW-04	Water	5/9/2017 11:15	5/12/2017 12:00
226580002	TW-17	Water	5/10/2017 09:34	5/12/2017 12:00
226580003	OB-06	Water	5/10/2017 13:20	5/12/2017 12:00
226580004	W-5	Water	5/10/2017 14:55	5/12/2017 12:00

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PROJECT SUMMARY

Workorder: 22658 FRM. TAYLOR INSTRUMENTS

Batch Comments

Batch: DISG/6119 - RSK175 QC

The relative percent difference between the sample and sample duplicate exceeded laboratory control limits; reference sample 226580001. Analyte Ethane. Results for original and duplicate samples were below reporting limits.

Batch: DISG/6123 - RSK175 QC

The matrix spike and/or spike duplicate, recovery or relative percent difference; accuracy influenced by the concentration of the reference sample 226180006. Analyte Methane and Ethene. Batch acceptance based on laboratory control sample recovery.

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ANALYTICAL RESULTS

Workorder: 22658 FRM. TAYLOR INSTRUMENTS

Lab ID: **226580001** Date Received: 5/12/2017 12:00 Matrix: Water

Sample ID: **TW-04** Date Collected: 5/9/2017 11:15

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: EPA RSK175		Analytical Method: EPA RSK175						
Methane	**46**	ug/l	0.50	0.019	1	5/19/2017 11:28	AK	
Ethene	**0.20 U**	ug/l	0.20	0.0070	1	5/19/2017 11:28	AK	

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ANALYTICAL RESULTS

Workorder: 22658 FRM. TAYLOR INSTRUMENTS

Lab ID: **226580002** Date Received: 5/12/2017 12:00 Matrix: Water

Sample ID: **TW-17** Date Collected: 5/10/2017 09:34

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: EPA RSK175		Analytical Method: EPA RSK175						
Methane	**27000**	ug/l	100	3.8	200	5/22/2017 13:06	AK	d,M3,D3,B,M5
Ethene	**26**	ug/l	0.20	0.0070	1	5/19/2017 11:39	AK	

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ANALYTICAL RESULTS

Workorder: 22658 FRM. TAYLOR INSTRUMENTS

Lab ID: **226580003** Date Received: 5/12/2017 12:00 Matrix: Water

Sample ID: **OB-06** Date Collected: 5/10/2017 13:20

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: EPA RSK175		Analytical Method: EPA RSK175						
Methane	**22000**	ug/l	50	1.9	100	5/22/2017 13:17	AK	d,M3,D3,B,M5
Ethene	**1.4**	ug/l	0.20	0.0070	1	5/19/2017 11:49	AK	

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ANALYTICAL RESULTS

Workorder: 22658 FRM. TAYLOR INSTRUMENTS

Lab ID: **226580004** Date Received: 5/12/2017 12:00 Matrix: Water

Sample ID: **W-5** Date Collected: 5/10/2017 14:55

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: EPA RSK175		Analytical Method: EPA RSK175						
Methane	**3900**	ug/l	50	1.9	100	5/22/2017 13:27	AK	d,M3,D3,B,M5
Ethene	**4.7**	ug/l	0.20	0.0070	1	5/19/2017 12:00	AK	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 22658 FRM. TAYLOR INSTRUMENTS

DEFINITIONS/QUALIFIERS

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).
D3	The matrix spike duplicate relative percent difference (RPD) exceeded laboratory control limits.
B	The analyte was detected in the associated blank.
d	The analyte concentration was determined from a dilution.
M5	The matrix spike duplicate sample recovery was outside laboratory control limits.
M3	The matrix spike sample recovery was outside laboratory control limits.

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QUALITY CONTROL DATA

Workorder: 22658 FRM. TAYLOR INSTRUMENTS

QC Batch: DISG/6119 Analysis Method: EPA RSK175

QC Batch Method: EPA RSK175

Associated Lab Samples: 226580001, 226580002, 226580003, 226580004

METHOD BLANK: 48883

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	0.50 U	0.50	
Ethene	ug/l	0.20 U	0.20	

LABORATORY CONTROL SAMPLE & LCSD: 48884 48885

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	44	43	44	96	99	85-115	3.1	20	
Ethene	ug/l	78	77	78	99	101	85-115	2	20	

SAMPLE DUPLICATE: 48888 Original: 226580001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
RISK						
Methane	ug/l	46	47	4.1	20	
Ethene	ug/l	0	0	0	20	

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QUALITY CONTROL DATA

Workorder: 22658 FRM. TAYLOR INSTRUMENTS

QC Batch: DISG/6123 Analysis Method: EPA RSK175

QC Batch Method: EPA RSK175

Associated Lab Samples: 226580002, 226580003, 226580004

METHOD BLANK: 48942

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	0.020J	0.50	M3,D3,B,M5

LABORATORY CONTROL SAMPLE & LCSD: 48943 48944

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	44	44	43	98	97	85-115	1	20	M3,M5,D3,B

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 48886 48887 Original: 226180006

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK											
Methane	ug/l	11000	44	10000	11000	-2360	-49	70-130	-192	20	d,M3,D3,B,M5

SAMPLE DUPLICATE: 48945 Original: 226600002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
RISK						
Methane	ug/l	0.51	0.47	8.5	20	M3,D3,B,M5

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QUALITY CONTROL DATA QUALIFIERS

Workorder: 22658 FRM. TAYLOR INSTRUMENTS

QUALITY CONTROL PARAMETER QUALIFIERS

B	The analyte was detected in the associated blank.
D3	The matrix spike duplicate relative percent difference (RPD) exceeded laboratory control limits.
M3	The matrix spike sample recovery was outside laboratory control limits.
M5	The matrix spike duplicate sample recovery was outside laboratory control limits.
d	The analyte concentration was determined from a dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 22658 FRM. TAYLOR INSTRUMENTS

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
226580001	TW-04			EPA RSK175	DISG/6119
226580002	TW-17			EPA RSK175	DISG/6119
226580003	OB-06			EPA RSK175	DISG/6119
226580004	W-5			EPA RSK175	DISG/6119
226580002	TW-17			EPA RSK175	DISG/6123
226580003	OB-06			EPA RSK175	DISG/6123
226580004	W-5			EPA RSK175	DISG/6123

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www.pacelabs.com

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412-826-5245

22658

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

007923

Section A
Required Client Information:

Company:	Amec Foster Wheeler
Address:	2030 Falling Waters Rd. Knoxville, TN 37922
Email To:	joe.deatherage@amecfw.com
Phone:	865-218-1049
Fax:	
Requested Due Date/TAT:	STANDARD

Section B
Required Project Information:

Report To:	Joe Deatherage
Copy To:	
Purchase Order No.:	
Project Name:	Former Taylor Instruments
Project Number:	30711520 28.08

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location STATE: Rochester NY

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	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	Analysis Test Y/N	methane/ethene	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TW-04	WT	G	~~5-9-17~~	~~11:~~	5-9-17	11:15		3					X					X		
2	TW-17					5-10-17	09:34		3					X					X		
3	OB-06					"	13:20		3					X					X		
4	W-5					"	14:55		3					X					X		
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Noel Garland/Amec FW	5-11-17	16:40	[illegible] PACE	5.12	1200	3	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Noel Garland

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 05/11/17

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 Lab Work Order: 22658

A. Shipping/Container Information (circle appropriate response)

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

Tracking Number: 786541612498

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-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	✓			
PAES 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: LG Date: 5.12.17

Project Manager Review: Frm Date: 5/12/17

NOVEMBER 2017
LABORATORY REPORTS AND
CHAIN-OF-CUSTODY FORMS

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: 490-140085-1
Client Project/Site: Former Taylor Instruments

For:
AMEC Foster Wheeler E & I, Inc
2030 Falling Waters Road
Ste 300
Knoxville, Tennessee 37922

Attn: Mr. Joe Deatherage

Authorized for release by:
11/17/2017 1:57:22 PM

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

Table of Contents

Sample Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-140085-1	BR-15	Water	10/31/17 14:35	11/04/17 09:31
490-140085-2	BR-02	Water	10/31/17 16:05	11/04/17 09:31
490-140085-3	BR-03	Water	11/01/17 10:10	11/04/17 09:31
490-140085-4	BR-10	Water	11/01/17 12:04	11/04/17 09:31
490-140085-5	BR-04	Water	11/01/17 13:25	11/04/17 09:31
490-140085-6	BR-01	Water	11/01/17 14:45	11/04/17 09:31
490-140085-7	QATB-01	Water	11/01/17 15:30	11/04/17 09:31
490-140085-8	QARB-01	Water	11/01/17 15:35	11/04/17 09:31
490-140085-9	QAFB-01	Water	11/01/17 15:40	11/04/17 09:31
490-140085-10	DUP-01	Water	10/31/17 00:01	11/04/17 09:31

Job ID: 490-140085-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-140085-1

Comments
No additional comments.

Receipt
The samples were received on 11/4/2017 9:31 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1º C.

GC/MS VOA
Method(s) 8260C: Surrogate recovery for the following sample was outside control limits: BR-10 (490-140085-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C: Internal standard (ISTD) response for 1,4-dichlorobenzene-d4 in the following samples was outside of acceptance limits: BR-01 (490-140085-6). None of the compounds reported in the sample are associated with this ISTD; therefore, the data is reported.

Method(s) 8260C: The following samples was diluted due to the nature of the sample matrix: BR-04 (490-140085-5) and BR-01 (490-140085-6). Elevated reporting limits (RLs) are provided.

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

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
X	Surrogate is outside control limits
*	ISTD response or retention time outside acceptable 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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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 Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

Client Sample ID: BR-15
Date Collected: 10/31/17 14:35
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-1
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			11/07/17 05:54	1
cis-1,2-Dichloroethene	**5.22**		1.00		ug/L			11/07/17 05:54	1
Tetrachloroethene	ND		1.00		ug/L			11/07/17 05:54	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/07/17 05:54	1
Trichloroethene	**2.43**		1.00		ug/L			11/07/17 05:54	1
Vinyl chloride	**4.06**		1.00		ug/L			11/07/17 05:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*70 - 130*		*11/07/17 05:54*	*1*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*		*11/07/17 05:54*	*1*
Dibromofluoromethane (Surr)	*105*		*70 - 130*		*11/07/17 05:54*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*11/07/17 05:54*	*1*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

Client Sample ID: BR-02
Date Collected: 10/31/17 16:05
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-2
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			11/07/17 06:19	1
cis-1,2-Dichloroethene	**18.6**		1.00		ug/L			11/07/17 06:19	1
Tetrachloroethene	ND		1.00		ug/L			11/07/17 06:19	1
trans-1,2-Dichloroethene	**1.73**		1.00		ug/L			11/07/17 06:19	1
Trichloroethene	**16.6**		1.00		ug/L			11/07/17 06:19	1
Vinyl chloride	**1.47**		1.00		ug/L			11/07/17 06:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 130*		*11/07/17 06:19*	*1*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*		*11/07/17 06:19*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*11/07/17 06:19*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*11/07/17 06:19*	*1*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

Client Sample ID: BR-03
Date Collected: 11/01/17 10:10
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	**1.09**		1.00		ug/L			11/07/17 06:45	1
cis-1,2-Dichloroethene	**49.5**		1.00		ug/L			11/07/17 06:45	1
Tetrachloroethene	ND		1.00		ug/L			11/07/17 06:45	1
trans-1,2-Dichloroethene	**2.48**		1.00		ug/L			11/07/17 06:45	1
Trichloroethene	**483**		10.0		ug/L			11/08/17 07:07	10
Vinyl chloride	ND		1.00		ug/L			11/07/17 06:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 130*		*11/07/17 06:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*11/08/17 07:07*	*10*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*11/07/17 06:45*	*1*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*		*11/08/17 07:07*	*10*
Dibromofluoromethane (Surr)	*107*		*70 - 130*		*11/07/17 06:45*	*1*
Dibromofluoromethane (Surr)	*114*		*70 - 130*		*11/08/17 07:07*	*10*
Toluene-d8 (Surr)	*104*		*70 - 130*		*11/07/17 06:45*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*11/08/17 07:07*	*10*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

Client Sample ID: BR-10
Date Collected: 11/01/17 12:04
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-4
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			11/07/17 07:10	1
cis-1,2-Dichloroethene	**413**		10.0		ug/L			11/08/17 07:33	10
Tetrachloroethene	ND		1.00		ug/L			11/07/17 07:10	1
trans-1,2-Dichloroethene	**56.2**		1.00		ug/L			11/07/17 07:10	1
Trichloroethene	**168**		1.00		ug/L			11/07/17 07:10	1
Vinyl chloride	**3.64**		1.00		ug/L			11/07/17 07:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 130*		*11/07/17 07:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*11/08/17 07:33*	*10*
4-Bromofluorobenzene (Surr)	*135*	*X*	*70 - 130*		*11/07/17 07:10*	*1*
4-Bromofluorobenzene (Surr)	*131*	*X*	*70 - 130*		*11/08/17 07:33*	*10*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*11/07/17 07:10*	*1*
Dibromofluoromethane (Surr)	*108*		*70 - 130*		*11/08/17 07:33*	*10*
Toluene-d8 (Surr)	*95*		*70 - 130*		*11/07/17 07:10*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*11/08/17 07:33*	*10*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

Client Sample ID: BR-04
Date Collected: 11/01/17 13:25
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-5
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		10.0		ug/L			11/07/17 08:01	10
cis-1,2-Dichloroethene	**1490**		10.0		ug/L			11/07/17 08:01	10
Tetrachloroethene	ND		10.0		ug/L			11/07/17 08:01	10
trans-1,2-Dichloroethene	**104**		10.0		ug/L			11/07/17 08:01	10
Trichloroethene	**933**		10.0		ug/L			11/07/17 08:01	10
Vinyl chloride	**59.6**		10.0		ug/L			11/07/17 08:01	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*70 - 130*		*11/07/17 08:01*	*10*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*		*11/07/17 08:01*	*10*
Dibromofluoromethane (Surr)	*108*		*70 - 130*		*11/07/17 08:01*	*10*
Toluene-d8 (Surr)	*96*		*70 - 130*		*11/07/17 08:01*	*10*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

Client Sample ID: BR-01
Date Collected: 11/01/17 14:45
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-6
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		5.00		ug/L			11/07/17 07:36	5
cis-1,2-Dichloroethene	**772**		5.00		ug/L			11/07/17 07:36	5
Tetrachloroethene	ND		5.00		ug/L			11/07/17 07:36	5
trans-1,2-Dichloroethene	**47.6**		5.00		ug/L			11/07/17 07:36	5
Trichloroethene	**6.08**		5.00		ug/L			11/07/17 07:36	5
Vinyl chloride	**345**		5.00		ug/L			11/07/17 07:36	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*70 - 130*		*11/07/17 07:36*	*5*
4-Bromofluorobenzene (Surr)	*99*	*	*70 - 130*		*11/07/17 07:36*	*5*
Dibromofluoromethane (Surr)	*107*		*70 - 130*		*11/07/17 07:36*	*5*
Toluene-d8 (Surr)	*106*		*70 - 130*		*11/07/17 07:36*	*5*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

Client Sample ID: QATB-01
Date Collected: 11/01/17 15:30
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-7
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			11/07/17 00:47	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			11/07/17 00:47	1
Tetrachloroethene	ND		1.00		ug/L			11/07/17 00:47	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/07/17 00:47	1
Trichloroethene	ND		1.00		ug/L			11/07/17 00:47	1
Vinyl chloride	ND		1.00		ug/L			11/07/17 00:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*		*11/07/17 00:47*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*11/07/17 00:47*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*11/07/17 00:47*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*11/07/17 00:47*	*1*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

Client Sample ID: QARB-01
Date Collected: 11/01/17 15:35
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-8
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			11/07/17 01:13	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			11/07/17 01:13	1
Tetrachloroethene	ND		1.00		ug/L			11/07/17 01:13	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/07/17 01:13	1
Trichloroethene	ND		1.00		ug/L			11/07/17 01:13	1
Vinyl chloride	ND		1.00		ug/L			11/07/17 01:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*		*11/07/17 01:13*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*11/07/17 01:13*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*11/07/17 01:13*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*11/07/17 01:13*	*1*

Client Sample ID: QAFB-01
Date Collected: 11/01/17 15:40
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-9
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			11/07/17 01:38	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			11/07/17 01:38	1
Tetrachloroethene	ND		1.00		ug/L			11/07/17 01:38	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/07/17 01:38	1
Trichloroethene	ND		1.00		ug/L			11/07/17 01:38	1
Vinyl chloride	ND		1.00		ug/L			11/07/17 01:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*		*11/07/17 01:38*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*11/07/17 01:38*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*11/07/17 01:38*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*11/07/17 01:38*	*1*

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

Client Sample ID: DUP-01
Date Collected: 10/31/17 00:01
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-10
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			11/07/17 08:27	1
cis-1,2-Dichloroethene	**5.70**		1.00		ug/L			11/07/17 08:27	1
Tetrachloroethene	ND		1.00		ug/L			11/07/17 08:27	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/07/17 08:27	1
Trichloroethene	**2.33**		1.00		ug/L			11/07/17 08:27	1
Vinyl chloride	**5.20**		1.00		ug/L			11/07/17 08:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*70 - 130*		*11/07/17 08:27*	*1*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*		*11/07/17 08:27*	*1*
Dibromofluoromethane (Surr)	*109*		*70 - 130*		*11/07/17 08:27*	*1*
Toluene-d8 (Surr)	*112*		*70 - 130*		*11/07/17 08:27*	*1*

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

Lab Sample ID: MB 490-473709/6
Matrix: Water
Analysis Batch: 473709

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			11/07/17 00:22	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			11/07/17 00:22	1
Tetrachloroethene	ND		1.00		ug/L			11/07/17 00:22	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/07/17 00:22	1
Trichloroethene	ND		1.00		ug/L			11/07/17 00:22	1
Vinyl chloride	ND		1.00		ug/L			11/07/17 00:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*		*11/07/17 00:22*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*11/07/17 00:22*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*11/07/17 00:22*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*11/07/17 00:22*	*1*

Lab Sample ID: LCS 490-473709/3
Matrix: Water
Analysis Batch: 473709

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			20.0	17.98		ug/L		90	79 - 124		
cis-1,2-Dichloroethene			20.0	18.15		ug/L		91	76 - 125		
Tetrachloroethene			20.0	19.15		ug/L		96	80 - 126		
trans-1,2-Dichloroethene			20.0	18.09		ug/L		90	79 - 126		
Trichloroethene			20.0	18.09		ug/L		90	80 - 123		
Vinyl chloride			20.0	19.56		ug/L		98	68 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Dibromofluoromethane (Surr)	*95*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 490-473709/4
Matrix: Water
Analysis Batch: 473709

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			20.0	18.45		ug/L		92	79 - 124	3	20
cis-1,2-Dichloroethene			20.0	18.35		ug/L		92	76 - 125	1	15
Tetrachloroethene			20.0	18.51		ug/L		93	80 - 126	3	17
trans-1,2-Dichloroethene			20.0	17.54		ug/L		88	79 - 126	3	15
Trichloroethene			20.0	17.06		ug/L		85	80 - 123	6	14
Vinyl chloride			20.0	19.15		ug/L		96	68 - 120	2	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*

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

Lab Sample ID: LCSD 490-473709/4
Matrix: Water
Analysis Batch: 473709

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

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: 490-140085-1 MS
Matrix: Water
Analysis Batch: 473709

Client Sample ID: BR-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	ND		20.0	22.81		ug/L		114	54 - 150
cis-1,2-Dichloroethene	5.22		20.0	27.77		ug/L		113	68 - 131
Tetrachloroethene	ND		20.0	19.65		ug/L		98	57 - 138
trans-1,2-Dichloroethene	ND		20.0	23.08		ug/L		114	59 - 143
Trichloroethene	2.43		20.0	21.98		ug/L		98	63 - 135
Vinyl chloride	4.06		20.0	29.03		ug/L		125	57 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*123*		*70 - 130*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
Dibromofluoromethane (Surr)	*105*		*70 - 130*
Toluene-d8 (Surr)	*88*		*70 - 130*

Lab Sample ID: 490-140085-1 MSD
Matrix: Water
Analysis Batch: 473709

Client Sample ID: BR-15
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		20.0	19.36		ug/L		97	54 - 150	16	17
cis-1,2-Dichloroethene	5.22		20.0	25.91		ug/L		103	68 - 131	7	17
Tetrachloroethene	ND		20.0	21.82		ug/L		109	57 - 138	10	16
trans-1,2-Dichloroethene	ND		20.0	20.49		ug/L		101	59 - 143	12	16
Trichloroethene	2.43		20.0	21.87		ug/L		97	63 - 135	1	17
Vinyl chloride	4.06		20.0	25.16		ug/L		105	57 - 150	14	17

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*118*		*70 - 130*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: MB 490-474026/8
Matrix: Water
Analysis Batch: 474026

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			11/08/17 02:46	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			11/08/17 02:46	1
Tetrachloroethene	ND		1.00		ug/L			11/08/17 02:46	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			11/08/17 02:46	1

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

Lab Sample ID: MB 490-474026/8
Matrix: Water
Analysis Batch: 474026

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			11/08/17 02:46	1
Vinyl chloride	ND		1.00		ug/L			11/08/17 02:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*		*11/08/17 02:46*	*1*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*		*11/08/17 02:46*	*1*
Dibromofluoromethane (Surr)	*107*		*70 - 130*		*11/08/17 02:46*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*11/08/17 02:46*	*1*

Lab Sample ID: LCS 490-474026/4
Matrix: Water
Analysis Batch: 474026

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	20.0	22.65		ug/L		113	79 - 124
cis-1,2-Dichloroethene	20.0	21.37		ug/L		107	76 - 125
Tetrachloroethene	20.0	22.11		ug/L		111	80 - 126
trans-1,2-Dichloroethene	20.0	21.43		ug/L		107	79 - 126
Trichloroethene	20.0	24.14		ug/L		121	80 - 123
Vinyl chloride	20.0	21.19		ug/L		106	68 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*110*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: 490-140193-A-2 MS
Matrix: Water
Analysis Batch: 474026

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		100	118.6		ug/L		119	54 - 150
cis-1,2-Dichloroethene	ND		100	110.7		ug/L		111	68 - 131
Tetrachloroethene	ND		100	116.0		ug/L		116	57 - 138
trans-1,2-Dichloroethene	ND		100	105.6		ug/L		106	59 - 143
Trichloroethene	ND		100	125.1		ug/L		125	63 - 135
Vinyl chloride	ND		100	105.7		ug/L		106	57 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*108*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

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

Lab Sample ID: 490-140193-A-2 MSD
Matrix: Water
Analysis Batch: 474026

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		100	129.3		ug/L		129	54 - 150	9	17
cis-1,2-Dichloroethene	ND		100	111.5		ug/L		112	68 - 131	1	17
Tetrachloroethene	ND		100	125.0		ug/L		125	57 - 138	7	16
trans-1,2-Dichloroethene	ND		100	110.7		ug/L		111	59 - 143	5	16
Trichloroethene	ND		100	131.9		ug/L		132	63 - 135	5	17
Vinyl chloride	ND		100	109.8		ug/L		110	57 - 150	4	17

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*107*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

GC/MS VOA

Analysis Batch: 473709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-140085-1	BR-15	Total/NA	Water	8260C	
490-140085-2	BR-02	Total/NA	Water	8260C	
490-140085-3	BR-03	Total/NA	Water	8260C	
490-140085-4	BR-10	Total/NA	Water	8260C	
490-140085-5	BR-04	Total/NA	Water	8260C	
490-140085-6	BR-01	Total/NA	Water	8260C	
490-140085-7	QATB-01	Total/NA	Water	8260C	
490-140085-8	QARB-01	Total/NA	Water	8260C	
490-140085-9	QAFB-01	Total/NA	Water	8260C	
490-140085-10	DUP-01	Total/NA	Water	8260C	
MB 490-473709/6	Method Blank	Total/NA	Water	8260C	
LCS 490-473709/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-473709/4	Lab Control Sample Dup	Total/NA	Water	8260C	
490-140085-1 MS	BR-15	Total/NA	Water	8260C	
490-140085-1 MSD	BR-15	Total/NA	Water	8260C	

Analysis Batch: 474026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-140085-3	BR-03	Total/NA	Water	8260C	
490-140085-4	BR-10	Total/NA	Water	8260C	
MB 490-474026/8	Method Blank	Total/NA	Water	8260C	
LCS 490-474026/4	Lab Control Sample	Total/NA	Water	8260C	
490-140193-A-2 MS	Matrix Spike	Total/NA	Water	8260C	
490-140193-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	

Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

Client Sample ID: BR-15
Date Collected: 10/31/17 14:35
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-1
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	473709	11/07/17 05:54	S1S	TAL NSH

Client Sample ID: BR-02
Date Collected: 10/31/17 16:05
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-2
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	473709	11/07/17 06:19	S1S	TAL NSH

Client Sample ID: BR-03
Date Collected: 11/01/17 10:10
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-3
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	473709	11/07/17 06:45	S1S	TAL NSH
Total/NA	Analysis	8260C		10	10 mL	10 mL	474026	11/08/17 07:07	P1B	TAL NSH

Client Sample ID: BR-10
Date Collected: 11/01/17 12:04
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-4
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	473709	11/07/17 07:10	S1S	TAL NSH
Total/NA	Analysis	8260C		10	10 mL	10 mL	474026	11/08/17 07:33	P1B	TAL NSH

Client Sample ID: BR-04
Date Collected: 11/01/17 13:25
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-5
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		10	10 mL	10 mL	473709	11/07/17 08:01	S1S	TAL NSH

Client Sample ID: BR-01
Date Collected: 11/01/17 14:45
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-6
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		5	10 mL	10 mL	473709	11/07/17 07:36	S1S	TAL NSH

Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

Client Sample ID: QATB-01

Date Collected: 11/01/17 15:30
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-7

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	473709	11/07/17 00:47	S1S	TAL NSH

Client Sample ID: QARB-01

Date Collected: 11/01/17 15:35
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-8

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	473709	11/07/17 01:13	S1S	TAL NSH

Client Sample ID: QAFB-01

Date Collected: 11/01/17 15:40
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-9

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	473709	11/07/17 01:38	S1S	TAL NSH

Client Sample ID: DUP-01

Date Collected: 10/31/17 00:01
Date Received: 11/04/17 09:31

Lab Sample ID: 490-140085-10

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	473709	11/07/17 08:27	S1S	TAL NSH

Laboratory References:

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

Method Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

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

Accreditation/Certification Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Former Taylor Instruments

TestAmerica Job ID: 490-140085-1

Laboratory: TestAmerica Nashville

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11342	03-31-18

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

490-140085 Chain of Custody

COOLER RECEIPT FORM

Cooler Received/Opened On 11/3/2017 @ 09:30

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 4960 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 14740456 pH Strip Lot_____ Chlorine Strip Lot_____

2. Temperature of rep. sample or temp blank when opened: 2.1 *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) es

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

● ⬅ Larger than this.

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) es

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) es

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) es

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

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

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

TestAmerica Nashville

Chain of Cust 490-140085

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Noel Garland	Lab PM: Brown, Shali	COC No:
Client Contact: Mr. Joe Deatherage	Phone: 865-202-9213	E-Mail: shali.brown@testamericainc.com	Page: 1 of 1
Company: AMEC Environment & Infrastructure, Inc.		Analysis Requested	Job #:
Address: ~~9725 Cogdill Road~~ 2030 Falling Waters Rd.	Due Date Requested:		Preservation Codes:
City: Knoxville	TAT Requested (days): Standard TAT		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~~ ~~37~~ 37922	PO #: 3031152028.08		
Phone: 865-218-1049(Tel)	WO #: 3031152028.08		Other:
Email: joe.deatherage@~~amec.com~~ amecfw.com	Project #: 49001213		
Project Name: Former Taylor Instruments	SSOW#:		
Site: Rochester, NY			

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 TOE PCE 1,1-DCE cis/trans 1,2 DCE vinyl chloride	624 Standard list	Total Number of containers	Special Instructions/Note:
Preservation Code:							A	A		
1 BR-15	10-31-17	14:35	G	Water			X		3	
2 BR-02	10-31-17	16:05	G	Water			X		3	
3 BR-03	11-1-17	10:10	G	Water			X		3	
4 BR-10		12:04	G	Water			X		3	
5 BR-04		13:25	G	Water			X		3	
6 BR-01		14:45	G	Water			X		3	
7 QATB-01		15:30	G	Water			X		3	
8 QARB-01		15:35	G	Water			X		3	
9 QAFB-01		15:40	G	Water			X		3	
10 DUP-01	10-31-17	—	G	Water			X		3	
~~MS/MSD~~ BR-15MS / BR-15MSD	10-31-17	14:35	G	Water			X		6	matrix Spike / matrix Spike Duplicate

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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]	11-2-17 13:00	AmecFW	[signature]	11-3-17 9:30	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.1

11/17/2017

Login Sample Receipt Checklist

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 490-140085-1

Login Number: 140085
List Number: 1
Creator: Stewart, Eric S

List Source: TestAmerica Nashville

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 (excluding tests with immediate HTs)	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	

APPENDIX E

FIELD DATA RECORDS

MAY 2017
FIELD DATA RECORDS

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5/09/17

SITE ID: OB-04

SITE TYPE: Monitor Well

SITE ACTIVITY: START 11:23 END 13:17

JOB NUMBER: 3031152028.08

WATER LEVEL

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	4.08 FT	WELL DEPTH	16.45 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	7.02 FT	SCREEN LENGTH	5 FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	2.94 FT	DRAWDOWN VOLUME	~~2.78~~ 0.470 GAL	PRODUCT THICKNESS	NA 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: 0.138 L/MIN

BEGIN PURGING: 11:30

END PURGING: 13:09

TOTAL VOL. PURGED: 3.55 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
11:35	FC	6.69	0.707	9.61	4.82	12.35	-173.8	5.03	clear - solvent odor
* 11:45	1.45	6.68	0.701	13.0	5.66	12.64	-143.9	6.05	light gray - solvent odor
12:05	3	6.74	0.816	207	3.41	12.49	-206.6	6.82	Gray - strong odor - black flakes
12:15	1.6	6.73	0.811	101	2.31	12.57	-211.1	6.98	Emptied F.C.
12:25	1.5	6.72	0.820	41.4	1.98	12.43	-216.8	7.13	Slowed pump
12:31	0.80	6.72	0.825	29.1	1.72	12.76	-227.1	7.02	lt. gray - slight odor
12:37	0.80	6.72	0.834	20.0	1.29	12.75	-231.2	7.03	
12:43	0.80	6.70	0.835	17.7	1.01	12.83	-228.3	7.03	clear - solvent odor
12:50	0.80	6.70	0.843	17.9	0.74	12.75	-235.8	7.03	
12:57	0.80	6.70	0.851	16.0	0.47	12.78	-234.6	7.03	
13:03	0.75	6.69	0.857	16.2	0.43	12.90	-238.3	7.02	
13:09	0.75	6.68	0.860	16.4	0.41	12.88	-239.4	7.02	

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 @ 14ft btoc

SIGNATURE: _____

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	OB-04	13:10
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

* changed DO sensor @ 11:45

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5/10/17

SITE ID: OB-06

SITE TYPE: Monitor Well

SITE ACTIVITY: START 12:20 END 13:29

JOB NUMBER: 3031152028.08

WATER LEVEL

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	3.85 FT	WELL DEPTH	16.45 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	5.19 FT	SCREEN LENGTH	10 FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	1.34 FT	DRAWDOWN VOLUME	0.214 GAL	PRODUCT THICKNESS	NA 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: 0.135 L/MIN

BEGIN PURGING: 12:24

END PURGING: 13:19

TOTAL VOL. PURGED: 1.93 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
12:27	FC	6.88	1.014	7.96	1.56	12.58	-48.7	4.48	clear – Solvent odor
12:37	1.6	6.89	1.013	8.39	0.70	12.60	-71.2	5.19	Slowed pump
12:44	~~0.7~~ 1.0	6.90	0.996	7.29	0.54	12.60	-110.8	5.27	
12:51	1	6.90	0.987	8.50	0.47	12.48	-127.8	5.31	Slowed pump
12:58	0.85	6.90	0.971	8.77	0.39	12.83	-139.1	5.20	clear – Solvent odor
13:05	0.85	6.90	0.961	8.90	0.34	12.88	-149.9	5.19	
13:12	0.85	6.90	0.954	7.92	0.27	13.04	-151.9	5.19	
13:19	0.85	6.90	0.952	9.14	0.25	13.05	-154.0	5.19	

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 @ 11.5 ft btoc

SIGNATURE: _____

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	OB-06	13:20
[ ]	VFA's			
[ ]	Sulfate			
[X]	Methane/Ethene		OB-06	13:20
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5/09/17

SITE ID: OB-08

SITE TYPE: Monitor Well

SITE ACTIVITY: START ~~13:19~~ END 15:07

JOB NUMBER: 3031152028.08

WATER LEVEL: 13:19

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	4.71 FT	WELL DEPTH	25.3 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	6.19 FT	SCREEN LENGTH	10 FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	1.48 FT	DRAWDOWN VOLUME	0.237 GAL	PRODUCT THICKNESS	NA 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: 0.122 L/MIN

BEGIN PURGING: 13:21

END PURGING: 15:02

TOTAL VOL. PURGED: 3.21 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
13:26	FC	7.20	0.868	20.0	5.53	13.33	-142.3	5.24	clear - Slight odor
13:36	1.4	7.16	0.859	20.6	0.73	13.20	-129.2	6.23	Slowed pump
13:46	1.2	7.15	0.856	25.1	0.40	13.14	-122.3	6.20	lt. gray - no odor
13:56	1.2	7.15	0.853	31.5	0.30	13.00	-121.2	6.20	cloudy - Slight odor
14:03	0.75	7.15	0.851	36.5	0.30	13.11	-120.5	6.18	
14:10	0.75	7.16	0.854	34.6	0.22	13.06	-124.9	6.18	Emptied F.C.
14:20	1.2	7.17	0.864	28.0	0.24	12.95	-115.1	6.18	
14:26	0.75	7.16	0.871	24.8	0.23	12.86	-116.7	6.18	
14:32	0.75	7.16	0.875	21.7	0.23	12.86	-116.8	6.18	
14:38	0.75	7.16	0.881	19.2	0.21	12.86	-115.1	6.18	
14:44	0.75	7.16	0.884	20.2	0.18	12.84	-118.1	6.19	
14:50	0.75	7.15	0.888	16.6	0.17	12.82	-113.0	6.19	
14:56	0.75	7.15	0.892	12.8	0.19	12.86	-116.3	6.19	
15:02	0.75	7.15	0.898	8.25	0.17	12.84	-119.5	6.19	clear - no odor

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 ft btoc

SIGNATURE:

NOTES

	Preservation	Sample Name	Time Collected
[✓] VOC (modified list)	HCl	OB-08	15:05
[ ] VFA's			
[ ] Sulfate			
[ ] Methane/Ethene			
[ ] Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 05/09/17

SITE ID: TW-04

SITE TYPE: Monitor Well

SITE ACTIVITY: START 09:40 END 11:20

JOB NUMBER: 3031152028.08

WATER LEVEL

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	6.24 FT	WELL DEPTH	17.3 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	8.81 FT	SCREEN LENGTH	5 FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	2.60 FT	DRAWDOWN VOLUME	0.416 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: 0.126 L/MIN

BEGIN PURGING: 09:49

END PURGING: 11:11

TOTAL VOL. PURGED: 2.84 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
09:49	FC	7.15	0.759	4.15	4.10	10.35	206.4	7.01	clear - No odor
09:56	|	7.22	0.764	1.90	2.01	10.37	132.7	7.82	
10:03	|	7.22	0.754	2.18	2.03	10.33	49.0	8.40	
10:10	|	7.22	0.745	2.41	2.13	10.33	26.1	8.71	slowed pump
10:20	1.3	7.23	0.733	2.11	2.24	10.29	0.0	8.80	
10:30	1.3	7.23	0.732	1.12	2.16	10.38	-14.2	8.90	
10:36	0.75	7.23	0.730	1.17	2.23	10.45	-18.5	8.95	slowed pump
10:43	0.75	7.23	0.707	1.07	2.27	10.44	-22.2	8.92	
10:50	0.80	7.24	0.723	0.71	2.18	10.40	-30.3	8.87	
10:57	0.80	7.24	0.716	0.61	2.07	10.48	-34.4	8.85	
11:04	0.80	7.24	0.713	0.97	1.99	10.51	-36.8	8.83	
11:11	0.80	7.24	0.711	1.32	1.97	10.57	-36.0	8.82	clear - No odor

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 @ 14.5ft btoc

SIGNATURE:

NOTES

	Preservation	Sample Name	Time Collected
[✓] VOC (modified list)	HCL	TW-04	11:15
[ ] VFA's			
[ ] Sulfate			
[✓] Methane/Ethene		TW-04	11:15
[ ] Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5/10/17

SITE ID: TW-09

SITE TYPE: Monitor Well

SITE ACTIVITY: START 11:14 END 12:18

JOB NUMBER: 3031152028.08

WATER LEVEL

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	10.53 FT	WELL DEPTH	17.70 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	10.83 FT	SCREEN LENGTH	5 FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	0.30 FT	DRAWDOWN VOLUME	0.048 GAL	PRODUCT THICKNESS	NA 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: 0.130 L/MIN

BEGIN PURGING: 11:19

END PURGING: 12:13

TOTAL VOL. PURGED: 1.83 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
11:23	FC	7.00	0.608	10.1	3.54	11.96	36.5	10.75	Clear - no odor
11:33	1.5	6.92	0.597	4.21	2.32	11.85	44.8	10.83	
11:39	0.90	6.92	0.613	2.71	2.48	11.85	48.5	10.85	
11:45	0.90	6.94	0.624	1.97	2.14	11.92	51.2	10.87	Slowed pump
11:52	0.80	6.95	0.635	1.12	1.87	1212	53.4	10.83	
11:59	0.80	6.96	0.640	1.19	1.68	12.01	56.0	10.83	
12:06	0.80	6.97	0.641	1.18	1.62	11.87	57.9	10.83	
12:13	0.80	6.98	0.645	0.86	1.61	11.84	60.6	10.83	

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 ft btoc

SIGNATURE:

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	TW-09	12:15
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5/10/17

SITE ID: TW-17

SITE TYPE: Monitor Well

SITE ACTIVITY: START 07:55 END 09:43

JOB NUMBER: 3031152028.08

WATER LEVEL

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): 2 FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.25 FT

INITIAL DEPTH TO WATER	5.69 FT	WELL DEPTH	17.04 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	7.88 FT	SCREEN LENGTH	5 FT	PID WELL MOUTH	NA PPM	WELL INTEGRITY: CAP	YES ✓ NO ___ N/A ___
DRAWDOWN	2.19 FT	DRAWDOWN VOLUME	0.350 GAL	PRODUCT THICKNESS	NA FT	CASING LOCKED	YES ✓ NO ___ N/A ___
						COLLAR	YES ✓ NO ___ N/A ___

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.109 L/MIN

BEGIN PURGING: 08:00

END PURGING: 09:31

TOTAL VOL. PURGED: 2.57 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
08:04	FC	7.04	0.808	9.73	3.72	9.61	-97.8	6.40	clear - slight odor
08:14	1.2	7.09	0840	12.4	1.24	9.84	-97.4	7.16	
08:24	1.3	7.07	0.817	14.6	1.41	9.97	-92.8	7.70	
08:34	1.4	7.07	0.799	19.1	1.53	9.98	-93.3	8.14	slowed pump
08:44	1	7.07	0.794	19.8	1.04	9.98	-112.1	8.03	clear - slight odor
08:52	0.8	7.07	0.779	19.1	0.85	10.00	-110.1	8.04	
08:59	0.75	7.06	0.773	16.9	081	10.00	-104.6	8.05	slowed pump
09:07	0.75	7.06	0.769	15.5	0.77	9.95	-101.2	7.91	
09:15	0.75	7.06	0.764	15.3	0.59	9.98	-118.2	7.86	
09:23	0.75	7.06	0.761	15.0	0.60	9.96	-120.1	7.86	
09:31	0.75	7.06	0.761	15.3	0.59	10.01	-119.4	7.87	clear - slight odor

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 @ 14.75 ft btoc

SIGNATURE: _____

NOTES

	Preservation	Sample Name	Time Collected
[X] VOC (modified 8260)	HCL	TW-17	09:34
[ ] VFA's			
[ ] Sulfate			
[X] Methane/Ethene		TW-17	09:34
[ ] Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5/10/17

SITE ID: TW-20

SITE TYPE: Monitor Well

SITE ACTIVITY: START 09:45 END 11:12

JOB NUMBER: 3031152028.08

WATER LEVEL

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 2.3 FT

PROTECTIVE CASING / WELL DIFFERENCE: 0.07 FT

INITIAL DEPTH TO WATER	11.09 FT	WELL DEPTH	17.22 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	11.52 FT	SCREEN LENGTH	5 FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	0.43 FT	DRAWDOWN VOLUME	0.069 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: 0.139 L/MIN

BEGIN PURGING: 09:51

END PURGING: 11:06

TOTAL VOL. PURGED: 2.71 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
09:55	FC	7.14	0.987	1.86	6.18	10.44	-31.9	11.26	Clear - NV odor
10:05	1.5	7.12	0.978	0.99	4.67	11.04	-9.9	11.39	
10:10	0.75	7.11	0971	0.96	7.74	10.90	-6.7	11.42	Cleaned "DO" sensor
10:20	1.5	7.13	1.198	1.67	5.27	11.38	1.2	11.49	Slowed pump
10:26	0.80	7.13	1.040	0.60	5.73	10.94	8.4	11.50	Changed "DO" sensor
10:36	1.30	7.13	1.051	0.60	5.68	11.29	13.5	11.50	
10:42	0.80	7.13	0.972	0.62	5.59	11.22	17.5	11.50	
10:48	0.80	7.14	0.950	0.56	4.25	11.15	18.6	11.51	
10:54	0.80	7.13	0.933	0.54	4.04	11.07	22.1	11.51	
11:00	0.80	7.14	0.925	0.83	3.69	11.02	24.4	11.52	
11:06	0.80	7.14	0.924	0.90	3.55	10.97	26.9	11.52	

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 @ 14.75 ft btoc

SIGNATURE:

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	TW-20	11:08
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5/10/17

SITE ID: W-5

SITE TYPE: Monitor Well

SITE ACTIVITY: START 13:31 END 15:05

JOB NUMBER: 3031152028.08

WATER LEVEL

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	4.25 FT	WELL DEPTH	21.8 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	2 IN
FINAL DEPTH TO WATER	6.93 FT	SCREEN LENGTH	5 FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	2.68 FT	DRAWDOWN VOLUME	0.429 GAL	PRODUCT THICKNESS	NA 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: 0.105 L/MIN

BEGIN PURGING: 13:36

END PURGING: 14:51

TOTAL VOL. PURGED: 2.04 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
13:39	FC	6.85	1.102	13.2	2.51	12.15	-86.2	5.05	clear – No odor
13:49	1.6	6.84	1.093	148	0.86	12.44	-85.0	6.50	slowed pump - orange tint
13:59	1	6.83	1.097	19.1	0.80	12.99	-71.6	6.75	
14:09	1	6.82	1.104	11.5	0.56	13.01	-69.8	6.96	slowed pump
14:19	0.95	6.81	1.111	10.1	0.48	12.79	-66.4	6.92	clear – no odor
14:27	0.75	6.81	1.109	9.87	0.38	12.58	-65.0	6.92	
14:35	0.75	6.81	1.113	8.48	0.34	12.98	-63.5	6.92	
14:43	0.75	6.80	1.122	6.32	0.33	13.08	-61.1	6.93	
14:51	0.75	6.79	1.126	5.82	0.32	13.05	-58.8	6.93	clear – no odor

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 ft btoc

SIGNATURE:

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	W-5	14:55
[ ]	VFA's			
[ ]	Sulfate			
[X]	Methane/Ethene		W-5	14:55
[X]	Duplicate		Dup-01	14:55

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5-11-17

SITE ID: BR-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START 12:35 END

JOB NUMBER: 3031152028.08

WATER LEVEL

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 2.3 FT

PROTECTIVE CASING / WELL DIFFERENCE: — FT

INITIAL DEPTH TO WATER	11.36 FT	WELL DEPTH	38.6 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	11.66 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	NA PPM	WELL INTEGRITY: CAP	YES ✓ NO — N/A —
DRAWDOWN	0.30 FT	DRAWDOWN VOLUME	0.195 GAL	PRODUCT THICKNESS	NA FT	CASING	YES ✓ NO — N/A —
						LOCKED	YES ✓ NO — N/A —
						COLLAR	YES ✓ NO — N/A —

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: 0.127 L/MIN

BEGIN PURGING: 12:40

END PURGING: 13:36

TOTAL VOL. PURGED: 1.86 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
12:45	EC	7.18	0.799	28.3	1.58	12.38	-97.7	11.54	clear - no odor
12:55	1.5	7.21	0.776	21.5	0.93	11.96	-104.3	11.70	slowed pump
13:05	1.4	7.08	0.930	17.2	0.53	12.03	-97.2	11.74	slowed pump
13:15	1.2	7.02	0.996	9.93	0.50	12.08	-90.7	11.70	clear - no odor
13:22	0.80	7.02	1.005	7.11	0.48	12.05	-90.3	11.67	
13:29	0.80	7.01	1.008	5.22	0.45	11.97	-90.2	11.66	
13:36	0.80	7.02	1.008	5.29	0.44	11.96	-90.2	11.66	

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 ft btoc

SIGNATURE:

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	BR-01	13:38
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5-11-17

SITE ID: BR-02

SITE TYPE: Monitor Well

SITE ACTIVITY: START 10:52 END 12:33

JOB NUMBER: 3031152028.08

WATER LEVEL

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	21.39 FT	WELL DEPTH	44 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	21.75 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	0.36 FT	DRAWDOWN VOLUME	0.234 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: 0.092 L/MIN

BEGIN PURGING: 10:59

END PURGING: 12:25

TOTAL VOL. PURGED: 2.05 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
11:05	FC	7.69	0.614	37.5	1.50	13.59	-62.9	21.50	cloudy - no odor
11:15	1.1	7.68	0.588	30.5	0.64	13.43	-79.6	21.59	
11:25	1.1	7.69	0.586	29.1	0.55	13.56	-83.9	21.64	Emptied F.C.
11:35	1.1	7.71	0.587	22.0	0.47	13.57	-82.5	21.70	Slowed pump
11:45	0.85	7.68	0.587	23.4	0.49	13.95	-91.0	21.70	clear - no odor
11:55	0.85	7.68	0.587	21.3	0.49	14.07	-89.9	21.71	
12:05	0.85	7.68	0.587	20.8	0.49	13.85	-99.9	21.75	Slowed pump
12:15	0.75	7.68	0.586	21.0	0.46	13.85	-100.7	21.75	
12:25	0.75	7.68	0.586	20.9	0.46	13.85	-98.7	21.75	clear - no odor

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 ft BGS

SIGNATURE:

NOTES

	Preservation	Sample Name	Time Collected
[X] VOC (modified 8260)	HCl	BR-02	12:28
[ ] VFA's			
[ ] Sulfate			
[ ] Methane/Ethene			
[ ] Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event
DATE: 5/10/17
SITE ID: BR-03
SITE TYPE: Monitor Well
SITE ACTIVITY: START 15:07 END
JOB NUMBER: 3031152028.08

WATER LEVEL

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	7.54 FT	WELL DEPTH	40.1 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	8.86 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	1.32 FT	DRAWDOWN VOLUME	0.858 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: 0.12 L/MIN
BEGIN PURGING: 15:15
END PURGING: 16:51
TOTAL VOL. PURGED: 3.02 GAL (purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
15:27	FC	7.88	0.771	133	1.12	11.91	-233.5	8.10	Orange Tint - NO odor
15:37	1.3	7.89	0.764	76.0	0.39	11.72	-234.1	8.41	
15:45	1.1	7.85	0.760	53.7	0.34	11.66	-224.8	8.57	Emptied F.C.
15:55	1.3	7.87	0.761	42.4	0.55	11.61	-190.3	8.73	slowed pump
16:01	0.75	7.83	0.760	37.1	0.33	11.63	-202.6	8.77	
16:07	0.75	7.83	0.760	25.8	0.34	11.58	-214.5	8.81	clear - NO odor; smaller gray particles
16:13	0.75	7.81	0.760	29.7	0.35	11.52	-218.1	8.83	
16:23	1.2	7.80	0.760	25.6	0.33	11.48	-220.3	8.88	slowed pump
16:30	0.75	7.81	0.760	20.5	0.32	11.39	-220.2	8.87	
16:37	0.75	7.81	0.760	19.7	0.32	11.34	-217.2	8.86	clear - NO odor
16:44	0.75	7.80	0.761	20.0	0.30	11.31	-215.7	8.86	
16:51	0.75	7.80	0.761	19.7	0.30	11.28	-214.7	8.86	

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 ft btoc

SIGNATURE:

NOTES

	Preservation	Sample Name	Time Collected
[X] VOC (modified list)	HCL	BR-03	16:53
[ ] VFA's			
[ ] Sulfate			
[ ] Methane/Ethene			
[ ] Duplicate			

Purged ~ 1.2 hrs before connecting to flow cell. Water was Rust colored with small metal flakes.

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5-11-17

SITE ID: BR-04

SITE TYPE: Monitor Well

SITE ACTIVITY: START 09:26 END 10:50

JOB NUMBER: 3031152028.08

WATER LEVEL

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): — FT

PROTECTIVE CASING / WELL DIFFERENCE: -0.05 FT

INITIAL DEPTH TO WATER	15.68 FT	WELL DEPTH	44.2 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	15.69 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	0.01 FT	DRAWDOWN VOLUME	~~0.0016~~ 0.0065 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: 0.151 L/MIN

BEGIN PURGING: 09:31

END PURGING: 10:43

TOTAL VOL. PURGED: 2.84 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
09:36	FC	8.39	0.136	55.5	1.98	13.13	-59.2	15.69	Orange tint - Mod
09:46	1.5	8.45	0.097	35.9	1.94	13.00	-77.6	15.69	Emptied F.C.
09:56	1.6	8.41	0.128	27.5	1.43	13.04	-151.7	15.69	cloudy - no odor
10:04	1.2	7.19	1.082	12.4	1.37	13.81	-106.5	15.69	clear - no odor
10:12	1.2	7.13	1.346	9.31	0.86	14.11	-100.1	15.69	
10:20	1.2	7.12	1.465	7.40	0.54	13.71	-96.7	15.69	
10:28	1.2	7.12	1.514	7.79	0.45	13.61	-94.5	15.69	
10:33	0.75	7.11	1.540	5.15	0.42	13.62	-93.8	15.69	
10:38	0.75	7.11	1.569	4.39	0.40	13.62	-92.5	15.69	
10:43	0.75	7.11	1.585	3.98	0.39	13.66	-92.1	15.69	

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 @ 26.5 ft btoc

SIGNATURE:

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	BR-04	10:45
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5-11-17

SITE ID: BR-10

SITE TYPE: Monitor Well

SITE ACTIVITY: START 07:50 END 09:24

JOB NUMBER: 3031152028.08

WATER LEVEL

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	15.26 FT	WELL DEPTH	47 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	6 IN
FINAL DEPTH TO WATER	15.26 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	0 FT	DRAWDOWN VOLUME	0 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: 0.164 L/MIN

BEGIN PURGING: 07:57

END PURGING: 09:19

TOTAL VOL. PURGED: 3.50 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
08:06	FC	7.38	0.547	69.2	1.88	12.02	191.2	15.26	Orange tint - no odor
08:16	1.6	7.81	0.544	36.5	0.50	12.50	12.9	15.26	
08:23	1.2	7.88	0.545	25.0	0.51	12.55	-29.2	15.26	
08:30	1.2	7.90	0.545	22.6	0.39	12.65	-69.5	15.26	clear - no odor
08:36	1	7.92	0.545	20.8	0.36	12.71	-157.2	15.26	
08:42	1	7.93	0.546	17.0	0.38	12.78	-162.8	15.26	
08:48	1	7.93	0.546	18.5	0.34	12.99	-151.5	15.26	
08:58	1.6	7.93	0.546	18.1	0.30	12.99	-152.3	15.26	
09:04	1	7.94	0.545	16.6	0.29	13.02	-156.9	15.26	
09:09	0.8	7.94	0.545	16.2	0.29	12.99	-161.4	15.26	
09:14	0.8	7.94	0.545	16.0	0.28	12.99	-157.9	15.26	
09:19	0.8	7.94	0.545	15.9	0.29	13.00	-162.4	15.26	

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 @ 25.5ft btoc

SIGNATURE: ____

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	BR-10	
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Purged ≈ 0.6L of water before connecting to Flow Cell. Water was Rust colored

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 05/09/17

SITE ID: BR-15

SITE TYPE: Monitor Well

SITE ACTIVITY: START 15:09 END 17:40

JOB NUMBER: 3031152028.08

WATER LEVEL

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	16.98 FT	WELL DEPTH	72 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	6 IN
FINAL DEPTH TO WATER	19.31 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	2.33 FT	DRAWDOWN VOLUME	3.5 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: 0.149 L/MIN

BEGIN PURGING: 15:17

END PURGING: 17:24

TOTAL VOL. PURGED: 4.91 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
15:21	FC	8.36	0.169	7.30	4.20	14.74	-106.8	17.12	clear - no odor
15:34	2	8.46	0.150	3.81	0.68	14.92	-107.0	17.43	
15:45	2	8.48	0.145	3.68	0.40	14.81	-101.3	17.75	
15:56	2	8.51	0.145	3.42	0.34	14.88	-111.3	18.08	
16:07	2	8.53	0.144	3.38	0.28	14.80	-94.7	18.37	
16:18	2	8.58	0.145	2.74	0.25	14.54	-94.6	18.65	slowed pump
16:28	1.5	8.56	0.145	2.27	0.21	14.72	-79.6	18.83	clear - no odor
16:38	1.5	8.53	0.144	2.43	0.21	14.86	-77.8	19.00	
16:48	1.5	8.51	0.144	2.40	0.20	14.70	-86.8	19.16	slowed pump
16:58	1.2	8.58	0.144	2.52	0.21	14.76	-89.7	19.25	clear - no odor
17:08	1	8.63	0.145	2.67	0.21	14.76	-90.6	19.27	
17:16	0.8	8.63	0.145	2.38	0.19	14.59	-90.0	19.28	
17:24	0.8	8.62	0.144	2.09	0.19	14.59	-89.9	19.29	

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 ft btoc

SIGNATURE:

NOTES

	Preservation	Sample Name	Time Collected
[✓] VOC (modified list)	HCL	BR-15	17:25
[ ] VFA's			
[ ] Sulfate			
[ ] Methane/Ethene			
[ ] Duplicate			

MS/MSD collected @ BR-15

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5-11-17

SITE ID: QARB-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START 14:08 END 14:2

JOB NUMBER: 3031152028.08

WATER LEVEL

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	___ FT	WELL DEPTH	___ FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	___ IN
FINAL DEPTH TO WATER	___ FT	SCREEN LENGTH	___ FT	PID WELL MOUTH	NA PPM	WELL INTEGRITY: CAP	YES NO N/A
DRAWDOWN	___ FT	DRAWDOWN VOLUME	___ GAL	PRODUCT THICKNESS	NA FT	CASING	
						LOCKED	
						COLLAR	

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

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	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
14:10	Purged DI water over W.L. indicator								

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	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	QARB-01	14:10
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5-11-17

SITE ID: QAFB_01

SITE TYPE: Monitor Well

SITE ACTIVITY: START 14:13 END 14:17

JOB NUMBER: 3031152028.08

WATER LEVEL

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	FT	WELL DEPTH	FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	IN
FINAL DEPTH TO WATER	FT	SCREEN LENGTH	FT	PID WELL MOUTH	NA PPM	WELL INTEGRITY: CAP	YES NO N/A
DRAWDOWN	FT	DRAWDOWN VOLUME	GAL	PRODUCT THICKNESS	NA FT	CASING	
						LOCKED	
						COLLAR	

((Initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

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	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
14:15 –	Poured DI water into Sample Bottles								

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	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	QAFB-01	14:15
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5-11-17

SITE ID: QATB-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START 14:18 END 14:21

JOB NUMBER: 3031152028.08

WATER LEVEL

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: FT

WELL DEPTH: FT

PID AMBIENT AIR: NA PPM

WELL DIAMETER: IN

FINAL DEPTH TO WATER: FT

SCREEN LENGTH: FT

PID WELL MOUTH: NA PPM

WELL INTEGRITY: CAP / CASING / LOCKED / COLLAR — YES / NO / N/A

DRAWDOWN: FT

DRAWDOWN VOLUME: 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: 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	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
14:20	Lab	provided	# Trip	blanks					

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	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	QATB-01	14:20
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 5-11-17

SITE ID: FDw-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START 13:55 END

JOB NUMBER: 3031152028.08

WATER LEVEL

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: FT

WELL DEPTH: FT

PID AMBIENT AIR: NA PPM

WELL DIAMETER: IN

FINAL DEPTH TO WATER: FT

SCREEN LENGTH: FT

PID WELL MOUTH: NA PPM

WELL INTEGRITY: CAP / CASING / LOCKED / COLLAR — YES / NO / N/A

DRAWDOWN: FT

DRAWDOWN VOLUME: 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: 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	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
14:00	– Collect	Sample	from	purge	water	drum	using	peri-pump.	

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	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	FDw-01	14:00
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

NOVEMBER 2017
FIELD DATA RECORDS

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event
DATE: 11-1-17
SITE ID: BR-01
SITE TYPE: Monitor Well
SITE ACTIVITY: START 13:35 END
JOB NUMBER: 3031152028.08

WATER LEVEL

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND)	2.3 FT	PROTECTIVE CASING / WELL DIFFERENCE	✓ FT				
INITIAL DEPTH TO WATER	11.43 FT	WELL DEPTH	38.6 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	12.06 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	0.63 FT	DRAWDOWN VOLUME	0.4095 GAL	PRODUCT THICKNESS	NA 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	BEGIN PURGING	END PURGING	TOTAL VOL. PURGED
0.171 L/MIN	13:45	14:42	2.53 GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
13:47	FC	7.27	0.879	18.1	5.32	13.62	117.9	11.59	Clear- no odor
13:57	2.2	7.28	0.863	11.9	1.63	13.80	102.3	12.03	Slowed pump
14:07	1.8	7.11	0.936	10.4	2.09	13.64	100.0	12.14	
14:12	0.9	7.04	0.962	7.17	2.50	13.61	99.6	12.19	slowed pump
14:18	0.9	7.02	0.985	3.65	2.81	13.63	98.8	12.06	clear- no odor
14:24	0.9	6.94	1.002	6.76	3.04	13.62	99.0	12.06	
14:30	0.9	6.95	1.004	4.41	3.13	13.53	99.0	12.06	
14:36	0.9	6.96	1.005	1.94	2.87	13.50	98.9	12.06	
14:42	0.9	6.96	1.006	1.87	2.80	13.48	98.4	12.06	

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 ft btoc

SIGNATURE:

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	BR-01	14:45
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 10-31-17

SITE ID: BR-02

SITE TYPE: Monitor Well

SITE ACTIVITY: START 14:52 END

JOB NUMBER: 3031152028.08

WATER LEVEL

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	21.91 FT	WELL DEPTH	44 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	22.27 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	0.36 FT	DRAWDOWN VOLUME	0.234 GAL	PRODUCT THICKNESS	NA 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: 0.144 L/MIN

BEGIN PURGING: 15:08

END PURGING: 16:00

TOTAL VOL. PURGED: 1.54 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
15:10	FC	7.79	0.578	10.0	5.08	13.52	95.3	22.01	clear-no odor
15:20	1.6	7.76	0.596	6.06	1.40	14.13	93.5	22.15	slowed pump
15:30	1.1	7.71	0.597	5.17	0.91	13.89	94.2	22.24	slowed pump
15:40	1	7.70	0.599	3.39	0.93	13.75	94.0	22.24	clear-no odor
15:50	1	7.69	0.600	3.46	0.88	13.70	93.5	22.25	
16:00	1	7.68	0.601	3.58	0.86	13.67	93.3	22.26	clear-no odor

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 @ 25.4ft bgs

SIGNATURE:

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	BR-02	16:05
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 11-1-2017

SITE ID: BR-03

SITE TYPE: Monitor Well

SITE ACTIVITY: START 08:55 END 10:15

JOB NUMBER: 3031152028.08

WATER LEVEL

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	7.96 FT	WELL DEPTH	40.1 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	9.16 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	1.20 FT	DRAWDOWN VOLUME	0.78 GAL	PRODUCT THICKNESS	NA 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: 0.132 L/MIN

BEGIN PURGING: 09:04

END PURGING: 10:07

TOTAL VOL. PURGED: 2.02 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
09:11	FC	7.50	0.729	21.0	11.42	13.87	117.0	8.19	Clear-no odor
09:21	2	8.06	0.758	14.5	2.56	14.19	103.8	8.75	Slowed pump
09:31	1.3	7.93	0.765	9.26	1.57	14.01	103.6	8.96	
09:41	1.3	7.79	0.770	7.93	1.22	13.90	102.7	9.10	Slowed pump
09:51	1.2	7.65	0.775	6.85	1.04	13.80	103.3	9.14	Clear-no odor
09:59	0.80	7.62	0.776	4.89	0.99	13.86	102.7	9.15	
10:07	0.80	7.60	0.778	4.94	0.97	13.79	102.6	9.15	Clear-no odor

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 @ 23.5Ft btoc

SIGNATURE:

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	BR-03	10:10
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 11-1-17

SITE ID: BR-04

SITE TYPE: Monitor Well

SITE ACTIVITY: START 12:15 END 13:30

JOB NUMBER: 3031152028.08

WATER LEVEL

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	16.68 FT	WELL DEPTH	44.2 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	4 IN
FINAL DEPTH TO WATER	16.69 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	0.01 FT	DRAWDOWN VOLUME	0.0065 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: 0.221 L/MIN

BEGIN PURGING: 12:25

END PURGING: 13:23

TOTAL VOL. PURGED: 3.34 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
12:27	FC	7.96	0.246	18.3	3.54	14.60	109.7	16.69	Clear - No odor
12:37	2.2	7.37	0.756	9.72	0.85	15.13	95.0	16.69	
12:47	2.2	7.12	1.293	5.77	0.82	15.14	102.7	16.69	
12:55	1.8	7.05	1.579	2.30	1.20	15.01	102.8	16.69	
13:03	1.8	7.02	1.719	1.95	2.04	14.94	102.9	16.69	
13:08	1.1	7.02	1.795	1.99	2.13	14.95	102.5	16.69	
13:13	1.1	7.02	1.841	1.70	2.21	14.89	102.4	16.69	
13:18	1.1	7.03	1.862	1.90	2.20	15.00	101.4	16.69	
13:23	1.1	7.03	1.893	1.20	2.23	15.03	101.0	16.69	

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 @ 26.5 ft btoc

SIGNATURE: _____

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	BR-04	13:25
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 11-1-2017

SITE ID: BR-10

SITE TYPE: Monitor Well

SITE ACTIVITY: START 11:05 END 12:13

JOB NUMBER: 3031152028.08

WATER LEVEL

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	16.30 FT	WELL DEPTH	47 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	6 IN
FINAL DEPTH TO WATER	16.30 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	NA PPM		
DRAWDOWN	0 FT	DRAWDOWN VOLUME	0 GAL	PRODUCT THICKNESS	NA 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: 0.200 L/MIN

BEGIN PURGING: 11:19

END PURGING: 12:01

TOTAL VOL. PURGED: 2.18 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
11:21	FC	7.84	0.607	44.7	6.60	15.21	118.0	16.30	cloudy - no odor
11:31	2	7.78	0.615	21.3	1.96	15.12	107.4	16.30	
11:41	2	7.76	0.615	12.4	1.23	15.10	102.5	16.30	clear - no odor
11:46	1	7.75	0.618	9.74	0.80	14.98	100.9	16.30	
11:51	1	7.74	0.618	7.92	0.81	14.98	100.1	16.30	
11:56	1	7.74	0.617	6.50	0.83	15.01	98.6	16.30	clear - no odor
12:01	1	7.74	0.618	5.88	0.84	15.04	97.0	16.30	

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 ft btoc

SIGNATURE:

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	BR-10	12:04
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 10-31-2017

SITE ID: BR-15

SITE TYPE: Monitor Well

SITE ACTIVITY: START 12:00 END 14:50

JOB NUMBER: 3031152028.08

WATER LEVEL

MEASUREMENT POINT
- [X] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): 6 FT

PROTECTIVE CASING / WELL DIFFERENCE: -0.35 FT

INITIAL DEPTH TO WATER	18.57 FT	WELL DEPTH	72 FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	6 IN
FINAL DEPTH TO WATER	20.91 FT	SCREEN LENGTH	NA FT	PID WELL MOUTH	NA PPM	WELL INTEGRITY: CAP	YES ✓
DRAWDOWN	2.34 FT	DRAWDOWN VOLUME	3.51 GAL	PRODUCT THICKNESS	NA FT	CASING	YES ✓
						LOCKED	YES ✓
						COLLAR	N/A ✓

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE: 0.156 L/MIN

BEGIN PURGING: 12:29

END PURGING: 14:30

TOTAL VOL. PURGED: 5.27 GAL
(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
12:29	FC	7.61	0.256	3.08	5.48	13.66	115.8	18.65	clear - no odor
12:32	2	8.36	0.262	4.22	1.19	14.67	82.8	14.97	slowed pump
12:41	2	8.46	0.261	2.59	1.18	14.64	94.7	19.31	slowed pump
12:51	2	8.46	0.253	3.77	1.09	14.57	96.3	19.60	
13:02	2	8.40	0.249	3.91	1.03	14.51	97.9	19.89	slowed pump
13:14	2	8.39	0.249	2.37	1.01	14.61	96.6	20.15	clear - slight odor
13:26	2	8.37	0.248	2.66	0.67	14.49	96.9	20.42	slowed pump
13:40	2	8.37	0.247	3.18	0.60	14.18	97.9	20.61	
13:50	1.95	8.35	0.245	2.12	0.64	14.18	98.1	20.74	slowed pump
14:00	1.20	8.31	0.247	2.85	0.59	13.77	101.1	20.82	slowed pump
14:10	1	8.31	0.254	1.38	0.61	13.51	100.2	20.84	
14:20	1	8.29	0.257	1.29	0.63	13.36	101.1	20.86	clear - slight odor
14:30	1	8.27	0.259	1.24	0.59	13.19	99.4	20.87	

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 ft btoc

SIGNATURE:

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	BR-15	14:35
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[X]	Duplicate		Dup-01	14:35

collect MS/MSD @ 14:35

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments, 2017 Semi-Annual Sampling Event

DATE: 11-1-17

SITE ID: QAFB

SITE TYPE: Monitor Well

SITE ACTIVITY: START 15:37 END 15:40

JOB NUMBER: 3031152028.08

WATER LEVEL

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: ____ FT	WELL DEPTH: ____ FT	PID AMBIENT AIR: NA PPM	WELL DIAMETER: ____ IN		
FINAL DEPTH TO WATER: ____ FT	SCREEN LENGTH: ____ FT	PID WELL MOUTH: NA PPM	WELL INTEGRITY: CAP	YES	NO / N/A
DRAWDOWN: ____ FT	DRAWDOWN VOLUME: ____ GAL	PRODUCT THICKNESS: NA FT	CASING		
			LOCKED		
			COLLAR		

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

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	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
15:40	Poured DI water into sample bottles								

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	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	QAFB	15:40
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 11-1-17

SITE ID: QARB-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START 15:32 END 15137

JOB NUMBER: 3031152028.08

WATER LEVEL

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: FT

WELL DEPTH: FT

PID AMBIENT AIR: NA PPM

WELL DIAMETER: IN

FINAL DEPTH TO WATER: FT

SCREEN LENGTH: FT

PID WELL MOUTH: NA PPM

WELL INTEGRITY: CAP, CASING, LOCKED, COLLAR — YES / NO / N/A

DRAWDOWN: FT

DRAWDOWN VOLUME: 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: 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	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
15:35 – poured DI water over WL indicator									

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	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	QARB	15:35
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 11-1-17

SITE ID: QATB-01

SITE TYPE: Monitor Well

SITE ACTIVITY: START 15:28 END 15:32

JOB NUMBER: 3031152028.08

WATER LEVEL

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	FT	WELL DEPTH	FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	IN
FINAL DEPTH TO WATER	FT	SCREEN LENGTH	FT	PID WELL MOUTH	NA PPM	WELL INTEGRITY: CAP	YES / NO / N/A
DRAWDOWN	FT	DRAWDOWN VOLUME	GAL	PRODUCT THICKNESS	NA FT	CASING	
						LOCKED	
						COLLAR	

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

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	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
15:30	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: _____

NOTES

		Preservation	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	QATB-01	15:30
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

Amec Foster Wheeler E&I, Inc.

FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments 2017 Semi-Annual Sampling Event

DATE: 11-1-17

SITE ID: IDW

SITE TYPE: Monitor Well

SITE ACTIVITY: START 15:15 END 15:25

JOB NUMBER: 3031152028.08

WATER LEVEL

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	FT	WELL DEPTH	FT	PID AMBIENT AIR	NA PPM	WELL DIAMETER	IN
FINAL DEPTH TO WATER	FT	SCREEN LENGTH	FT	PID WELL MOUTH	NA PPM	WELL INTEGRITY: CAP	YES / NO / N/A
DRAWDOWN	FT	DRAWDOWN VOLUME	GAL	PRODUCT THICKNESS	NA FT	CASING	
						LOCKED	
						COLLAR	

((initial - final) x 0.16 (2-inch) or x 0.65 (4-inch) or x 1.5 (6-inch))

PURGE RATE	BEGIN PURGING	END PURGING	TOTAL VOL. PURGED
L/MIN			GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOL Purged (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	TEMPERATURE (°C)	ORP (mV)	WATER LEVEL	Comments
15:20 – Collect Sample from purge water drum using peri-pump									

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	Sample Name	Time Collected
[X]	VOC (modified list)	HCL	IDW-01	15:20
[ ]	VFA's			
[ ]	Sulfate			
[ ]	Methane/Ethene			
[ ]	Duplicate			

APPENDIX F

WELL CONSTRUCTION INFORMATION

Appendix F
Well Construction Information

2017 Annual Progress Report
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