

US EPA ARCHIVE DOCUMENT

FINAL

Supplemental Groundwater Monitoring Report

AWMD/WRAP-KNRP

Former Chamberlain Manufacturing Corporation

550 Esther Street

Waterloo Iowa

EPA Docket Nos.

RCRA-07-2010-002

CERCLA-07-2010-0005

REVISED 6-12-2012 ~~April 30, 2012~~

Terracon Project No. 07107020

Prepared for:

Chamberlain Manufacturing Corporation

Elmhurst, Illinois

Prepared by:

Terracon Consultants, Inc.

Bettendorf, Iowa

515553



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April 30, 2012

United States Environmental Protection Agency
Region 7
Air, RCRA and Toxics Division
901 North 5th Street
Kansas City, KS 66101

Attention: Mr. Bruce Morrison

Re: Supplemental Groundwater Monitoring Report
Former Chamberlain Manufacturing Corporation
550 Esther Street
Waterloo, Iowa
EPA Docket Nos. RCRA-07-2010-002 and CERCLA-07-2010-0005

Dear Mr. Morrison:

Terracon is pleased to submit this Supplemental Groundwater Monitoring Report (Report). This Report provides a summary of site monitoring activities conducted by Terracon in February and March 2012 to investigate and characterize volatile organic compound impact within the unconsolidated groundwater aquifer at the site.

Activities were conducted in accordance with the approved Quality Assurance Project Plan dated August 18, 2006 and the approved Revised Supplemental Groundwater Field Sampling Plan dated January 23, 2012.

Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
Terracon Consultants, Inc.



John F. Brimeyer, PE, REM
Environmental Manager

JFB/MEH/wkb/jb2



Mike E. Hagemeister, PE
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ACRONYMS & ABBREVIATIONS



AOC.....	Area of Concern
City.....	City of Waterloo
CO ₂	Carbon Dioxide
DO.....	Dissolved Oxygen
EPA 7.....	United States Environmental Protection Agency Region 7
EQL.....	Estimated Quantitation Limit
ESC.....	Environmental Science Corporation
eV.....	electron-volt
FSP.....	Field Sampling Plan
Grant.....	Brownfields Assessment Grant
Green.....	Howard R. Green Company
HAL.....	Health Advisory Level
IDNR.....	Iowa Department of Natural Resources
m/day.....	meters per day
MCL.....	Maximum Contaminant Level
MDL.....	Method Detection Limit
mg/kg.....	milligrams per kilogram, generally equivalent to ppm
mg/L.....	milligrams per liter, generally equivalent to ppm
MNA.....	Monitored Natural Attenuation
ORP.....	Oxygen Reduction Potential
PAH.....	Polycyclic Aromatic Hydrocarbon
PCBs.....	Polychlorinated Bi-Phenyls
PCE.....	Perchloroethylene (or Tetrachloroethylene)
PID.....	Photoionization Detector
ppb.....	parts per billion
ppm.....	parts per million
ppmi.....	parts per million isobutylene equivalents
PRG.....	Preliminary Remediation Goals
QA.....	Quality Assurance
QAPP.....	Generic Quality Assurance Project Plan
QC.....	Quality Control
RBCA.....	Risk-Based Corrective Action
REC.....	Recognized Environmental Condition
RPD.....	Relative Percent Difference
RSL.....	Risk-based Screening Level
SARA.....	Superfund Amendments and Reauthorization Act
Spec.Cond.....	Specific Conductance
Summary.....	Soil Assessment Summary
SVOC.....	Semi-Volatile Organic Compounds
TCE.....	Trichloroethylene
TDS.....	Total Dissolved Solids
TestAmerica.....	TestAmerica, Inc
TSOP.....	Terracon Standard Operating Procedure-Bettendorf Office
µg/L.....	micrograms per liter, generally equivalent to ppb
USEPA.....	United States Environmental Protection Agency
VOC.....	Volatile Organic Compounds

**SUPPLEMENTAL GROUNDWATER MONITORING REPORT
FORMER CHAMBERLAIN MANUFACTURING CORPORATION
550 ESTHER STREET
WATERLOO, IOWA**

**Project No. 07107020
April 30, 2012**

1.0 INTRODUCTION

Terracon has conducted supplemental groundwater monitoring activities at the former industrial property located at 550 Esther Street, Waterloo, Iowa. The supplemental monitoring activities were conducted in accordance with the USEPA approved QAPP¹ and the Revised Supplemental Groundwater FSP². A Topographic Vicinity Map is included as Figure 1 in Appendix A. A Site Diagram is included as Exhibit 2.

This Supplemental Groundwater Monitoring Report (Report) is submitted in accordance with the requirements of the UAO, Docket Nos. RCRA 07-2010-002 and CERCLA 07-2010-005 dated April 20, 2010 and Task I of the SOW attached to the UAO. Capitalized terms not defined herein have the definitions set forth in the UAO or the SOW.

1.1 Site Conditions

The Property is an irregularly shaped parcel containing approximately 22.8 acres and located at 550 Esther Street in Waterloo, Iowa. A Topographic Map is included as Exhibit 1 in Appendix A; a Site Diagram is included as Exhibit 2.

Chamberlain Manufacturing produced metal washer wringers and projectile metal parts from approximately 1919 until 1996 when it was sold to Atlas Warehouse L.C. for use as a warehousing facility. The City acquired the Property from Atlas Warehouse L.C in 2005 in an effort to facilitate redevelopment and has demolished the buildings on the Property.

The Property is zoned Heavy Industrial (M-2) by the City. The Property is adjoined by park land to the north and south, single family residential housing to the west, and Virden Creek followed by a golf course to the east. Virden Creek is within approximately 100 feet of the Property at its closest point. Gates Park adjoins the Property to the north across Louise Street, to the east across Virden Creek, and to the south across the railroad tracks. Single family residences are located across East 4th Street to the west of the Property. Single family residences are also located along the east side of East 4th between Anita and Louise Streets.

¹ Quality Assurance Project Plan, Revision 1, Former Industrial Property, 550 Esther Street, Waterloo, Iowa, Terracon, August 18, 2006.

² Revised Supplemental Groundwater Field Sampling Plan, Former Industrial Property, 550 Esther Street, Waterloo, Iowa, Terracon, January 23, 2012.

1.2 Previous Assessment Activities

Previous assessment activities were conducted by Green on behalf of the City using USEPA Brownfields Assessment funding. Assessment activities included the installation of 14 onsite groundwater monitoring wells (MW-1 through MW-14) and eight offsite groundwater monitoring wells (OSMW-1 through OSMW-8). The Green assessment identified reported concentrations of chlorinated solvents in groundwater that exceeded Iowa Statewide Standards for a protected groundwater source. Analytical results indicate that the reported concentrations of PCE and TCE exceed MCLs in off-site groundwater monitoring wells located downgradient from the site. The following documents, prepared by Green, are available from the USEPA.

- Phase I Environmental Site Assessment, Former Chamberlain Manufacturing Property, 550 Esther Street, Parcel ID 8913-13-176-002, Waterloo, Iowa. Howard R. Green Company, May 2004.
- Phase II Environmental Site Assessment, Former Chamberlain Manufacturing Property, 550 Esther Street, Parcel ID 8913-13-176-002, Waterloo, Iowa. Howard R. Green Company, January 2005.
- Supplemental Phase II Environmental Site Assessment, Former Chamberlain Manufacturing Facility, Parcel ID 8913-13-176-002, 550 Esther Street, Waterloo, Iowa. Howard R. Green Company, September 2005.

Subsequently, Terracon completed supplemental site assessment activities to determine the lateral extent of chlorinated solvent impact in groundwater south and west of the subject site. Terracon advanced 25 Geoprobe soil borings (OSGP-1 through OSGP-25) and collected groundwater samples at each soil boring location for analysis of chlorinated solvents. Based on the results of groundwater sampling activities, six additional groundwater monitoring wells (OSMW-9 through OSMW-14) were installed offsite. Groundwater monitoring wells, screened at the surface of the unconsolidated groundwater aquifer, were used to define the extent of TCE impact in the upper portions of the aquifer.

At the request of the USEPA, two additional soil borings were advanced onsite to the top of bedrock near MW-1 and MW-12 to evaluate for dense non-aqueous phase liquids (DNAPL). The soil borings were converted into monitoring wells MW-15 and MW-16, respectively. TCE impact was identified in the deep wells at concentrations that were generally equivalent to or less than the impact in the shallow portion of the aquifer at those locations. Further assessment activities related to TCE impact in the lower portion of the unconsolidated aquifer were not requested by the USEPA at the time. Results of supplemental site assessment activities were reported in Quarterly Groundwater Monitoring Reports dated August 8, 2007, February 11, 2008, November 6, 2008, January 5, 2009, and July 27, 2009.

1.3 Project Objectives

In correspondence dated October 11, 2011, the USEPA directed Chamberlain to conduct supplemental groundwater monitoring to investigate and characterize groundwater for VOC contamination down to the upper bedrock horizon. In addition, supplemental groundwater monitoring activities were used to gather additional information related to bedrock topography and for consideration in the development of the pending CMS Work Plan.

2.0 FIELD SAMPLING ACTIVITIES

Supplemental groundwater monitoring activities were conducted to investigate and characterize the groundwater for VOC contamination down to the upper bedrock horizon. A series of Geoprobe® soil borings were advanced to the top of bedrock and to intermediate depths between the groundwater surface and the top of bedrock. Low-flow sampling equipment was used to collect groundwater samples at each soil boring location for analysis of chlorinated solvents by an offsite fixed laboratory. Terracon completed the following tasks.

2.1 Groundwater Sampling Activities

Terracon mobilized to the site on February 28, February 29, and March 2, 2012 to advance Geoprobe® soil borings and collect groundwater samples at five locations identified as GP-26 through GP-30. At each soil boring location, Terracon advanced one soil boring to probe refusal at depths ranging from 36 to 87 feet and determined the approximate depth to groundwater in the nearby monitoring well. Based on the depth to groundwater and the depth to probe refusal, Terracon estimated the thickness of the shallow unconfined aquifer.

In accordance with the Revised Supplemental Groundwater FSP, Terracon proposed to advance a second soil boring to the approximate midpoint of the unconsolidated groundwater aquifer if the thickness exceeded 20 feet. At the first soil boring location advanced (GP-28D), Terracon observed that the thickness of the unconsolidated groundwater aquifer was approximately 77 feet. After reviewing with Chamberlain, Terracon implemented a field revision to the Revised Supplemental Groundwater FSP to allow for the collection of three groundwater samples from the unconsolidated groundwater aquifer if the thickness exceeded 50 feet. Samples would be collected at the top of bedrock and at the approximate 1/3rd depth points through the unconsolidated groundwater aquifer.

Terracon advanced a total of 12 soil borings and collected 12 groundwater samples for laboratory analysis. Two soil borings (GP-26I and GP-26D) were advanced east of and crossgradient from the site near OSMW-2. Three soil borings (GP-27S, GP-27M, and GP-27D) were advanced southeast of and crossgradient from the site near OSMW-3. Three soil borings (GP-28S, GP-28M, and GP-28D) were advanced south of and downgradient from the site near OSMW-8. Three soil borings (GP-29S, GP-29M, and GP-29D) were advanced southwest of

and downgradient from the site near OSGP-4. One soil boring (GP-30D) was advanced west of and crossgradient from the site near OSMW-5. A summary of the soil borings is presented in Table 2-1. Groundwater sample locations and groundwater contours, based on the October 2011 monitoring event, are depicted on Exhibit 3, Appendix A.

Table 2-1 Soil Boring Summary

Boring Location	Depth to Top of Bedrock	Depth to Groundwater	Unconsolidated Aquifer Thickness	Number of Borings & Boring Identification
GP-26	36 feet	12.3 feet	23.7 feet	2 (GP-26I & GP-26D)
GP-27	77.5 feet	13.3 feet	64.2 feet	3 (GP-27S, GP-27M, & GP-27D)
GP-28	85 feet	8.4 feet	76.6 feet	3 (GP-28S, GP-28M, & GP-28D)
GP-29	87 feet	12.6 feet	74.4 feet	3 (GP-29S, GP-29M, & GP-29D)
GP-30	36 feet	25.4 feet	10.6 feet	1 (GP-30)

2.2 Methodology

Terracon followed standard procedures for sampling, physical measurements, equipment cleaning, and equipment calibration. The TSOPs that accompanied the sampling team incorporate industry protocols, internal procedures, and equipment operation manuals. The Revised Supplemental Groundwater FSP specified the appropriate TSOPs for use at the site. Terracon recorded discrepancies, clarifications, and corrective actions for QA, if applicable, in the field logbook. Terracon implemented the TSOPs identified in Table 2-2 during fieldwork activities.

Table 2-2 Field Activities TSOPs

Reference No.	Title
E.10	Project Mobilization
E.20	Standard Safe Operating Procedures for Hazardous Waste Operations
E.30	Chain of Custody Documentation
E.50	Sampling – Environmental Representativeness
E.400	Subsurface Sampling – Geoprobe® Platform
E.470	Sample Handling – Groundwater (Non-Hazardous)
E.530	pH Field Screening – Water
E.540	Conductivity Field Screening – Water
E.570	Temperature Field Screening
E.1400	Well Development – Parametric
E.1500	Boring Abandonment – Commercial Sealant
E.1800	Field Measurement – Surface Layout
E.1805	Field Measurement – Elevations
E.2000	Groundwater Sampling – Low Flow Pumping

Reference No.	Title
E.2210	Site Housekeeping - General
E.2220	Disposal of Spent Supplies
E.2230	Handling and Storage of Drill Cuttings (Non-Hazardous)
E.2240	Site Security Procedures
E.2405	Cleaning – General
E.2410	Cleaning - Manual Washing

3.0 ASSESSMENT RESULTS

3.1 Groundwater Sampling and Analysis

3.1.1 Physical Measurements

Terracon compare the depth to groundwater in nearby monitoring wells to the depth to the top of bedrock to estimate the thickness of the shallow unconfined aquifer. Further, the depth to the top of bedrock and the monitoring well casing elevation were used to estimate an approximate top of bedrock elevation. Terracon assessed the top of bedrock elevation data using a Kriging data evaluation method packaged with Surfer™ contouring software. Exhibit 4 in Appendix A depicts the top of bedrock contours.

Terracon measured the depth to groundwater and the depth to the top of bedrock at GP-30, located west of the site, to be approximately 35 feet and 36 feet, respectively. The thickness of the unconsolidated groundwater aquifer at GP-30 is approximately 11 feet. The shallow bedrock condition was also observed at offsite monitoring wells OSMW-15 and OSMW-16 lying approximately 600 feet and 1,400 feet northwest of the site. The shallow bedrock northwest of the site represents a boundary condition for intermediate and deep portions of the unconsolidated groundwater aquifer.

3.1.2 Low Flow Sampling

Terracon used low flow pumping techniques for purging and sampling groundwater monitoring wells. Terracon pumped groundwater from each well using a peristaltic pump set at a pumping rate of less than one liter per minute.

Field MNA parameters including pH, temperature, specific conductance, ORP, and DO were monitored during purging and sampling activities using a flow-through cell and a YSI-556 multi-meter. MNA parameters are summarized in Table 3-1. These parameters are non-critical; however, the concentrations are indicators of oxidation or reduction potential as well as well stabilization. Field MNA parameters were recorded on a Groundwater Monitoring Form at the

start of well purging activities and at one-well volume intervals. Well purging activities were considered complete when the temperature change was less than 0.5 degrees Centigrade (°C), the specific conductance change was less than 3 percent, and the pH change was less than 0.1 pH units.

Upon completion of well purging activities, the final MNA parameters were recorded on the Groundwater Monitoring Form. Terracon then filled the laboratory-prepared containers directly from the discharge end of the tubing for laboratory analysis. Copies of the Groundwater Monitoring Forms are included in Appendix D.

Table 3-1 Monitored Natural Attenuation Parameters

Parameter	Field/Laboratory	Method
pH	Field	YSI-556 multi-meter with flow-cell or equivalent
Specific Conductance	Field	YSI-556 multi-meter with flow-cell or equivalent
Temperature	Field	YSI-556 multi-meter with flow-cell or equivalent
ORP	Field	YSI-556 multi-meter with flow-cell or equivalent
DO	Field	YSI-556 multi-meter with flow-cell or equivalent
VOCs	Laboratory	EPA SW-846 Method 8260

3.1.3 Laboratory Measurements

Terracon submitted groundwater samples to TestAmerica, Cedar Falls, Iowa for laboratory analysis in accordance with the Revised Supplemental Groundwater FSP.

3.2 Groundwater Analytical Results

Terracon collected 12 groundwater samples for analysis of chlorinated solvents by SW-846 Method 8260. Seven VOCs were detected in one or more of the groundwater samples.

The results of groundwater sampling activities are summarized in Table 1, Appendix B. Copies of the analytical results and chain-of-custody documentation are provided in Appendix C.

3.2.1 Evaluation of TCE Results

Terracon assessed the results of TCE analysis using the Kriging data evaluation method packaged with Surfer™ contouring software. The analytical results for deep groundwater data were supplemented with recent October 2011 analytical data from monitoring wells MW-15 and MW-16. Intermediate depth aquifer conditions were modeled using the maximum TCE concentration from samples collected at approximate upper and lower 1/3rd depths. The TCE concentrations in the intermediate and deep portions of the shallow unconfined aquifer are depicted on Exhibits 5 and 6, respectively.

The shallow bedrock northwest of the site represents a boundary condition for intermediate and deep portions of the unconsolidated groundwater aquifer. As such, the intermediate and deep portions of the unconsolidated groundwater aquifer are not present northwest of the site.

3.2.2 TCE Concentrations

Review of the TCE plumes depicted on Exhibits 5 and 6 indicates that the limits of the intermediate and deep TCE plume have been adequately characterized east and southeast of the site and are generally consistent with the shallow TCE plume. Further, the limits of the TCE plume in the deep portion of the unconsolidated groundwater aquifer south and southwest of the site have been adequately defined.

However, the reported TCE concentrations at intermediate depths south and southwest of the site are greater than the observed shallow and deep TCE concentrations at the same locations. The reported TCE concentrations at sample locations GP-28 and GP-29 range from 45.4 µg/L to 442 µg/L. The reported TCE concentrations in shallow samples collected at these locations are 7.13 µg/L and 63.6 µg/L, respectively. The reported TCE concentrations on deep samples collected at these locations are less than 1.0 µg/L and 5.5 µg/L, respectively. Investigation and characterization of TCE impact in the unconsolidated portion of the groundwater aquifer indicates that TCE concentrations in intermediate zones exceed the concentrations observed at the same locations in the shallow and deep portions of the aquifer.

The reduced TCE concentrations at the top of bedrock indicate that contaminants appear to be dispersing vertically downward and laterally in the downgradient direction from a near surface source. The deep groundwater TCE concentrations do not appear to indicate the presence of DNAPL conditions at the top of bedrock. Further, the lateral extent of TCE at the top of bedrock has been defined to near the MCL of 5 µg/L. Further investigation to characterize VOC impact at the top of bedrock is not warranted.

The increase in TCE concentrations at intermediate depths south and southwest of the site could be attributable to several factors. Due to increased frictional effects, groundwater movement at the surface of the unconsolidated aquifer and at the top of bedrock would be expected to be slower. Increased groundwater flow at intermediate depths would convey contaminants more rapidly and could result in apparent increases in concentration at intermediate intervals. The apparent increase at intermediate depths could also be the result of a decrease of near surface concentrations due to volatilization of organic compounds into the unsaturated zone above the water table.

Terracon notes that TCE concentrations at intermediate depths do not significantly affect conditions at the site. Elevated TCE concentrations near the surface of the aquifer can have a direct impact on vapor migration to Residences. Elevated TCE concentrations near the top of bedrock could be indicative of a DNAPL condition. The observed TCE impact at intermediate

depths; however, does not directly affect vapor migration nor is it indicative of DNAPL conditions. Further, the observed impact will not significantly affect corrective measures, which will be targeted on reduction of TCE concentrations at the source area. It is anticipated that dispersion and natural attenuation of contaminants downgradient from the source area will occur over time following abatement of the source conditions. Further investigation to characterize VOC impact at intermediate depths is not warranted.

4.0 FIELD DATA QUALITY

The QAPP set forth the procedures and methods for data collection. The sampling plans defined the specific procedures and adjustments necessary to maintain data quality to support the project decision. The QAPP required both field and laboratory checks to monitor conformance to project quality limits.

4.1 Quality Control Parameters

To assess whether quality assurance objectives for this project have been achieved, the following QC parameters were considered: precision, accuracy, representativeness, comparability, completeness, and sensitivity.

4.1.1 Precision and Accuracy

As described in the QAPP, precision is evaluated using the RPD between an actual sample and a duplicate sample. Accuracy is evaluated using a percent recovery measured in spiked and unspiked samples. Accuracy is a function of the laboratory method, and parameters regarding accuracy are included in the data quality package provided by the laboratory.

A duplicate groundwater sample was collected from GP-29S. For each compound, Terracon compared the concentrations detected in each sample and its corresponding duplicate sample. The absolute value RPDs for groundwater ranged from 4.9% to 11.8%, which are within the 20% limit specified in the QAPP.

One trip blank was submitted to the TestAmerica for analysis. The reported analytical results were non-detect for the blank sample.

4.1.2 Representativeness

Terracon has evaluated the representativeness of the field assessment activities to document the degree to which the sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Review of field methods and procedures indicated that sample collection, handling, and transportation

were conducted in general accordance with the QAPP and the Revised Supplemental Groundwater FSP.

Field parameters are taken with an YSI-556 multi-meter and pH, temperature, specific conductance, DO and ORP are also recorded on Groundwater Monitoring Forms from the YSI-556 screen. Review of analytical results indicates that the data is generally uniform and consistent between sampling points and with previous sampling and analysis activities.

4.1.3 Completeness

Laboratory analysis was completed on each of the samples collected in the field and submitted for analysis. Laboratory completeness was determined to be 100%.

4.1.4 Comparability

To produce comparable data, the units specified for analytical results obtained during the field activities are consistent throughout this project and standardized analytical methods have been used for each parameter.

4.1.5 Sensitivity

Analytical results were compared to RSLs and MCLs. The laboratory detection limits were sufficient allow to for comparison to the MCL for each of the contaminants of concern; however, the RSL for TCE, PCE, and vinyl chloride were less than the MDL.

5.0 LABORATORY DATA QUALITY

The laboratory completed validation and verification of laboratory processes and data, and delivered a Level II data package to the Terracon Project Manager. The package, including laboratory written reports and documents are in compliance with the QAPP.

6.0 FINDINGS AND CONCLUSIONS

Terracon has conducted a supplemental groundwater monitoring event for this property. Terracon makes the following conclusions.

- The field assessment activities have been conducted consistent with the intent and strictures of project objectives.

- The field assessment activities have been conducted consistent with the QAPP and Revised Supplemental Groundwater FSP.
- The field assessment activities have produced data of a quality sufficient to make the project decisions set forth in the QAPP.
- Further investigation to characterize VOC impact at the top of bedrock is not warranted.
- Further investigation to characterize VOC impact at intermediate depths of the unconsolidated groundwater aquifer is not warranted.

Appendix A

Exhibit

Exhibit 1 - Topographic Vicinity Map

Exhibit 2 - Site Diagram

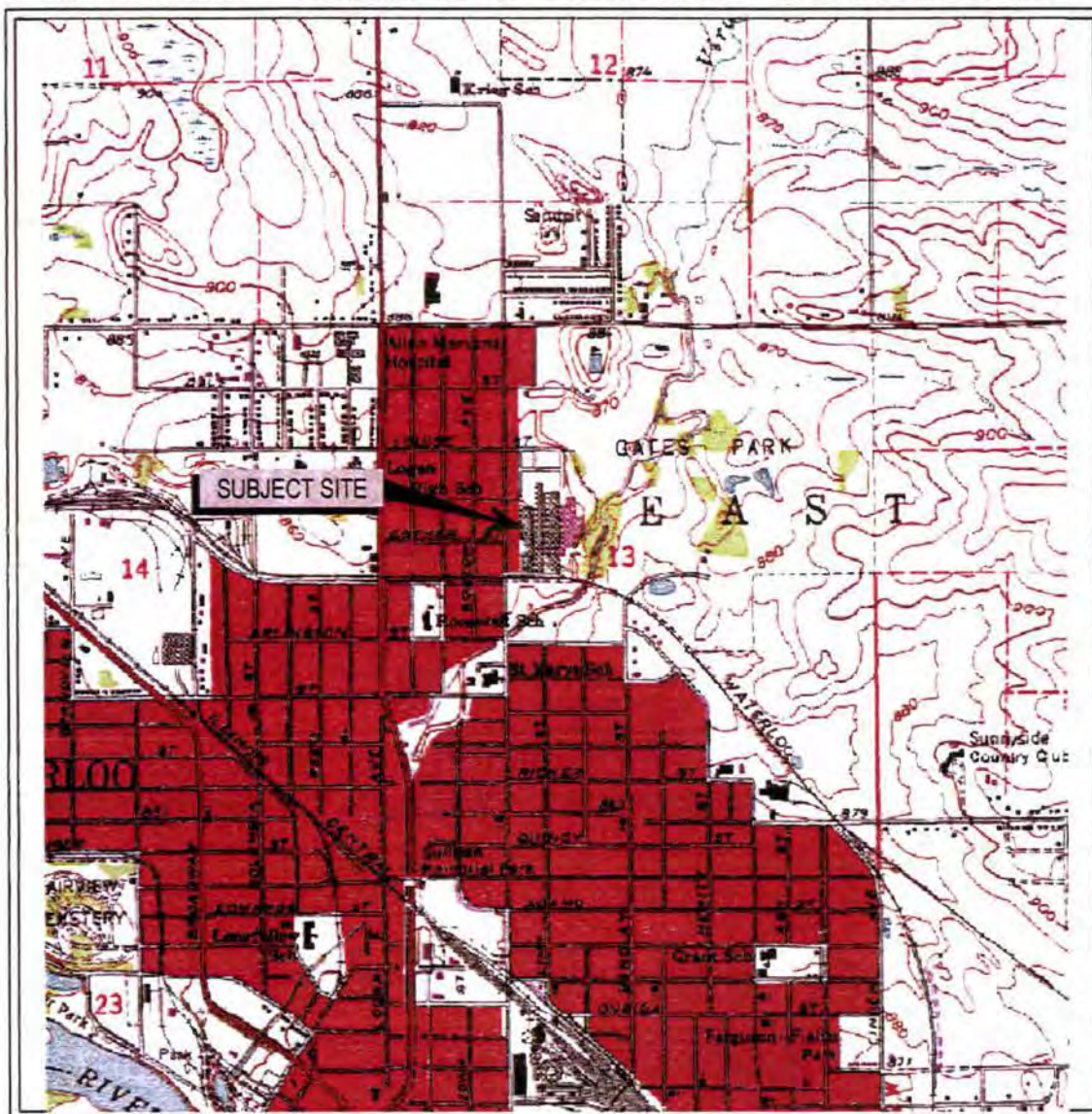
Exhibit 3 – Sample Locations/Groundwater Contours

Exhibit 4 - Top of Bedrock Contours

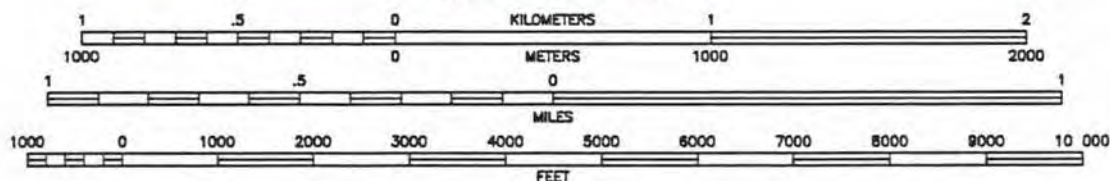
Exhibit 5 - TCE Concentration – Intermediate Portion of Aquifer

Exhibit 6 - TCE Concentration – Deep Portion of Aquifer

UNITED STATES - DEPARTMENT OF THE INTERIOR - GEOLOGICAL SURVEY



SCALE 1:24 000



CONTOUR INTERVAL FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
TOPO LINES REPRESENT 10-FOOT CONTOURS

WATERLOO NORTH QUADRANGLE

7.5 MINUTE SERIES (TOPOGRAPHIC)

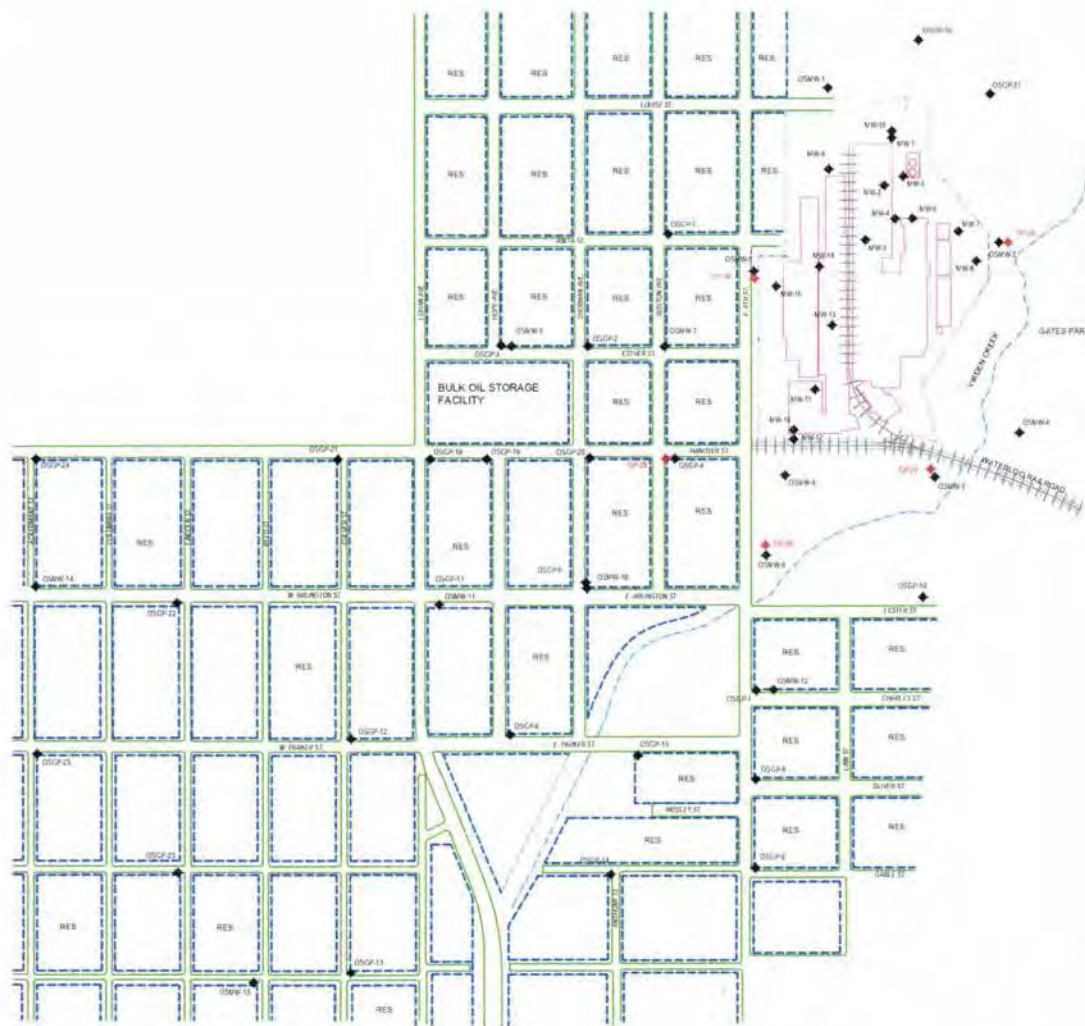
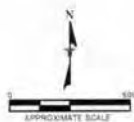


Project Mgr:	JFB	Project No:	07107020	TOPOGRAPHIC VICINITY MAP	FIG. No
Drawn By:	JFB	Scale:	AS SHOWN	SUPPLEMENTAL GROUNDWATER MONITORING REPORT	
Checked By:	JFB	File No:	07107020-T7-FSP-FIG1	FORMER CHAMBERLAIN MANUFACTURING FACILITY	
Approved By:	JFB	Date:	APRIL 20, 2010	550 ESTHER ST.	1
				WATERLOO, IOWA	

Terracon
Consulting Engineers and Scientists

870 40th Avenue Bettendorf, Iowa 52722

N:\Project\4101007\01000Drawings\006 Monitoring\Map 20120710\005.T560M4E11.dwg



LEGEND

- PROPERTY LINE
- ++++ RAILROAD
- ◆ MONITORING WELL
- RES. RESIDENTIAL
- ◆ FORMER GEOPROBE SAMPLES

NOTE: ON-SITE BUILDINGS HAVE BEEN DEMOLISHED AND ARE DEPICTED FOR REFERENCE ONLY.

Project Mgr:	JFB	Project No.	41010000
Drawn By:	JFB	Date:	AS-SHOWN
Checked By:	JFB	Revised By:	JFB
Approved By:	JFB	Date:	APRIL 30, 2012

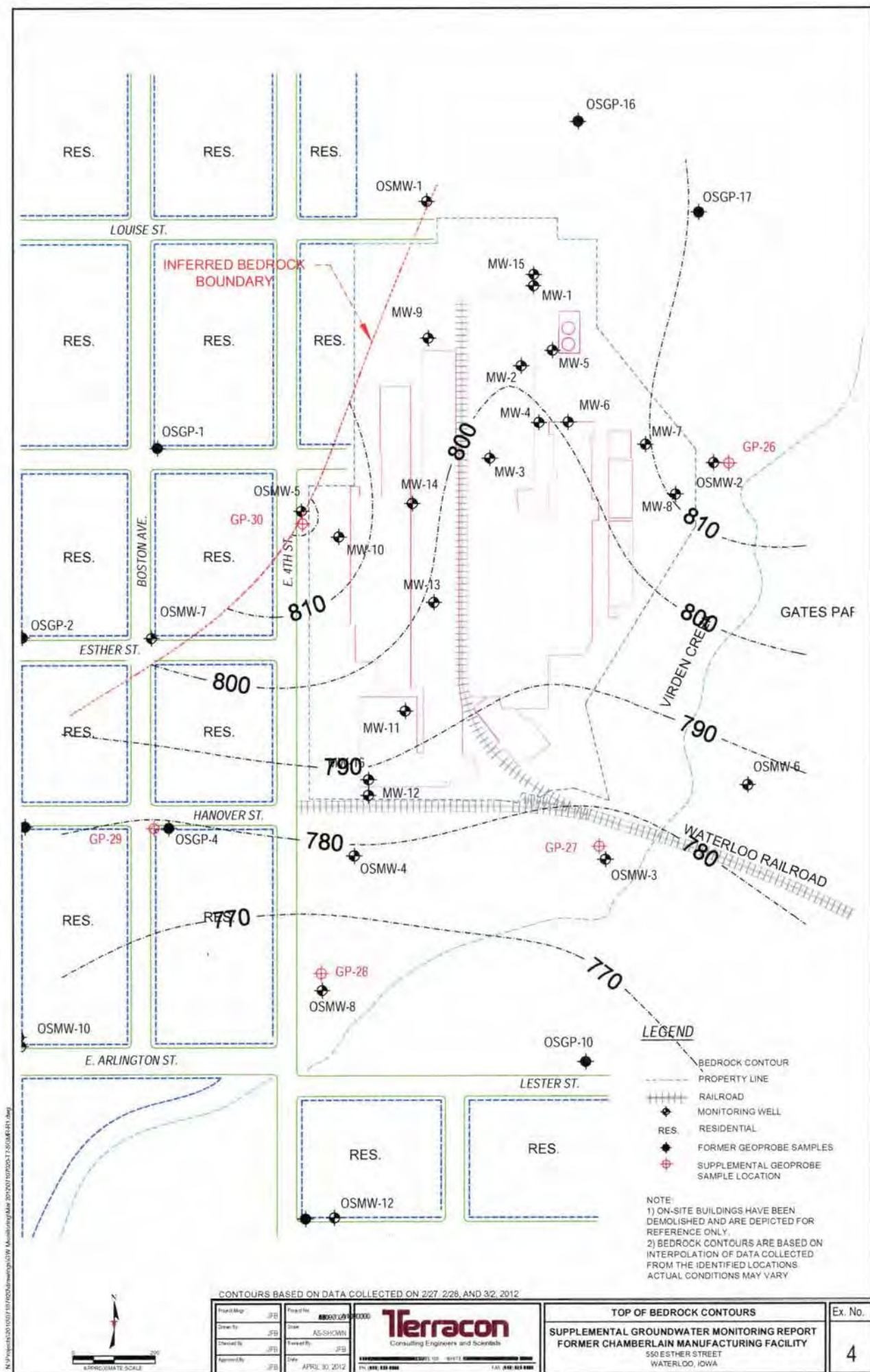


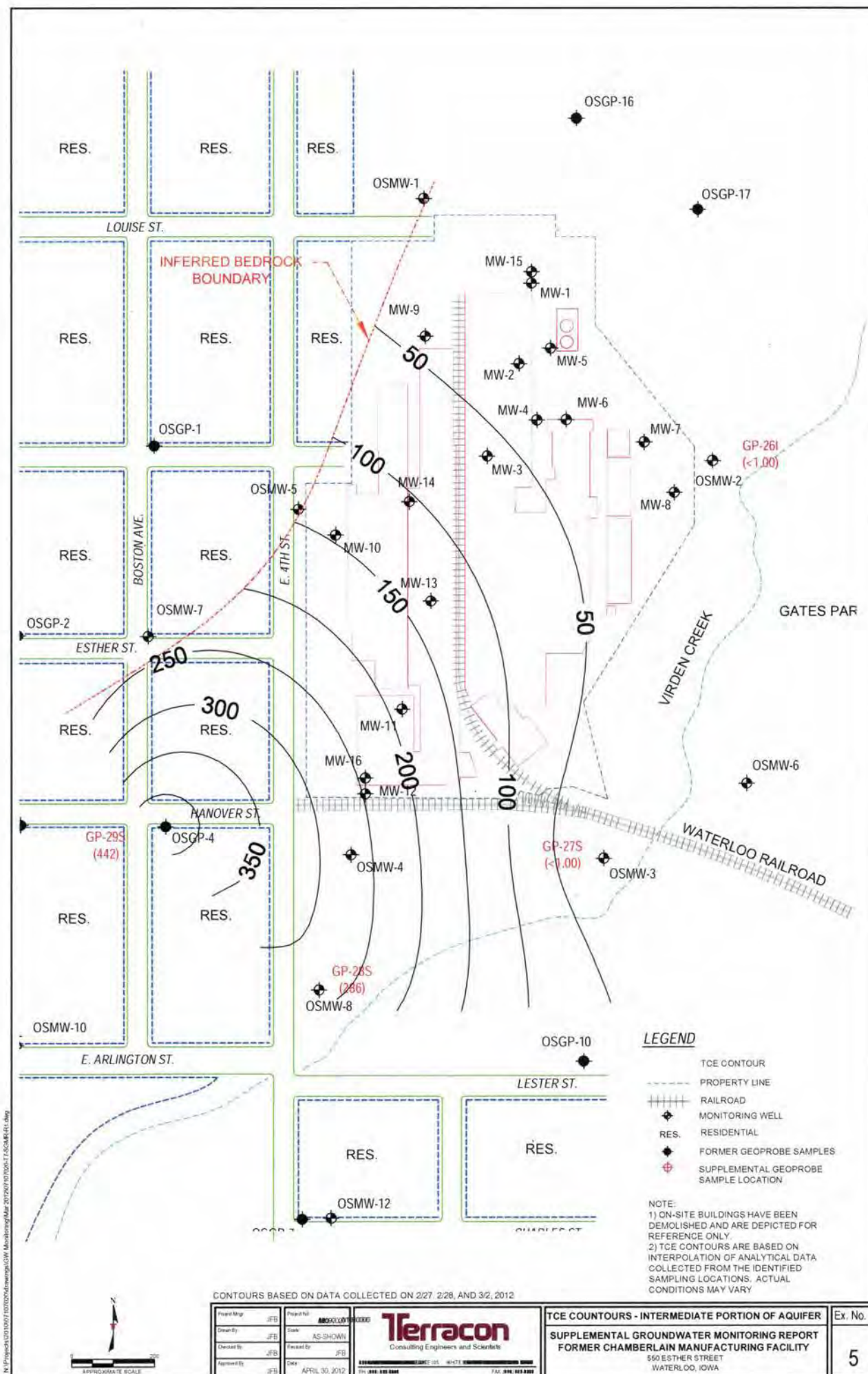
SITE DIAGRAM
SUPPLEMENTAL GROUNDWATER MONITORING REPORT FORMER CHAMBERLAIN MANUFACTURING FACILITY 550 ESTHER STREET WATERLOO, IOWA

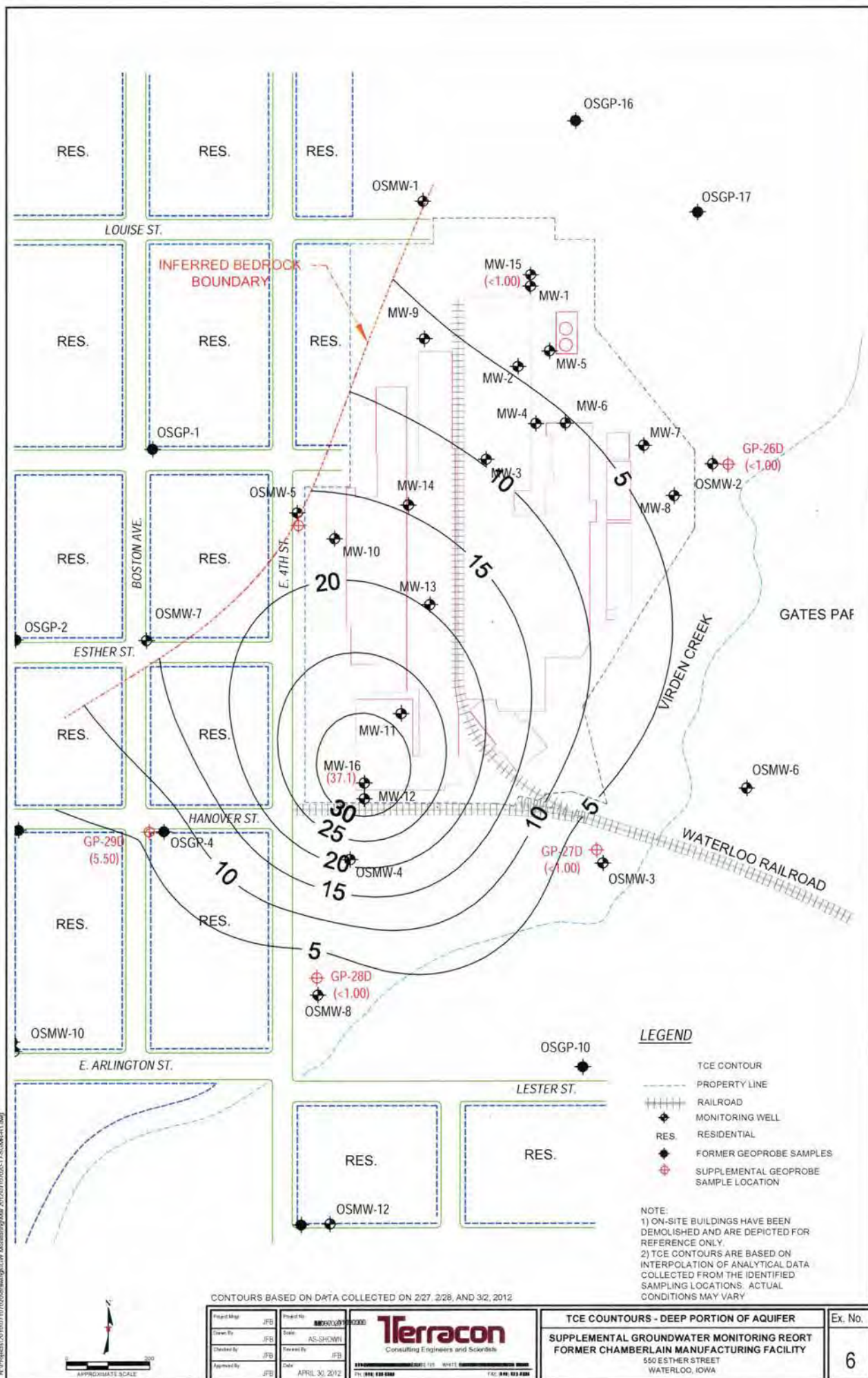
Ex. No.

2









Appendix B

Tables

Table Notes

Table 1 - Supplemental Analytical Results

Table Notes
Supplemental Groundwater Monitoring Report
Former Industrial Property
505 Esther Street
Waterloo, Iowa

PRGs from USEPA Region 9 PRG Tables, October 1, 2002.

mg/kg = milligrams per kilogram, generally equivalent to ppm

µg/kg = micrograms per kilogram, generally equivalent to ppb

mg/L = milligrams per liter, generally equivalent to parts per million (ppm)

µg/L = micrograms per liter generally equivalent to ppb

deg C. = degrees Centigrade

mV = milli Volts

mS/cm = micro mhos per centimeter

Exceedances of applicable PRGs are highlighted in **bold**

October 2007 DO results converted from percent to mg/L.

Table 1: Supplemental Groundwater Monitoring Analytical Results
Former Industrial Property
505 Esther Street
Waterloo, Iowa

Client Sample ID	GP-26-I	GP-26-D	GP-27-S	GP-27-M	GP-27-D	GP-28-S	GP-28-M	GP-28-D	GP-29-S	GP-29-M	GP-29-D	GP-30-D	DUP-1		
Lab Sample ID	CVC0180-02	CVC0180-01	CVB1583-06	CVB1583-05	CVB1583-04	CVB1583-03	CVB1583-02	CVB1583-01	CVB1583-10	CVB1583-09	CVB1583-08	CVB1583-07	CVB1583-11		
Date Sampled	3/2/2012	3/2/2012	2/29/2012	2/28/2012	2/28/2012	2/28/2012	2/28/2012	2/28/2012	2/29/2012	2/29/2012	2/29/2012	2/29/2012	2/29/2012		
Approximate Sample Depth (ft bgs)	24	36	35	50	77.5	32	48	85	35	60	87	36			
Approximate Sample Elevation (ft amsl)	832	820	817	802	775	814	798	761	829	804	777	828			
CAS No	Parameter	Units													
FIELD MNA PARAMETERS															
	Temperature	deg C	7.61	9.63	9.19	8.84	10.05	10.24	10.25	10.39	10.2	9.26	10.12	12.46	10.2
	Dissolved Oxygen	mg/L	6.57	0.29	0.38	0.13	1.2	0.12	0.18	1.99	1.56	0.81	0.19	2.01	1.56
	ORP	mV	-0.2	-112	-15.5	-40.7	24.7	73	49.9	71.4	767	6.9	-22	173.3	767
	pH				9.08	7.56	7.62	7.23	7.3	6.9		8.82	8.67	4.38	
	Specific Conductance	mS/cm	0.627	0.727	0.465	0.541	0.482	0.658	0.558	0.481	0.522	0.483	0.466	0.686	0.522
VOLATILE ORGANIC COMPOUNDS															
630-20-6	1,1,1,2-Tetrachloroethane	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
71-55-6	1,1,1-Trichloroethane	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	1.55	1.54	<1.00	6.67	6.33	<1.00	14.4	6.35
79-34-5	1,1,2,2-Tetrachloroethane	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
79-00-5	1,1,2-Trichloroethane	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
75-34-3	1,1-Dichloroethane	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	1.05	1.15	<1.00	2.44	<1.00
75-35-4	1,1-Dichloroethene	µg/L	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
563-58-6	1,1-Dichloropropene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
87-61-6	1,2,3-Trichlorobenzene	µg/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
96-18-4	1,2,3-Trichloropropane	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
120-82-1	1,2,4-Trichlorobenzene	µg/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
95-63-6	1,2,4-Trimethylbenzene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
96-12-8	1,2-Dibromo-3-chloropropane	µg/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
106-93-4	1,2-Dibromoethane (EDB)	µg/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
202-425-9	1,2-Dichlorobenzene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
107-06-2	1,2-Dichloroethane	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
78-87-5	1,2-Dichloropropane	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
108-67-8	1,3,5-Trimethylbenzene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
541-73-1	1,3-Dichlorobenzene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
142-28-9	1,3-Dichloropropane	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
106-46-7	1,4-Dichlorobenzene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
594-20-7	2,2-Dichloropropane	µg/L	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
95-49-8	2-Chlorotoluene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
106-43-4	4-Chlorotoluene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
67-64-1	Acetone	µg/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
71-43-2	Benzene	µg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
108-86-1	Bromobenzene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
74-97-5	Bromochloromethane	µg/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
75-27-4	Bromodichloromethane	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
75-25-2	Bromoform	µg/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
74-83-9	Bromomethane	µg/L	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
75-15-0	Carbon disulfide	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00

Table 1: Supplemental Groundwater Monitoring Analytical Results
Former Industrial Property
505 Esther Street
Waterloo, Iowa

Client Sample ID	GP-26-I	GP-26-D	GP-27-S	GP-27-M	GP-27-D	GP-28-S	GP-28-M	GP-28-D	GP-29-S	GP-29-M	GP-29-D	GP-30-D	DUP-1
Lab Sample ID	CVC0180-02	CVC0180-01	CVB1583-06	CVB1583-05	CVB1583-04	CVB1583-03	CVB1583-02	CVB1583-01	CVB1583-10	CVB1583-09	CVB1583-08	CVB1583-07	CVB1583-11
Date Sampled	3/2/2012	3/2/2012	2/29/2012	2/28/2012	2/28/2012	2/28/2012	2/28/2012	2/28/2012	2/29/2012	2/29/2012	2/29/2012	2/29/2012	2/29/2012
Approximate Sample Depth (ft bgs)	24	36	35	50	77.5	32	48	85	35	60	87	36	
Approximate Sample Elevation (ft amsl)	832	820	817	802	775	814	798	761	829	804	777	828	
CAS No	Parameter	Units											
56-23-5	Carbon tetrachloride	µg/L	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
108-90-7	Chlorobenzene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
124-48-1	Chlorodibromomethane	µg/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
75-00-3	Chloroethane	µg/L	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
67-66-3	Chloroform	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
74-87-3	Chloromethane	µg/L	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00
156-59-2	cis-1,2-Dichloroethene	µg/L	<1.00	<1.00	<1.00	14	<1.00	3.53	2.89	<1.00	29.5	31.1	<1.00
10061-01-5	cis-1,3-Dichloropropene	µg/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
74-95-3	Dibromomethane	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
75-71-8	Dichlorodifluoromethane	µg/L	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00
100-41-4	Ethylbenzene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
87-68-3	Hexachlorobutadiene	µg/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
110-54-3	Hexane	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
98-82-8	Isopropylbenzene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
78-93-3	MEK	µg/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
75-09-2	Methylene chloride	µg/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
1634-04-4	MTBE	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
91-20-3	Naphthalene	µg/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
104-51-8	n-Butylbenzene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
103-65-1	n-Propylbenzene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
99-87-6	p-Isopropyltoluene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
135-9-88	sec-Butylbenzene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
100-42-5	Styrene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
98-06-6	tert-Butylbenzene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
127-18-4	Tetrachloroethene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	2.16	<1.00	10.3	3.69	1.24
108-88-3	Toluene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
156-60-5	trans-1,2-Dichloroethene	µg/L	<1.00	<1.00	<1.00	7.64	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
10061-02-6	trans-1,3-Dichloropropene	µg/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
79-01-6	Trichloroethylene	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	286	<1.00	45.4	<1.00	442
75-69-4	Trichlorofluoromethane	µg/L	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
75-01-4	Vinyl Chloride	µg/L	<1.00	<1.00	<1.00	6.04	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1330-20-7	Xylenes, Total	µg/L	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00

µg/L

Micrograms per liter

ft bgs

Feet below ground surface

ft amsl

Feet above mean sea level

GP-28-M

Intermediate sample collected at approximately 25 feet and 50 feet below groundwater table

GP-26-D

Deep sample collected near top of bedrock and greater than 20 feet of groundwater over bedrock

GP-30-D

Deep sample collected near top of bedrock, but less than 15 feet of groundwater over bedrock

Table 1: Supplemental Groundwater Monitoring Analytical Results
Former Industrial Property
505 Esther Street
Waterloo, Iowa

Client Sample ID			Trip Blank		Frequency of Detection	Maximum Detected Concentration	RSL		MCL	Maximum Exceeds?							
Lab Sample ID			CVB1583-12	CVC0180-03			Tap Water										
Date Sampled			2/29/2012	3/2/2012													
Approximate Sample Depth (ft bgs)																	
Approximate Sample Elevation (ft amsl)																	
CAS No	Parameter	Units															
FIELD MNA PARAMETERS																	
	Temperature	deg C.			12 of 12 (100%)	12.46	>20										
	Dissolved Oxygen	mg/L			12 of 12 (100%)	6.57	<0.5										
	ORP	mV			12 of 12 (100%)	767.00	>100										
	pH				9 of 9 (100%)	9.08	5<pH<9										
	Specific Conductance	mS/cm			12 of 12 (100%)	0.73											
VOLATILE ORGANIC COMPOUNDS																	
630-20-6	1,1,1,2-Tetrachloroethane	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	0.5			Not Detected							
71-55-6	1,1,1-Trichloroethane	µg/L	<1.00	<1.00	5 of 12 (42%)	14.40	7500	200		NO							
79-34-5	1,1,2,2-Tetrachloroethane	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	0.066			Not Detected							
79-00-5	1,1,2-Trichloroethane	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	0.24	5		Not Detected							
75-34-3	1,1-Dichloroethane	µg/L	<1.00	<1.00	3 of 12 (25%)	2.44	2.4			YES							
75-35-4	1,1-Dichloroethene	µg/L	<2.00	<2.00	0 of 12 (0%)	Not Detected	260	7		Not Detected							
563-58-6	1,1-Dichloropropene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	#N/A	#N/A		Not Detected							
87-61-6	1,2,3-Trichlorobenzene	µg/L	<5.00	<5.00	0 of 12 (0%)	Not Detected	5.2			Not Detected							
96-18-4	1,2,3-Trichloropropane	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	0.00065			Not Detected							
120-82-1	1,2,4-Trichlorobenzene	µg/L	<5.00	<5.00	0 of 12 (0%)	Not Detected	0.99	70		Not Detected							
95-63-6	1,2,4-Trimethylbenzene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	15			Not Detected							
96-12-8	1,2-Dibromo-3-chloropropane	µg/L	<10.0	<10.0	0 of 12 (0%)	Not Detected	0.00032	0.2		Not Detected							
106-93-4	1,2-Dibromoethane (EDB)	µg/L	<10.0	<10.0	0 of 12 (0%)	Not Detected	0.0065	0.05		Not Detected							
202-425-9	1,2-Dichlorobenzene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	#N/A	#N/A		Not Detected							
107-06-2	1,2-Dichloroethane	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	0.15	5		Not Detected							
78-87-5	1,2-Dichloropropane	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	0.38	5		Not Detected							
108-67-8	1,3,5-Trimethylbenzene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	87			Not Detected							
541-73-1	1,3-Dichlorobenzene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	#N/A	#N/A		Not Detected							
142-28-9	1,3-Dichloropropane	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	290			Not Detected							
106-46-7	1,4-Dichlorobenzene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	0.42	75		Not Detected							
594-20-7	2,2-Dichloropropane	µg/L	<4.00	<4.00	0 of 12 (0%)	Not Detected	#N/A	#N/A		Not Detected							
95-49-8	2-Chlorotoluene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	180			Not Detected							
106-43-4	4-Chlorotoluene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	190			Not Detected							
67-64-1	Acetone	µg/L	<10.0	<10.0	0 of 12 (0%)	Not Detected	12000			Not Detected							
71-43-2	Benzene	µg/L	<0.500	<0.500	0 of 12 (0%)	Not Detected	0.39	5		Not Detected							
108-86-1	Bromobenzene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	54			Not Detected							
74-97-5	Bromochloromethane	µg/L	<5.00	<5.00	0 of 12 (0%)	Not Detected	83			Not Detected							
75-27-4	Bromodichloromethane	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	0.12	8.0E+01(F)		Not Detected							
75-25-2	Bromoform	µg/L	<5.00	<5.00	0 of 12 (0%)	Not Detected	7.9	8.0E+01(F)		Not Detected							
74-83-9	Bromomethane	µg/L	<4.00	<4.00	0 of 12 (0%)	Not Detected	7			Not Detected							
75-15-0	Carbon disulfide	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	720			Not Detected							

Table 1: Supplemental Groundwater Monitoring Analytical Results
Former Industrial Property
505 Esther Street
Waterloo, Iowa

Client Sample ID			Trip Blank	Trip Blank	Frequency of Detection	Maximum Detected Concentration	RSL	MCL	Maximum Exceeds?
Lab Sample ID			CVB1583-12	CVC0180-03			Tap Water		
Date Sampled			2/29/2012	3/2/2012					
Approximate Sample Depth (ft bgs)									
Approximate Sample Elevation (ft amsl)									
CAS No	Parameter	Units							
56-23-5	Carbon tetrachloride	µg/L	<2.00	<2.00	0 of 12 (0%)	Not Detected	0.39	5	Not Detected
108-90-7	Chlorobenzene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	72	100	Not Detected
124-48-1	Chlorodibromomethane	µg/L	<5.00	<5.00	0 of 12 (0%)	Not Detected	0.15	8.0E+01(F)	Not Detected
75-00-3	Chloroethane	µg/L	<4.00	<4.00	0 of 12 (0%)	Not Detected	21000		Not Detected
67-66-3	Chloroform	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	0.19	8.0E+01(F)	Not Detected
74-87-3	Chloromethane	µg/L	<3.00	<3.00	0 of 12 (0%)	Not Detected	190		Not Detected
156-59-2	cis-1,2-Dichloroethene	µg/L	<1.00	<1.00	6 of 12 (50%)	31.10	28	70	YES
10061-01-5	cis-1,3-Dichloropropene	µg/L	<5.00	<5.00	0 of 12 (0%)	Not Detected	#N/A	#N/A	Not Detected
74-95-3	Dibromomethane	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	7.9		Not Detected
75-71-8	Dichlorodifluoromethane	µg/L	<3.00	<3.00	0 of 12 (0%)	Not Detected	190		Not Detected
100-41-4	Ethylbenzene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	1.3	700	Not Detected
87-68-3	Hexachlorobutadiene	µg/L	<5.00	<5.00	0 of 12 (0%)	Not Detected	0.26		Not Detected
110-54-3	Hexane	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	250		Not Detected
98-82-8	Isopropylbenzene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	390		Not Detected
78-93-3	MEK	µg/L	<10.0	<10.0	0 of 12 (0%)	Not Detected	4900		Not Detected
75-09-2	Methylene chloride	µg/L	<5.00	<5.00	0 of 12 (0%)	Not Detected	4.7	5	Not Detected
1634-04-4	MTBE	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	12		Not Detected
91-20-3	Napthalene	µg/L	<5.00	<5.00	0 of 12 (0%)	Not Detected	0.14		Not Detected
104-51-8	n-Butylbenzene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	780		Not Detected
103-65-1	n-Propylbenzene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	530		Not Detected
99-87-6	p-Isopropyltoluene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	#N/A	#N/A	Not Detected
135-9-88	sec-Butylbenzene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	#N/A	#N/A	Not Detected
100-42-5	Styrene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	1100	100	Not Detected
98-06-6	tert-Butylbenzene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	#N/A	#N/A	Not Detected
127-18-4	Tetrachloroethene	µg/L	<1.00	<1.00	5 of 12 (42%)	10.30	0.072	5	YES
108-88-3	Toluene	µg/L	<1.00	<1.00	0 of 12 (0%)	Not Detected	860	1000	Not Detected
156-60-5	trans-1,2-Dichloroethene	µg/L	<1.00	<1.00	1 of 12 (8%)	7.64	86	100	NO
10061-02-6	trans-1,3-Dichloropropene	µg/L	<5.00	<5.00	0 of 12 (0%)	Not Detected	0.41		Not Detected
79-01-6	Trichloroethylene	µg/L	<1.00	<1.00	6 of 12 (50%)	442.00	0.44	5	YES
75-69-4	Trichlorofluoromethane	µg/L	<4.00	<4.00	0 of 12 (0%)	Not Detected	1100		Not Detected
75-01-4	Vinyl Chloride	µg/L	<1.00	<1.00	1 of 12 (8%)	6.04	0.015	2	YES
1330-20-7	Xylenes, Total	µg/L	<3.00	<3.00	0 of 12 (0%)	Not Detected	190	10000	Not Detected

Appendix C

Analytical Results and Chains of Custody

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: 800-750-2401

TestAmerica Job ID: CVB1583
Client Project/Site: 07107020
Client Project Description: Chamberlain - Waterloo, IA

For:
TERRACON - BETTENDORF
870 40th Avenue
Bettendorf, IA 52722

Attn: John Brimeyer

Angela Muehling

Authorized for release by:
3/5/2012 3:42:06 PM

Angela Muehling
Project Coordinator
Angela.Muehling@testamericainc.com

Designee for
Derrick Klinkenberg
Organics Manager
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
CVB1583-01	GP-28D	Ground Water	02/28/12 11:49	02/29/12 15:53
CVB1583-02	GP-28M	Ground Water	02/28/12 13:26	02/29/12 15:53
CVB1583-03	GP-28S	Ground Water	02/28/12 14:20	02/29/12 15:53
CVB1583-04	GP-27D	Ground Water	02/28/12 16:15	02/29/12 15:53
CVB1583-05	GP-27M	Ground Water	02/28/12 18:42	02/29/12 15:53
CVB1583-06	GP-27S	Ground Water	02/29/12 07:55	02/29/12 15:53
CVB1583-07	GP-30D	Ground Water	02/29/12 09:30	02/29/12 15:53
CVB1583-08	GP-29D	Ground Water	02/29/12 13:05	02/29/12 15:53
CVB1583-09	GP-29M	Ground Water	02/29/12 14:25	02/29/12 15:53
CVB1583-10	GP-29S	Ground Water	02/29/12 15:15	02/29/12 15:53
CVB1583-11	GP-Dup	Ground Water	02/28/12 00:00	02/29/12 15:53
CVB1583-12	Trip Blank	Water	02/28/12 00:00	02/29/12 15:53

Detection Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-28D

Lab Sample ID: CVB1583-01

No Detections

Client Sample ID: GP-28M

Lab Sample ID: CVB1583-02

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.89		1.00		ug/L	1.00		SW 8260B	Total
Tetrachloroethene	2.16		1.00		ug/L	1.00		SW 8260B	Total
1,1,1-Trichloroethane	1.54		1.00		ug/L	1.00		SW 8260B	Total
Trichloroethene	45.4		1.00		ug/L	1.00		SW 8260B	Total

Client Sample ID: GP-28S

Lab Sample ID: CVB1583-03

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.53		1.00		ug/L	1.00		SW 8260B	Total
1,1,1-Trichloroethane	1.55		1.00		ug/L	1.00		SW 8260B	Total
Trichloroethene	286		1.00		ug/L	1.00		SW 8260B	Total

Client Sample ID: GP-27D

Lab Sample ID: CVB1583-04

No Detections

Client Sample ID: GP-27M

Lab Sample ID: CVB1583-05

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	14.0		1.00		ug/L	1.00		SW 8260B	Total
trans-1,2-Dichloroethene	7.64		1.00		ug/L	1.00		SW 8260B	Total
Vinyl chloride	6.04		1.00		ug/L	1.00		SW 8260B	Total

Client Sample ID: GP-27S

Lab Sample ID: CVB1583-06

No Detections

Client Sample ID: GP-30D

Lab Sample ID: CVB1583-07

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	2.44		1.00		ug/L	1.00		SW 8260B	Total
cis-1,2-Dichloroethene	14.0		1.00		ug/L	1.00		SW 8260B	Total
Tetrachloroethene	5.22		1.00		ug/L	1.00		SW 8260B	Total
1,1,1-Trichloroethane	14.4		1.00		ug/L	1.00		SW 8260B	Total
Trichloroethene	33.2		1.00		ug/L	1.00		SW 8260B	Total

Client Sample ID: GP-29D

Lab Sample ID: CVB1583-08

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1.24		1.00		ug/L	1.00		SW 8260B	Total
Trichloroethene	5.50		1.00		ug/L	1.00		SW 8260B	Total

Client Sample ID: GP-29M

Lab Sample ID: CVB1583-09

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.15		1.00		ug/L	1.00		SW 8260B	Total
cis-1,2-Dichloroethene	31.1		1.00		ug/L	1.00		SW 8260B	Total
Tetrachloroethene	3.69		1.00		ug/L	1.00		SW 8260B	Total
1,1,1-Trichloroethane	6.33		1.00		ug/L	1.00		SW 8260B	Total
Trichloroethene	236		1.00		ug/L	1.00		SW 8260B	Total

Detection Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-29S

Lab Sample ID: CVB1583-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.05		1.00		ug/L	1.00		SW 8260B	Total
cis-1,2-Dichloroethene	29.5		1.00		ug/L	1.00		SW 8260B	Total
Tetrachloroethene	10.3		1.00		ug/L	1.00		SW 8260B	Total
1,1,1-Trichloroethane	6.67		1.00		ug/L	1.00		SW 8260B	Total
Trichloroethene	442		1.00		ug/L	1.00		SW 8260B	Total

Client Sample ID: GP-Dup

Lab Sample ID: CVB1583-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	26.2		1.00		ug/L	1.00		SW 8260B	Total
Tetrachloroethene	9.57		1.00		ug/L	1.00		SW 8260B	Total
1,1,1-Trichloroethane	6.35		1.00		ug/L	1.00		SW 8260B	Total
Trichloroethene	394		1.00		ug/L	1.00		SW 8260B	Total
pH	>2		2.00		units	1.00		SW 9041	Total

Client Sample ID: Trip Blank

Lab Sample ID: CVB1583-12

☐ No Detections

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-28D

Lab Sample ID: CVB1583-01

Date Collected: 02/28/12 11:49

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Phone Number: 563-355-0702

Sampler Name: Holly Moriarty

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Bromomethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
2,2-Dichloropropane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Hexane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Naphthalene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,1,2,2-Tetrachloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00

US EPA ARCHIVE DOCUMENT

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-28D

Lab Sample ID: CVB1583-01

Date Collected: 02/28/12 11:49

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,2,4-Trichlorobenzene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,2,3-Trichloropropane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 07:42	1.00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	95		75 - 120	03/01/12 00:00	03/01/12 07:42	1.00
Toluene-d8	94		80 - 120	03/01/12 00:00	03/01/12 07:42	1.00
4-Bromofluorobenzene	104		75 - 110	03/01/12 00:00	03/01/12 07:42	1.00

Method: SW 8260B - Volatile Organic Compounds - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 12:47	1.00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	95		75 - 120	03/01/12 00:00	03/01/12 12:47	1.00
Toluene-d8	100		80 - 120	03/01/12 00:00	03/01/12 12:47	1.00
4-Bromofluorobenzene	96		75 - 110	03/01/12 00:00	03/01/12 12:47	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/05/12 11:50	03/05/12 11:53	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-28M

Lab Sample ID: CVB1583-02

Date Collected: 02/28/12 13:26

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Bromomethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
cis-1,2-Dichloroethene	2.89		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
2,2-Dichloropropane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Hexane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Naphthalene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,1,2,2-Tetrachloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-28M

Lab Sample ID: CVB1583-02

Date Collected: 02/28/12 13:26

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	2.16		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,2,4-Trichlorobenzene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,1,1-Trichloroethane	1.54		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Trichloroethene	45.4		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,2,3-Trichloropropane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 08:04	1.00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	92		75 - 120	03/01/12 00:00	03/01/12 08:04	1.00
Toluene-d8	93		80 - 120	03/01/12 00:00	03/01/12 08:04	1.00
4-Bromofluorobenzene	104		75 - 110	03/01/12 00:00	03/01/12 08:04	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/05/12 11:50	03/05/12 11:53	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-28S

Lab Sample ID: CVB1583-03

Date Collected: 02/28/12 14:20

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Bromomethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
cis-1,2-Dichloroethene	3.53		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
2,2-Dichloropropane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Hexane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Naphthalene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,1,2,2-Tetrachloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00

US EPA ARCHIVE DOCUMENT

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-28S

Lab Sample ID: CVB1583-03

Date Collected: 02/28/12 14:20

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,2,4-Trichlorobenzene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,1,1-Trichloroethane	1.55		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Trichloroethene	286		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,2,3-Trichloropropane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 08:27	1.00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	91		75 - 120	03/01/12 00:00	03/01/12 08:27	1.00
Toluene-d8	93		80 - 120	03/01/12 00:00	03/01/12 08:27	1.00
4-Bromofluorobenzene	103		75 - 110	03/01/12 00:00	03/01/12 08:27	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/05/12 11:50	03/05/12 11:53	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-27D

Lab Sample ID: CVB1583-04

Date Collected: 02/28/12 16:15

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Bromomethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
2,2-Dichloropropane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Hexane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Naphthalene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,1,2,2-Tetrachloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00

US EPA ARCHIVE DOCUMENT

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-27D

Lab Sample ID: CVB1583-04

Date Collected: 02/28/12 16:15

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,2,4-Trichlorobenzene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Trichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,2,3-Trichloropropane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 08:49	1.00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	95		75 - 120	03/01/12 00:00	03/01/12 08:49	1.00
Toluene-d8	93		80 - 120	03/01/12 00:00	03/01/12 08:49	1.00
4-Bromofluorobenzene	105		75 - 110	03/01/12 00:00	03/01/12 08:49	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/05/12 11:50	03/05/12 11:53	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-27M

Lab Sample ID: CVB1583-05

Date Collected: 02/28/12 18:42

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Bromomethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
cis-1,2-Dichloroethene	14.0		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
trans-1,2-Dichloroethene	7.64		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
2,2-Dichloropropane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Hexane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Naphthalene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,1,2,2-Tetrachloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-27M

Lab Sample ID: CVB1583-05

Date Collected: 02/28/12 18:42

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,2,4-Trichlorobenzene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Trichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,2,3-Trichloropropane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Vinyl chloride	6.04		1.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 09:56	1.00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	96		75 - 120	03/01/12 00:00	03/01/12 09:56	1.00
Toluene-d8	95		80 - 120	03/01/12 00:00	03/01/12 09:56	1.00
4-Bromofluorobenzene	107		75 - 110	03/01/12 00:00	03/01/12 09:56	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/05/12 11:50	03/05/12 11:53	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-27S

Lab Sample ID: CVB1583-06

Date Collected: 02/29/12 07:55

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Bromomethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
2,2-Dichloropropane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Hexane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Naphthalene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,1,2,2-Tetrachloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-27S

Lab Sample ID: CVB1583-06

Date Collected: 02/29/12 07:55

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,2,4-Trichlorobenzene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Trichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,2,3-Trichloropropane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 10:19	1.00

Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	95		75 - 120	03/01/12 00:00	03/01/12 10:19	1.00
Toluene-d8	94		80 - 120	03/01/12 00:00	03/01/12 10:19	1.00
4-Bromofluorobenzene	106		75 - 110	03/01/12 00:00	03/01/12 10:19	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/05/12 11:50	03/05/12 11:53	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-30D

Date Collected: 02/29/12 09:30

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Lab Sample ID: CVB1583-07

Matrix: Ground Water

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Bromomethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,1-Dichloroethane	2.44		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
cis-1,2-Dichloroethene	14.0		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
2,2-Dichloropropane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Hexane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Naphthalene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,1,2,2-Tetrachloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-30D

Lab Sample ID: CVB1583-07

Date Collected: 02/29/12 09:30

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	5.22		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,2,4-Trichlorobenzene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,1,1-Trichloroethane	14.4		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Trichloroethene	33.2		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,2,3-Trichloropropane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 10:41	1.00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	94		75 - 120	03/01/12 00:00	03/01/12 10:41	1.00
Toluene-d8	94		80 - 120	03/01/12 00:00	03/01/12 10:41	1.00
4-Bromofluorobenzene	104		75 - 110	03/01/12 00:00	03/01/12 10:41	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/05/12 11:50	03/05/12 11:53	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-29D

Lab Sample ID: CVB1583-08

Date Collected: 02/29/12 13:05

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Bromomethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
2,2-Dichloropropane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Hexane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Naphthalene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,1,2,2-Tetrachloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00

US EPA ARCHIVE DOCUMENT

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-29D

Lab Sample ID: CVB1583-08

Date Collected: 02/29/12 13:05

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	1.24		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,2,4-Trichlorobenzene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Trichloroethene	5.50		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,2,3-Trichloropropane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 11:03	1.00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	92		75 - 120	03/01/12 00:00	03/01/12 11:03	1.00
Toluene-d8	94		80 - 120	03/01/12 00:00	03/01/12 11:03	1.00
4-Bromofluorobenzene	103		75 - 110	03/01/12 00:00	03/01/12 11:03	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/05/12 11:50	03/05/12 11:53	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-29M

Lab Sample ID: CVB1583-09

Date Collected: 02/29/12 14:25

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Bromomethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,1-Dichloroethane	1.15		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
cis-1,2-Dichloroethene	31.1		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
2,2-Dichloropropane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Hexane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Naphthalene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,1,2,2-Tetrachloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00

US EPA ARCHIVE DOCUMENT

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-29M

Lab Sample ID: CVB1583-09

Date Collected: 02/29/12 14:25

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	3.69		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,2,4-Trichlorobenzene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,1,1-Trichloroethane	6.33		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Trichloroethene	236		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,2,3-Trichloropropane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 07:20	1.00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	94		75 - 120	03/01/12 00:00	03/01/12 07:20	1.00
Toluene-d8	95		80 - 120	03/01/12 00:00	03/01/12 07:20	1.00
4-Bromofluorobenzene	105		75 - 110	03/01/12 00:00	03/01/12 07:20	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/05/12 11:50	03/05/12 11:53	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-29S

Lab Sample ID: CVB1583-10

Date Collected: 02/29/12 15:15

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Bromomethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,1-Dichloroethane	1.05		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
cis-1,2-Dichloroethene	29.5		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
2,2-Dichloropropane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Hexane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Naphthalene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,1,2,2-Tetrachloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00

US EPA ARCHIVE DOCUMENT

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-29S

Lab Sample ID: CVB1583-10

Date Collected: 02/29/12 15:15

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	10.3		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,2,4-Trichlorobenzene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,1,1-Trichloroethane	6.67		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Trichloroethene	442		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,2,3-Trichloropropane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 06:57	1.00

Surrogate

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	92		75 - 120	03/01/12 00:00	03/01/12 06:57	1.00
Toluene-d8	95		80 - 120	03/01/12 00:00	03/01/12 06:57	1.00
4-Bromofluorobenzene	105		75 - 110	03/01/12 00:00	03/01/12 06:57	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/05/12 11:50	03/05/12 11:53	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-Dup

Lab Sample ID: CVB1583-11

Date Collected: 02/28/12 00:00

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Bromomethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
cis-1,2-Dichloroethene	26.2		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
2,2-Dichloropropane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Hexane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Naphthalene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,1,2,2-Tetrachloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-Dup

Lab Sample ID: CVB1583-11

Date Collected: 02/28/12 00:00

Matrix: Ground Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	9.57		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,2,4-Trichlorobenzene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,1,1-Trichloroethane	6.35		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Trichloroethene	394		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,2,3-Trichloropropane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 06:35	1.00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	91		75 - 120	03/01/12 00:00	03/01/12 06:35	1.00
Toluene-d8	95		80 - 120	03/01/12 00:00	03/01/12 06:35	1.00
4-Bromofluorobenzene	104		75 - 110	03/01/12 00:00	03/01/12 06:35	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	>2		2.00		units		03/05/12 11:50	03/05/12 11:53	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: Trip Blank

Lab Sample ID: CVB1583-12

Date Collected: 02/28/12 00:00

Matrix: Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Bromomethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
2,2-Dichloropropane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Hexane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Naphthalene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,1,2,2-Tetrachloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00

US EPA ARCHIVE DOCUMENT

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: Trip Blank

Lab Sample ID: CVB1583-12

Date Collected: 02/28/12 00:00

Matrix: Water

Date Received: 02/29/12 15:53

Sampler Name: Holly Moriarty

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,2,4-Trichlorobenzene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Trichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,2,3-Trichloropropane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 06:13	1.00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	94		75 - 120	03/01/12 00:00	03/01/12 06:13	1.00
Toluene-d8	94		80 - 120	03/01/12 00:00	03/01/12 06:13	1.00
4-Bromofluorobenzene	103		75 - 110	03/01/12 00:00	03/01/12 06:13	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/05/12 11:50	03/05/12 11:53	1.00

Surrogate Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds

Matrix: Ground Water

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
CVB1583-01	GP-28D	95	94	104
CVB1583-01 - RE1	GP-28D	95	100	96
CVB1583-02	GP-28M	92	93	104
CVB1583-03	GP-28S	91	93	103
CVB1583-04	GP-27D	95	93	105
CVB1583-05	GP-27M	96	95	107
CVB1583-06	GP-27S	95	94	106
CVB1583-07	GP-30D	94	94	104
CVB1583-08	GP-29D	92	94	103
CVB1583-09	GP-29M	94	95	105
CVB1583-10	GP-29S	92	95	105
CVB1583-11	GP-Dup	91	95	104

Surrogate Legend

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

Method: SW 8260B - Volatile Organic Compounds

Matrix: Water

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
CVB1583-12	Trip Blank	94	94	103

Surrogate Legend

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

Method: SW 8260B - Volatile Organic Compounds

Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
12C0123-BLK1	Method Blank	91	94	102
12C0125-BLK1	Method Blank	96	101	98

Surrogate Legend

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

Method: SW 8260B - Volatile Organic Compounds

Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (80-120)
12C0123-BS1	Lab Control Sample	91	94	104

Surrogate Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds (Continued)

Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (80-120)
12C0123-MS1	Matrix Spike	91	95	106
12C0123-MSD1	Matrix Spike Duplicate	91	94	103
12C0125-BS1	Lab Control Sample	97	99	97
12C0125-MS1	Matrix Spike	99	102	99
12C0125-MSD1	Matrix Spike Duplicate	97	102	96

Surrogate Legend

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds

Lab Sample ID: 12C0123-BLK1
Matrix: Water - NonPotable
Analysis Batch: 12C0123

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 12C0123_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Bromomethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,1-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
2,2-Dichloropropane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Hexane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Naphthalene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00

US EPA ARCHIVE DOCUMENT

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0123-BLK1
Matrix: Water - NonPotable
Analysis Batch: 12C0123

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 12C0123_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Tetrachloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,2,4-Trichlorobenzene	<5.00	CIN	5.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Trichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,2,3-Trichloropropane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 02:52	1.00

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	91		75 - 120	03/01/12 00:00	03/01/12 02:52	1.00
Toluene-d8	94		80 - 120	03/01/12 00:00	03/01/12 02:52	1.00
4-Bromofluorobenzene	102		75 - 110	03/01/12 00:00	03/01/12 02:52	1.00

Lab Sample ID: 12C0123-BS1
Matrix: Water - NonPotable
Analysis Batch: 12C0123

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 12C0123_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	20.0	22.3		ug/L		112	60 - 150
Benzene	20.0	21.9		ug/L		109	70 - 130
Bromobenzene	20.0	20.2		ug/L		101	75 - 130
Bromochloromethane	20.0	22.4		ug/L		112	65 - 145
Bromodichloromethane	20.0	16.9		ug/L		84	60 - 130
Bromoform	20.0	14.9		ug/L		75	30 - 125
Bromomethane	20.0	18.9		ug/L		94	35 - 130
2-Butanone (MEK)	20.0	21.9		ug/L		110	55 - 140
n-Butylbenzene	20.0	17.5		ug/L		88	55 - 135
sec-Butylbenzene	20.0	18.2		ug/L		91	65 - 135
tert-Butylbenzene	20.0	18.5		ug/L		92	60 - 135
Carbon disulfide	20.0	20.8		ug/L		104	40 - 130
Carbon Tetrachloride	20.0	17.4		ug/L		87	55 - 130
Chlorobenzene	20.0	19.6		ug/L		98	75 - 125
Chlorodibromomethane	20.0	17.3		ug/L		86	45 - 125
Chloroethane	20.0	20.8		ug/L		104	55 - 135
Chloroform	20.0	17.6		ug/L		88	70 - 125
Chloromethane	20.0	18.6		ug/L		93	30 - 125
2-Chlorotoluene	20.0	18.4		ug/L		92	75 - 135
4-Chlorotoluene	20.0	18.2		ug/L		91	70 - 140
1,2-Dibromo-3-chloropropane	20.0	14.0		ug/L		70	35 - 130
1,2-Dibromoethane (EDB)	20.0	19.7		ug/L		99	70 - 135
Dibromomethane	20.0	19.6		ug/L		98	75 - 130
1,2-Dichlorobenzene	20.0	19.1		ug/L		96	65 - 135

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0123-BS1
Matrix: Water - NonPotable
Analysis Batch: 12C0123

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 12C0123_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,3-Dichlorobenzene	20.0	19.0		ug/L		95	70 - 130
1,4-Dichlorobenzene	20.0	18.3		ug/L		92	60 - 140
Dichlorodifluoromethane	20.0	20.1		ug/L		101	35 - 130
1,1-Dichloroethane	20.0	20.2		ug/L		101	60 - 130
1,2-Dichloroethane	20.0	17.8		ug/L		89	65 - 140
1,1-Dichloroethene	20.0	20.1		ug/L		100	60 - 135
cis-1,2-Dichloroethene	20.0	20.9		ug/L		104	70 - 135
trans-1,2-Dichloroethene	20.0	20.0		ug/L		100	60 - 145
1,2-Dichloropropane	20.0	20.6		ug/L		103	65 - 130
1,3-Dichloropropane	20.0	20.4		ug/L		102	75 - 125
2,2-Dichloropropane	20.0	14.9		ug/L		74	25 - 120
1,1-Dichloropropene	20.0	21.6		ug/L		108	60 - 140
cis-1,3-Dichloropropene	20.0	18.2		ug/L		91	30 - 120
trans-1,3-Dichloropropene	20.0	15.8		ug/L		79	35 - 120
Ethylbenzene	20.0	19.4		ug/L		97	70 - 130
Hexachlorobutadiene	20.0	17.0		ug/L		85	60 - 135
Hexane	20.0	18.0		ug/L		90	40 - 135
Isopropylbenzene	20.0	19.3		ug/L		96	70 - 125
p-Isopropyltoluene	20.0	17.9		ug/L		90	60 - 140
Methylene Chloride	20.0	20.0		ug/L		100	55 - 145
Methyl tert-Butyl Ether	20.0	19.4		ug/L		97	50 - 135
Naphthalene	20.0	19.2	CIN	ug/L		96	40 - 135
n-Propylbenzene	20.0	18.8		ug/L		94	70 - 135
Styrene	20.0	19.3		ug/L		97	70 - 130
1,1,1,2-Tetrachloroethane	20.0	17.1		ug/L		85	65 - 120
1,1,2,2-Tetrachloroethane	20.0	20.1	CIN	ug/L		100	65 - 130
Tetrachloroethene	20.0	21.3		ug/L		106	70 - 135
Toluene	20.0	20.3		ug/L		102	70 - 135
1,2,3-Trichlorobenzene	20.0	19.2		ug/L		96	55 - 130
1,2,4-Trichlorobenzene	20.0	18.4	CIN	ug/L		92	40 - 135
1,1,1-Trichloroethane	20.0	19.1		ug/L		95	60 - 125
1,1,2-Trichloroethane	20.0	20.8		ug/L		104	75 - 125
Trichloroethene	20.0	20.5		ug/L		103	70 - 130
Trichlorofluoromethane	20.0	20.3		ug/L		102	55 - 145
1,2,3-Trichloropropane	20.0	18.8	CIN	ug/L		94	60 - 150
1,2,4-Trimethylbenzene	20.0	19.0		ug/L		95	70 - 140
1,3,5-Trimethylbenzene	20.0	18.8		ug/L		94	70 - 140
Vinyl chloride	20.0	22.2		ug/L		111	45 - 135
Xylenes, total	60.0	59.2		ug/L		99	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane	91		75 - 120
Toluene-d8	94		80 - 120
4-Bromofluorobenzene	104		80 - 120

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0123-MS1

Matrix: Water - NonPotable

Analysis Batch: 12C0123

Client Sample ID: Matrix Spike

Prep Type: Total

Prep Batch: 12C0123_P

Analyte	Sample	Sample	Spike	Matrix Spike	Matrix Spike	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Acetone	0.620		20.0	19.6		ug/L		95	45 - 150	
Benzene	0.0300		20.0	20.4		ug/L		102	50 - 130	
Bromobenzene	0.0800		20.0	21.8		ug/L		109	60 - 135	
Bromochloromethane	0.0400		20.0	22.7		ug/L		113	55 - 145	
Bromodichloromethane	0.0100		20.0	18.1		ug/L		91	50 - 130	
Bromoform	0.110		20.0	17.6		ug/L		88	30 - 125	
Bromomethane	0.330		20.0	17.5		ug/L		86	30 - 130	
2-Butanone (MEK)	0.120		20.0	21.2		ug/L		106	45 - 140	
n-Butylbenzene	0.220		20.0	17.7		ug/L		87	40 - 135	
sec-Butylbenzene	0.120		20.0	18.1		ug/L		90	40 - 135	
tert-Butylbenzene	0.130		20.0	19.0		ug/L		95	40 - 135	
Carbon disulfide	0.410		20.0	19.2		ug/L		94	30 - 130	
Carbon Tetrachloride	<0.240		20.0	16.2		ug/L		81	35 - 130	
Chlorobenzene	0.0700		20.0	21.2		ug/L		105	60 - 130	
Chlorodibromomethane	0.0400		20.0	19.2	R	ug/L		96	35 - 130	
Chloroethane	0.180		20.0	19.6		ug/L		97	40 - 135	
Chloroform	0.0200		20.0	17.9		ug/L		89	55 - 125	
Chloromethane	0.110		20.0	16.5		ug/L		82	25 - 125	
2-Chlorotoluene	0.0900		20.0	19.7		ug/L		98	55 - 140	
4-Chlorotoluene	0.130		20.0	19.6		ug/L		98	50 - 140	
1,2-Dibromo-3-chloropropane	<0.120		20.0	16.0		ug/L		80	35 - 130	
1,2-Dibromoethane (EDB)	0.0400		20.0	22.8		ug/L		114	55 - 140	
Dibromomethane	0.0700		20.0	21.0	R	ug/L		104	60 - 135	
1,2-Dichlorobenzene	0.140		20.0	21.6		ug/L		107	55 - 140	
1,3-Dichlorobenzene	0.190		20.0	21.4		ug/L		106	55 - 135	
1,4-Dichlorobenzene	0.200		20.0	20.7		ug/L		102	55 - 140	
Dichlorodifluoromethane	0.0200		20.0	17.9		ug/L		90	15 - 130	
1,1-Dichloroethane	0.460		20.0	19.0		ug/L		93	50 - 130	
1,2-Dichloroethane	<0.180		20.0	17.8	R	ug/L		89	55 - 140	
1,1-Dichloroethene	2.20		20.0	19.3		ug/L		85	35 - 135	
cis-1,2-Dichloroethene	0.0600		20.0	19.4		ug/L		97	45 - 135	
trans-1,2-Dichloroethene	0.0200		20.0	17.8		ug/L		89	45 - 145	
1,2-Dichloropropane	<0.870		20.0	20.9	R	ug/L		104	55 - 130	
1,3-Dichloropropane	0.0700		20.0	23.0	R	ug/L		115	60 - 135	
2,2-Dichloropropane	<0.180		20.0	14.1		ug/L		71	20 - 120	
1,1-Dichloropropene	<0.150		20.0	19.3		ug/L		97	40 - 140	
cis-1,3-Dichloropropene	0.0600		20.0	20.9		ug/L		104	25 - 120	
trans-1,3-Dichloropropene	<0.220		20.0	18.2		ug/L		91	25 - 120	
Ethylbenzene	0.0700		20.0	19.9		ug/L		99	45 - 135	
Hexachlorobutadiene	1.09		20.0	18.6		ug/L		88	40 - 135	
Hexane	0.160		20.0	17.5		ug/L		87	25 - 135	
Isopropylbenzene	0.0900		20.0	19.6		ug/L		98	45 - 125	
p-Isopropyltoluene	0.130		20.0	18.2		ug/L		90	40 - 140	
Methylene Chloride	0.160		20.0	18.7		ug/L		93	45 - 145	
Methyl tert-Butyl Ether	0.0500		20.0	19.6		ug/L		98	40 - 135	
Naphthalene	0.790		20.0	21.6	CIN	ug/L		104	40 - 135	
n-Propylbenzene	0.120		20.0	19.1		ug/L		95	45 - 140	
Styrene	0.0800		20.0	20.6		ug/L		103	40 - 135	
1,1,1,2-Tetrachloroethane	<0.210		20.0	19.0		ug/L		95	50 - 130	

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0123-MS1
Matrix: Water - NonPotable
Analysis Batch: 12C0123

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 12C0123_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	Limits
1,1,2,2-Tetrachloroethane	0.120		20.0	21.4	CIN	ug/L		107	55 - 140
Tetrachloroethene	1.05		20.0	20.3		ug/L		96	40 - 135
Toluene	0.0500		20.0	19.9		ug/L		99	45 - 135
1,2,3-Trichlorobenzene	0.830		20.0	21.6		ug/L		104	50 - 140
1,2,4-Trichlorobenzene	0.610		20.0	20.2	CIN	ug/L		98	40 - 135
1,1,1-Trichloroethane	1.05		20.0	18.5		ug/L		87	40 - 125
1,1,2-Trichloroethane	0.0700		20.0	22.7	M1 R	ug/L		113	60 - 130
Trichloroethene	<0.190		20.0	19.2		ug/L		96	50 - 130
Trichlorofluoromethane	0.0400		20.0	18.0		ug/L		90	40 - 145
1,2,3-Trichloropropane	0.200		20.0	19.7	CIN	ug/L		98	55 - 150
1,2,4-Trimethylbenzene	0.120		20.0	20.6		ug/L		102	45 - 140
1,3,5-Trimethylbenzene	0.0800		20.0	19.7		ug/L		98	45 - 140
Vinyl chloride	0.0400		20.0	19.5		ug/L		97	30 - 135
Xylenes, total	0.150		60.0	62.1		ug/L		103	40 - 135

Surrogate	Matrix Spike %Recovery	Matrix Spike Qualifier	Limits
Dibromofluoromethane	91		75 - 120
Toluene-d8	95		80 - 120
4-Bromofluorobenzene	106		80 - 120

Lab Sample ID: 12C0123-MSD1
Matrix: Water - NonPotable
Analysis Batch: 12C0123

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 12C0123_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acetone	0.620		20.0	23.3		ug/L		113	45 - 150	17	35
Benzene	0.0300		20.0	23.0		ug/L		115	50 - 130	12	20
Bromobenzene	0.0800		20.0	24.5		ug/L		122	60 - 135	11	15
Bromochloromethane	0.0400		20.0	26.6		ug/L		133	55 - 145	16	25
Bromodichloromethane	0.0100		20.0	20.5		ug/L		102	50 - 130	12	15
Bromoform	0.110		20.0	21.7		ug/L		108	30 - 125	21	25
Bromomethane	0.330		20.0	20.5		ug/L		101	30 - 130	16	35
2-Butanone (MEK)	0.120		20.0	27.0		ug/L		134	45 - 140	24	35
n-Butylbenzene	0.220		20.0	20.1		ug/L		99	40 - 135	13	20
sec-Butylbenzene	0.120		20.0	20.3		ug/L		101	40 - 135	11	20
tert-Butylbenzene	0.130		20.0	21.4		ug/L		106	40 - 135	11	20
Carbon disulfide	0.410		20.0	22.2		ug/L		109	30 - 130	14	30
Carbon Tetrachloride	<0.240		20.0	18.0		ug/L		90	35 - 130	11	20
Chlorobenzene	0.0700		20.0	24.6		ug/L		123	60 - 130	15	15
Chlorodibromomethane	0.0400		20.0	23.6	R	ug/L		118	35 - 130	21	20
Chloroethane	0.180		20.0	22.4		ug/L		111	40 - 135	13	20
Chloroform	0.0200		20.0	20.3		ug/L		101	55 - 125	13	15
Chloromethane	0.110		20.0	18.6		ug/L		92	25 - 125	12	25
2-Chlorotoluene	0.0900		20.0	22.3		ug/L		111	55 - 140	12	20
4-Chlorotoluene	0.130		20.0	22.3		ug/L		111	50 - 140	13	20
1,2-Dibromo-3-chloropropane	<0.120		20.0	18.4		ug/L		92	35 - 130	14	30
1,2-Dibromoethane (EDB)	0.0400		20.0	25.5		ug/L		127	55 - 140	11	20
Dibromomethane	0.0700		20.0	24.6	R	ug/L		123	60 - 135	16	15
1,2-Dichlorobenzene	0.140		20.0	25.4		ug/L		127	55 - 140	17	20

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0123-MSD1				Client Sample ID: Matrix Spike Duplicate							
Matrix: Water - NonPotable				Prep Type: Total							
Analysis Batch: 12C0123				Prep Batch: 12C0123_P							
Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3-Dichlorobenzene	0.190		20.0	23.4		ug/L		116	55 - 135	9	15
1,4-Dichlorobenzene	0.200		20.0	23.4		ug/L		116	55 - 140	12	15
Dichlorodifluoromethane	0.0200		20.0	20.1		ug/L		100	15 - 130	11	25
1,1-Dichloroethane	0.460		20.0	21.3		ug/L		104	50 - 130	11	25
1,2-Dichloroethane	<0.180		20.0	21.2	R	ug/L		106	55 - 140	18	15
1,1-Dichloroethene	2.20		20.0	21.6		ug/L		97	35 - 135	11	30
cis-1,2-Dichloroethene	0.0600		20.0	23.2		ug/L		116	45 - 135	18	20
trans-1,2-Dichloroethene	0.0200		20.0	21.8		ug/L		109	45 - 145	20	35
1,2-Dichloropropane	<0.870		20.0	25.2	R	ug/L		126	55 - 130	19	15
1,3-Dichloropropane	0.0700		20.0	27.0	R	ug/L		134	60 - 135	16	15
2,2-Dichloropropane	<0.180		20.0	16.5		ug/L		82	20 - 120	15	35
1,1-Dichloropropene	<0.150		20.0	22.1		ug/L		110	40 - 140	13	20
cis-1,3-Dichloropropene	0.0600		20.0	23.7		ug/L		118	25 - 120	13	20
trans-1,3-Dichloropropene	<0.220		20.0	21.0		ug/L		105	25 - 120	14	20
Ethylbenzene	0.0700		20.0	22.7		ug/L		113	45 - 135	13	20
Hexachlorobutadiene	1.09		20.0	21.6		ug/L		102	40 - 135	15	30
Hexane	0.160		20.0	19.9		ug/L		99	25 - 135	13	35
Isopropylbenzene	0.0900		20.0	22.1		ug/L		110	45 - 125	12	15
p-Isopropyltoluene	0.130		20.0	20.9		ug/L		104	40 - 140	14	20
Methylene Chloride	0.160		20.0	22.5		ug/L		112	45 - 145	19	30
Methyl tert-Butyl Ether	0.0500		20.0	23.2		ug/L		116	40 - 135	17	25
Naphthalene	0.790		20.0	25.1	CIN	ug/L		122	40 - 135	15	20
n-Propylbenzene	0.120		20.0	21.8		ug/L		108	45 - 140	13	20
Styrene	0.0800		20.0	23.0		ug/L		114	40 - 135	11	20
1,1,1,2-Tetrachloroethane	<0.210		20.0	21.9		ug/L		110	50 - 130	14	20
1,1,1,2,2-Tetrachloroethane	0.120		20.0	24.6	CIN	ug/L		122	55 - 140	14	20
Tetrachloroethene	1.05		20.0	22.6		ug/L		108	40 - 135	11	20
Toluene	0.0500		20.0	22.5		ug/L		112	45 - 135	12	20
1,2,3-Trichlorobenzene	0.830		20.0	25.3		ug/L		122	50 - 140	16	25
1,2,4-Trichlorobenzene	0.610		20.0	23.0	CIN	ug/L		112	40 - 135	13	25
1,1,1-Trichloroethane	1.05		20.0	21.0		ug/L		100	40 - 125	13	20
1,1,2-Trichloroethane	0.0700		20.0	26.6	M1 R	ug/L		132	60 - 130	16	15
Trichloroethene	<0.190		20.0	22.0		ug/L		110	50 - 130	14	20
Trichlorofluoromethane	0.0400		20.0	20.3		ug/L		101	40 - 145	12	25
1,2,3-Trichloropropane	0.200		20.0	23.1	CIN	ug/L		115	55 - 150	16	20
1,2,4-Trimethylbenzene	0.120		20.0	23.4		ug/L		117	45 - 140	13	20
1,3,5-Trimethylbenzene	0.0800		20.0	22.6		ug/L		112	45 - 140	14	20
Vinyl chloride	0.0400		20.0	22.0		ug/L		110	30 - 135	12	20
Xylenes, total	0.150		60.0	70.4		ug/L		117	40 - 135	12	20

Surrogate	Matrix Spike Dup %Recovery	Matrix Spike Dup Qualifier	Matrix Spike Dup Limits
Dibromofluoromethane	91		75 - 120
Toluene-d8	94		80 - 120
4-Bromofluorobenzene	103		80 - 120

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0125-BLK1
Matrix: Water - NonPotable
Analysis Batch: 12C0125

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 12C0125_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Benzene	<0.500		0.500		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Bromobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Bromoform	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Bromomethane	<4.00	CIN	4.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Chloroethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Chloroform	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Chloromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Dibromomethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,1-Dichloroethane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
2,2-Dichloropropane	<4.00	CIN	4.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Hexane	<1.00	CIN	1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Naphthalene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Styrene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00

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QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0125-BLK1

Matrix: Water - NonPotable

Analysis Batch: 12C0125

Client Sample ID: Method Blank

Prep Type: Total

Prep Batch: 12C0125_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Tetrachloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Toluene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Trichloroethene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,2,3-Trichloropropane	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00
Xylenes, total	<3.00		3.00		ug/L		03/01/12 00:00	03/01/12 09:50	1.00

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	96		75 - 120	03/01/12 00:00	03/01/12 09:50	1.00
Toluene-d8	101		80 - 120	03/01/12 00:00	03/01/12 09:50	1.00
4-Bromofluorobenzene	98		75 - 110	03/01/12 00:00	03/01/12 09:50	1.00

Lab Sample ID: 12C0125-BS1

Matrix: Water - NonPotable

Analysis Batch: 12C0125

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 12C0125_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Acetone	20.0	20.3		ug/L		101	60 - 150
Benzene	20.0	19.0		ug/L		95	70 - 130
Bromobenzene	20.0	18.4		ug/L		92	75 - 130
Bromochloromethane	20.0	20.9		ug/L		104	65 - 145
Bromodichloromethane	20.0	18.3		ug/L		91	60 - 130
Bromoform	20.0	17.3		ug/L		87	30 - 125
Bromomethane	20.0	12.6	CIN	ug/L		63	35 - 130
2-Butanone (MEK)	20.0	19.4		ug/L		97	55 - 140
n-Butylbenzene	20.0	18.3		ug/L		92	55 - 135
sec-Butylbenzene	20.0	18.1		ug/L		90	65 - 135
tert-Butylbenzene	20.0	18.0		ug/L		90	60 - 135
Carbon disulfide	20.0	15.5		ug/L		77	40 - 130
Carbon Tetrachloride	20.0	17.1		ug/L		86	55 - 130
Chlorobenzene	20.0	18.6		ug/L		93	75 - 125
Chlorodibromomethane	20.0	17.9		ug/L		89	45 - 125
Chloroethane	20.0	16.8		ug/L		84	55 - 135
Chloroform	20.0	17.0		ug/L		85	70 - 125
Chloromethane	20.0	13.2		ug/L		66	30 - 125
2-Chlorotoluene	20.0	19.0		ug/L		95	75 - 135
4-Chlorotoluene	20.0	18.6		ug/L		93	70 - 140
1,2-Dibromo-3-chloropropane	20.0	19.2		ug/L		96	35 - 130
1,2-Dibromoethane (EDB)	20.0	21.4		ug/L		107	70 - 135
Dibromomethane	20.0	19.6		ug/L		98	75 - 130
1,2-Dichlorobenzene	20.0	19.1		ug/L		96	65 - 135

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0125-BS1

Matrix: Water - NonPotable

Analysis Batch: 12C0125

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 12C0125_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	20.0	18.2		ug/L		91	70 - 130
1,4-Dichlorobenzene	20.0	17.9		ug/L		90	60 - 140
Dichlorodifluoromethane	20.0	17.2		ug/L		86	35 - 130
1,1-Dichloroethane	20.0	17.0	CIN	ug/L		85	60 - 130
1,2-Dichloroethane	20.0	19.4		ug/L		97	65 - 140
1,1-Dichloroethene	20.0	13.9		ug/L		69	60 - 135
cis-1,2-Dichloroethene	20.0	17.0		ug/L		85	70 - 135
trans-1,2-Dichloroethene	20.0	15.6		ug/L		78	60 - 145
1,2-Dichloropropane	20.0	19.7		ug/L		99	65 - 130
1,3-Dichloropropane	20.0	21.2		ug/L		106	75 - 125
2,2-Dichloropropane	20.0	15.9	CIN	ug/L		80	25 - 120
1,1-Dichloropropene	20.0	19.5		ug/L		98	60 - 140
cis-1,3-Dichloropropene	20.0	20.7		ug/L		104	30 - 120
trans-1,3-Dichloropropene	20.0	20.3		ug/L		101	35 - 120
Ethylbenzene	20.0	19.1		ug/L		96	70 - 130
Hexachlorobutadiene	20.0	17.9		ug/L		89	60 - 135
Hexane	20.0	16.2	CIN	ug/L		81	40 - 135
Isopropylbenzene	20.0	18.1		ug/L		90	70 - 125
p-Isopropyltoluene	20.0	17.9		ug/L		89	60 - 140
Methylene Chloride	20.0	14.4		ug/L		72	55 - 145
Methyl tert-Butyl Ether	20.0	19.1		ug/L		95	50 - 135
Naphthalene	20.0	17.0		ug/L		85	40 - 135
n-Propylbenzene	20.0	18.2		ug/L		91	70 - 135
Styrene	20.0	18.8		ug/L		94	70 - 130
1,1,1,2-Tetrachloroethane	20.0	18.8		ug/L		94	65 - 120
1,1,1,2,2-Tetrachloroethane	20.0	20.5		ug/L		102	65 - 130
Tetrachloroethene	20.0	17.6		ug/L		88	70 - 135
Toluene	20.0	19.0		ug/L		95	70 - 135
1,2,3-Trichlorobenzene	20.0	17.2		ug/L		86	55 - 130
1,2,4-Trichlorobenzene	20.0	17.8		ug/L		89	40 - 135
1,1,1-Trichloroethane	20.0	18.4		ug/L		92	60 - 125
1,1,2-Trichloroethane	20.0	21.2		ug/L		106	75 - 125
Trichloroethene	20.0	18.6		ug/L		93	70 - 130
Trichlorofluoromethane	20.0	17.2		ug/L		86	55 - 145
1,2,3-Trichloropropane	20.0	20.4		ug/L		102	60 - 150
1,2,4-Trimethylbenzene	20.0	18.4		ug/L		92	70 - 140
1,3,5-Trimethylbenzene	20.0	18.3		ug/L		91	70 - 140
Vinyl chloride	20.0	16.5		ug/L		83	45 - 135
Xylenes, total	60.0	54.9		ug/L		92	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane	97		75 - 120
Toluene-d8	99		80 - 120
4-Bromofluorobenzene	97		80 - 120

US EPA ARCHIVE DOCUMENT

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0125-MS1

Matrix: Water - NonPotable

Analysis Batch: 12C0125

Client Sample ID: Matrix Spike

Prep Type: Total

Prep Batch: 12C0125_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	Limits
Acetone	12.4		20.0	32.5		ug/L		101	45 - 150
Benzene	0.0400		20.0	17.9		ug/L		89	50 - 130
Bromobenzene	<0.210		20.0	18.0		ug/L		90	60 - 135
Bromochloromethane	<0.120		20.0	20.3		ug/L		101	55 - 145
Bromodichloromethane	<0.120		20.0	17.2		ug/L		86	50 - 130
Bromoform	<0.140		20.0	16.5		ug/L		82	30 - 125
Bromomethane	0.130		20.0	15.8	CIN	ug/L		78	30 - 130
2-Butanone (MEK)	3.16		20.0	20.3		ug/L		86	45 - 140
n-Butylbenzene	0.0100		20.0	18.0		ug/L		90	40 - 135
sec-Butylbenzene	0.0100		20.0	17.1		ug/L		86	40 - 135
tert-Butylbenzene	<0.120		20.0	16.8		ug/L		84	40 - 135
Carbon disulfide	0.260		20.0	16.5		ug/L		81	30 - 130
Carbon Tetrachloride	<0.240		20.0	16.3		ug/L		81	35 - 130
Chlorobenzene	0.0500		20.0	18.1		ug/L		90	60 - 130
Chlorodibromomethane	<0.200		20.0	16.9		ug/L		84	35 - 130
Chloroethane	0.280		20.0	17.8		ug/L		87	40 - 135
Chloroform	<0.280		20.0	17.3		ug/L		87	55 - 125
Chloromethane	0.0800		20.0	14.1		ug/L		70	25 - 125
2-Chlorotoluene	0.0100		20.0	18.0		ug/L		90	55 - 140
4-Chlorotoluene	0.0400		20.0	18.1		ug/L		90	50 - 140
1,2-Dibromo-3-chloropropane	<0.120		20.0	18.0		ug/L		90	35 - 130
1,2-Dibromoethane (EDB)	<0.130		20.0	20.1		ug/L		101	55 - 140
Dibromomethane	<0.180		20.0	19.1		ug/L		95	60 - 135
1,2-Dichlorobenzene	0.0200		20.0	17.5		ug/L		88	55 - 140
1,3-Dichlorobenzene	0.0500		20.0	17.0		ug/L		85	55 - 135
1,4-Dichlorobenzene	0.0800		20.0	17.2		ug/L		85	55 - 140
Dichlorodifluoromethane	<0.200		20.0	20.1		ug/L		100	15 - 130
1,1-Dichloroethane	<0.210		20.0	17.0	CIN	ug/L		85	50 - 130
1,2-Dichloroethane	<0.180		20.0	20.6		ug/L		103	55 - 140
1,1-Dichloroethene	<0.150		20.0	14.7		ug/L		74	35 - 135
cis-1,2-Dichloroethene	0.270		20.0	18.0		ug/L		89	45 - 135
trans-1,2-Dichloroethene	0.0200		20.0	16.4		ug/L		82	45 - 145
1,2-Dichloropropane	<0.870		20.0	18.7		ug/L		93	55 - 130
1,3-Dichloropropane	<0.160		20.0	19.9		ug/L		100	60 - 135
2,2-Dichloropropane	<0.180		20.0	18.1	CIN	ug/L		91	20 - 120
1,1-Dichloropropene	<0.150		20.0	19.6		ug/L		98	40 - 140
cis-1,3-Dichloropropene	<0.150		20.0	20.2		ug/L		101	25 - 120
trans-1,3-Dichloropropene	0.0400		20.0	19.5		ug/L		97	25 - 120
Ethylbenzene	0.0700		20.0	18.3		ug/L		91	45 - 135
Hexachlorobutadiene	0.0600		20.0	20.1		ug/L		100	40 - 135
Hexane	<0.200		20.0	18.1	CIN	ug/L		90	25 - 135
Isopropylbenzene	<0.190		20.0	17.2		ug/L		86	45 - 125
p-Isopropyltoluene	0.0300		20.0	17.2		ug/L		86	40 - 140
Methylene Chloride	1.01		20.0	17.5		ug/L		82	45 - 145
Methyl tert-Butyl Ether	<0.160		20.0	20.0		ug/L		100	40 - 135
Naphthalene	0.110		20.0	17.5		ug/L		87	40 - 135
n-Propylbenzene	<0.100		20.0	17.4		ug/L		87	45 - 140
Styrene	0.0400		20.0	18.5		ug/L		92	40 - 135
1,1,1,2-Tetrachloroethane	<0.210		20.0	19.0		ug/L		95	50 - 130

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0125-MS1

Matrix: Water - NonPotable

Analysis Batch: 12C0125

Client Sample ID: Matrix Spike

Prep Type: Total

Prep Batch: 12C0125_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	Limits
1,1,2,2-Tetrachloroethane	<0.100		20.0	19.5		ug/L		97	55 - 140
Tetrachloroethene	0.210		20.0	17.1		ug/L		84	40 - 135
Toluene	0.120		20.0	18.8		ug/L		93	45 - 135
1,2,3-Trichlorobenzene	0.0300		20.0	17.7		ug/L		88	50 - 140
1,2,4-Trichlorobenzene	0.0800		20.0	16.9		ug/L		84	40 - 135
1,1,1-Trichloroethane	0.0200		20.0	17.1		ug/L		85	40 - 125
1,1,2-Trichloroethane	<0.120		20.0	19.8		ug/L		99	60 - 130
Trichloroethene	<0.190		20.0	17.5		ug/L		88	50 - 130
Trichlorofluoromethane	<0.170		20.0	18.6		ug/L		93	40 - 145
1,2,3-Trichloropropane	<0.190		20.0	19.8		ug/L		99	55 - 150
1,2,4-Trimethylbenzene	0.0400		20.0	17.5		ug/L		87	45 - 140
1,3,5-Trimethylbenzene	0.0200		20.0	17.5		ug/L		88	45 - 140
Vinyl chloride	<0.100		20.0	17.5		ug/L		88	30 - 135
Xylenes, total	<0.130		60.0	52.5		ug/L		88	40 - 135

Surrogate	Matrix Spike %Recovery	Matrix Spike Qualifier	Limits
Dibromofluoromethane	99		75 - 120
Toluene-d8	102		80 - 120
4-Bromofluorobenzene	99		80 - 120

Lab Sample ID: 12C0125-MSD1

Matrix: Water - NonPotable

Analysis Batch: 12C0125

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total

Prep Batch: 12C0125_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acetone	12.4		20.0	30.4		ug/L		90	45 - 150	7	35
Benzene	0.0400		20.0	17.9		ug/L		89	50 - 130	0.1	20
Bromobenzene	<0.210		20.0	17.5		ug/L		87	60 - 135	3	15
Bromochloromethane	<0.120		20.0	18.1		ug/L		90	55 - 145	11	25
Bromodichloromethane	<0.120		20.0	16.8		ug/L		84	50 - 130	3	15
Bromoform	<0.140		20.0	16.3		ug/L		81	30 - 125	1	25
Bromomethane	0.130		20.0	13.0	CIN	ug/L		65	30 - 130	19	35
2-Butanone (MEK)	3.16		20.0	20.6		ug/L		87	45 - 140	1	35
n-Butylbenzene	0.0100		20.0	17.7		ug/L		88	40 - 135	2	20
sec-Butylbenzene	0.0100		20.0	17.5		ug/L		87	40 - 135	2	20
tert-Butylbenzene	<0.120		20.0	17.4		ug/L		87	40 - 135	4	20
Carbon disulfide	0.260		20.0	14.5		ug/L		71	30 - 130	12	30
Carbon Tetrachloride	<0.240		20.0	15.3		ug/L		76	35 - 130	6	20
Chlorobenzene	0.0500		20.0	18.1		ug/L		90	60 - 130	0.1	15
Chlorodibromomethane	<0.200		20.0	17.7		ug/L		88	35 - 130	5	20
Chloroethane	0.280		20.0	15.5		ug/L		76	40 - 135	14	20
Chloroform	<0.280		20.0	15.3		ug/L		76	55 - 125	12	15
Chloromethane	0.0800		20.0	13.3		ug/L		66	25 - 125	6	25
2-Chlorotoluene	0.0100		20.0	18.3		ug/L		92	55 - 140	2	20
4-Chlorotoluene	0.0400		20.0	18.2		ug/L		91	50 - 140	0.6	20
1,2-Dibromo-3-chloropropane	<0.120		20.0	17.7		ug/L		89	35 - 130	1	30
1,2-Dibromoethane (EDB)	<0.130		20.0	20.5		ug/L		103	55 - 140	2	20
Dibromomethane	<0.180		20.0	18.4		ug/L		92	60 - 135	4	15
1,2-Dichlorobenzene	0.0200		20.0	18.2		ug/L		91	55 - 140	4	20

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0125-MSD1				Client Sample ID: Matrix Spike Duplicate							
Matrix: Water - NonPotable				Prep Type: Total							
Analysis Batch: 12C0125				Prep Batch: 12C0125_P							
Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3-Dichlorobenzene	0.0500		20.0	17.6		ug/L		88	55 - 135	3	15
1,4-Dichlorobenzene	0.0800		20.0	17.2		ug/L		86	55 - 140	0.5	15
Dichlorodifluoromethane	<0.200		20.0	18.0		ug/L		90	15 - 130	11	25
1,1-Dichloroethane	<0.210		20.0	15.9	CIN	ug/L		80	50 - 130	7	25
1,2-Dichloroethane	<0.180		20.0	18.7		ug/L		93	55 - 140	10	15
1,1-Dichloroethene	<0.150		20.0	12.8		ug/L		64	35 - 135	14	30
cis-1,2-Dichloroethene	0.270		20.0	16.2		ug/L		80	45 - 135	10	20
trans-1,2-Dichloroethene	0.0200		20.0	14.4		ug/L		72	45 - 145	13	35
1,2-Dichloropropane	<0.870		20.0	18.2		ug/L		91	55 - 130	2	15
1,3-Dichloropropane	<0.160		20.0	19.6		ug/L		98	60 - 135	2	15
2,2-Dichloropropane	<0.180		20.0	15.2	CIN	ug/L		76	20 - 120	17	35
1,1-Dichloropropene	<0.150		20.0	18.4		ug/L		92	40 - 140	6	20
cis-1,3-Dichloropropene	<0.150		20.0	19.8		ug/L		99	25 - 120	2	20
trans-1,3-Dichloropropene	0.0400		20.0	18.9		ug/L		94	25 - 120	3	20
Ethylbenzene	0.0700		20.0	17.9		ug/L		89	45 - 135	2	20
Hexachlorobutadiene	0.0600		20.0	17.8		ug/L		89	40 - 135	12	30
Hexane	<0.200		20.0	16.9	CIN	ug/L		84	25 - 135	7	35
Isopropylbenzene	<0.190		20.0	17.4		ug/L		87	45 - 125	1	15
p-Isopropyltoluene	0.0300		20.0	17.4		ug/L		87	40 - 140	1	20
Methylene Chloride	1.01		20.0	16.4		ug/L		77	45 - 145	7	30
Methyl tert-Butyl Ether	<0.160		20.0	18.2		ug/L		91	40 - 135	9	25
Naphthalene	0.110		20.0	17.9		ug/L		89	40 - 135	2	20
n-Propylbenzene	<0.100		20.0	17.8		ug/L		89	45 - 140	2	20
Styrene	0.0400		20.0	18.1		ug/L		90	40 - 135	2	20
1,1,1,2-Tetrachloroethane	<0.210		20.0	18.3		ug/L		92	50 - 130	4	20
1,1,2,2-Tetrachloroethane	<0.100		20.0	19.9		ug/L		100	55 - 140	2	20
Tetrachloroethene	0.210		20.0	17.2		ug/L		85	40 - 135	0.4	20
Toluene	0.120		20.0	18.3		ug/L		91	45 - 135	2	20
1,2,3-Trichlorobenzene	0.0300		20.0	18.5		ug/L		92	50 - 140	5	25
1,2,4-Trichlorobenzene	0.0800		20.0	17.9		ug/L		89	40 - 135	5	25
1,1,1-Trichloroethane	0.0200		20.0	16.6		ug/L		83	40 - 125	3	20
1,1,2-Trichloroethane	<0.120		20.0	19.5		ug/L		97	60 - 130	1	15
Trichloroethene	<0.190		20.0	17.5		ug/L		87	50 - 130	0.2	20
Trichlorofluoromethane	<0.170		20.0	16.7		ug/L		84	40 - 145	11	25
1,2,3-Trichloropropane	<0.190		20.0	20.4		ug/L		102	55 - 150	3	20
1,2,4-Trimethylbenzene	0.0400		20.0	18.2		ug/L		91	45 - 140	4	20
1,3,5-Trimethylbenzene	0.0200		20.0	17.6		ug/L		88	45 - 140	0.4	20
Vinyl chloride	<0.100		20.0	15.3		ug/L		76	30 - 135	14	20
Xylenes, total	<0.130		60.0	52.0		ug/L		87	40 - 135	1	20

Surrogate	Matrix Spike Dup %Recovery	Matrix Spike Dup Qualifier	Matrix Spike Dup Limits
Dibromofluoromethane	97		75 - 120
Toluene-d8	102		80 - 120
4-Bromofluorobenzene	96		80 - 120

QC Association Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

GCMS Volatiles

Analysis Batch: 12C0123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12C0123-BLK1	Method Blank	Total	Water - NonPotable	SW 8260B	12C0123_P
12C0123-BS1	Lab Control Sample	Total	Water - NonPotable	SW 8260B	12C0123_P
12C0123-MS1	Matrix Spike	Total	Water - NonPotable	SW 8260B	12C0123_P
12C0123-MSD1	Matrix Spike Duplicate	Total	Water - NonPotable	SW 8260B	12C0123_P
CVB1583-01	GP-28D	Total	Ground Water	SW 8260B	12C0123_P
CVB1583-02	GP-28M	Total	Ground Water	SW 8260B	12C0123_P
CVB1583-03	GP-28S	Total	Ground Water	SW 8260B	12C0123_P
CVB1583-04	GP-27D	Total	Ground Water	SW 8260B	12C0123_P
CVB1583-05	GP-27M	Total	Ground Water	SW 8260B	12C0123_P
CVB1583-06	GP-27S	Total	Ground Water	SW 8260B	12C0123_P
CVB1583-07	GP-30D	Total	Ground Water	SW 8260B	12C0123_P
CVB1583-08	GP-29D	Total	Ground Water	SW 8260B	12C0123_P
CVB1583-09	GP-29M	Total	Ground Water	SW 8260B	12C0123_P
CVB1583-10	GP-29S	Total	Ground Water	SW 8260B	12C0123_P
CVB1583-11	GP-Dup	Total	Ground Water	SW 8260B	12C0123_P
CVB1583-12	Trip Blank	Total	Water	SW 8260B	12C0123_P

Analysis Batch: 12C0125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12C0125-BLK1	Method Blank	Total	Water - NonPotable	SW 8260B	12C0125_P
12C0125-BS1	Lab Control Sample	Total	Water - NonPotable	SW 8260B	12C0125_P
12C0125-MS1	Matrix Spike	Total	Water - NonPotable	SW 8260B	12C0125_P
12C0125-MSD1	Matrix Spike Duplicate	Total	Water - NonPotable	SW 8260B	12C0125_P
CVB1583-01 - RE1	GP-28D	Total	Ground Water	SW 8260B	12C0125_P

Analysis Batch: 12C0162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVB1583-01	GP-28D	Total	Ground Water	SW 9041	12C0162_P
CVB1583-02	GP-28M	Total	Ground Water	SW 9041	12C0162_P
CVB1583-03	GP-28S	Total	Ground Water	SW 9041	12C0162_P
CVB1583-04	GP-27D	Total	Ground Water	SW 9041	12C0162_P
CVB1583-05	GP-27M	Total	Ground Water	SW 9041	12C0162_P
CVB1583-06	GP-27S	Total	Ground Water	SW 9041	12C0162_P
CVB1583-07	GP-30D	Total	Ground Water	SW 9041	12C0162_P
CVB1583-08	GP-29D	Total	Ground Water	SW 9041	12C0162_P
CVB1583-09	GP-29M	Total	Ground Water	SW 9041	12C0162_P
CVB1583-10	GP-29S	Total	Ground Water	SW 9041	12C0162_P
CVB1583-11	GP-Dup	Total	Ground Water	SW 9041	12C0162_P
CVB1583-12	Trip Blank	Total	Water	SW 9041	12C0162_P

Prep Batch: 12C0123_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12C0123-BLK1	Method Blank	Total	Water - NonPotable	SW 5030B	
12C0123-BS1	Lab Control Sample	Total	Water - NonPotable	SW 5030B	

QC Association Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

GCMS Volatiles (Continued)

Prep Batch: 12C0123_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12C0123-MS1	Matrix Spike	Total	Water - NonPotable	SW 5030B	
12C0123-MSD1	Matrix Spike Duplicate	Total	Water - NonPotable	SW 5030B	
CVB1583-01	GP-28D	Total	Ground Water	SW 5030B	
CVB1583-02	GP-28M	Total	Ground Water	SW 5030B	
CVB1583-03	GP-28S	Total	Ground Water	SW 5030B	
CVB1583-04	GP-27D	Total	Ground Water	SW 5030B	
CVB1583-05	GP-27M	Total	Ground Water	SW 5030B	
CVB1583-06	GP-27S	Total	Ground Water	SW 5030B	
CVB1583-07	GP-30D	Total	Ground Water	SW 5030B	
CVB1583-08	GP-29D	Total	Ground Water	SW 5030B	
CVB1583-09	GP-29M	Total	Ground Water	SW 5030B	
CVB1583-10	GP-29S	Total	Ground Water	SW 5030B	
CVB1583-11	GP-Dup	Total	Ground Water	SW 5030B	
CVB1583-12	Trip Blank	Total	Water	SW 5030B	

Prep Batch: 12C0125_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12C0125-BLK1	Method Blank	Total	Water - NonPotable	SW 5030B	
12C0125-BS1	Lab Control Sample	Total	Water - NonPotable	SW 5030B	
12C0125-MS1	Matrix Spike	Total	Water - NonPotable	SW 5030B	
12C0125-MSD1	Matrix Spike Duplicate	Total	Water - NonPotable	SW 5030B	
CVB1583-01 - RE1	GP-28D	Total	Ground Water	SW 5030B	

Prep Batch: 12C0162_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVB1583-01	GP-28D	Total	Ground Water	Default Prep VOC	
CVB1583-02	GP-28M	Total	Ground Water	Default Prep VOC	
CVB1583-03	GP-28S	Total	Ground Water	Default Prep VOC	
CVB1583-04	GP-27D	Total	Ground Water	Default Prep VOC	
CVB1583-05	GP-27M	Total	Ground Water	Default Prep VOC	
CVB1583-06	GP-27S	Total	Ground Water	Default Prep VOC	
CVB1583-07	GP-30D	Total	Ground Water	Default Prep VOC	
CVB1583-08	GP-29D	Total	Ground Water	Default Prep VOC	
CVB1583-09	GP-29M	Total	Ground Water	Default Prep VOC	
CVB1583-10	GP-29S	Total	Ground Water	Default Prep VOC	
CVB1583-11	GP-Dup	Total	Ground Water	Default Prep VOC	
CVB1583-12	Trip Blank	Total	Water	Default Prep VOC	

Lab Chronicle

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-28D

Date Collected: 02/28/12 11:49

Date Received: 02/29/12 15:53

Lab Sample ID: CVB1583-01

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0123_P	03/01/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0123	03/01/12 07:42	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0162_P	03/05/12 11:50	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0162	03/05/12 11:53	FMK	TAL CF
Total	Prep	SW 5030B	RE1	1.00	5 mL	5 mL	12C0125_P	03/01/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B	RE1	1.00			12C0125	03/01/12 12:47	SJN	TAL CF

Client Sample ID: GP-28M

Date Collected: 02/28/12 13:26

Date Received: 02/29/12 15:53

Lab Sample ID: CVB1583-02

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0123_P	03/01/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0123	03/01/12 08:04	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0162_P	03/05/12 11:50	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0162	03/05/12 11:53	FMK	TAL CF

Client Sample ID: GP-28S

Date Collected: 02/28/12 14:20

Date Received: 02/29/12 15:53

Lab Sample ID: CVB1583-03

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0123_P	03/01/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0123	03/01/12 08:27	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0162_P	03/05/12 11:50	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0162	03/05/12 11:53	FMK	TAL CF

Client Sample ID: GP-27D

Date Collected: 02/28/12 16:15

Date Received: 02/29/12 15:53

Lab Sample ID: CVB1583-04

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0123_P	03/01/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0123	03/01/12 08:49	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0162_P	03/05/12 11:50	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0162	03/05/12 11:53	FMK	TAL CF

Client Sample ID: GP-27M

Date Collected: 02/28/12 18:42

Date Received: 02/29/12 15:53

Lab Sample ID: CVB1583-05

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0123_P	03/01/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0123	03/01/12 09:56	SJN	TAL CF

Lab Chronicle

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-27M

Lab Sample ID: CVB1583-05

Date Collected: 02/28/12 18:42

Matrix: Ground Water

Date Received: 02/29/12 15:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0162_P	03/05/12 11:50	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0162	03/05/12 11:53	FMK	TAL CF

Client Sample ID: GP-27S

Lab Sample ID: CVB1583-06

Date Collected: 02/29/12 07:55

Matrix: Ground Water

Date Received: 02/29/12 15:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0123_P	03/01/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0123	03/01/12 10:19	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0162_P	03/05/12 11:50	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0162	03/05/12 11:53	FMK	TAL CF

Client Sample ID: GP-30D

Lab Sample ID: CVB1583-07

Date Collected: 02/29/12 09:30

Matrix: Ground Water

Date Received: 02/29/12 15:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0123_P	03/01/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0123	03/01/12 10:41	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0162_P	03/05/12 11:50	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0162	03/05/12 11:53	FMK	TAL CF

Client Sample ID: GP-29D

Lab Sample ID: CVB1583-08

Date Collected: 02/29/12 13:05

Matrix: Ground Water

Date Received: 02/29/12 15:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0123_P	03/01/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0123	03/01/12 11:03	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0162_P	03/05/12 11:50	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0162	03/05/12 11:53	FMK	TAL CF

Client Sample ID: GP-29M

Lab Sample ID: CVB1583-09

Date Collected: 02/29/12 14:25

Matrix: Ground Water

Date Received: 02/29/12 15:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0123_P	03/01/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0123	03/01/12 07:20	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0162_P	03/05/12 11:50	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0162	03/05/12 11:53	FMK	TAL CF

Lab Chronicle

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Client Sample ID: GP-29S

Lab Sample ID: CVB1583-10

Date Collected: 02/29/12 15:15

Matrix: Ground Water

Date Received: 02/29/12 15:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0123_P	03/01/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0123	03/01/12 06:57	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0162_P	03/05/12 11:50	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0162	03/05/12 11:53	FMK	TAL CF

Client Sample ID: GP-Dup

Lab Sample ID: CVB1583-11

Date Collected: 02/28/12 00:00

Matrix: Ground Water

Date Received: 02/29/12 15:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0123_P	03/01/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0123	03/01/12 06:35	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0162_P	03/05/12 11:50	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0162	03/05/12 11:53	FMK	TAL CF

Client Sample ID: Trip Blank

Lab Sample ID: CVB1583-12

Date Collected: 02/28/12 00:00

Matrix: Water

Date Received: 02/29/12 15:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0123_P	03/01/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0123	03/01/12 06:13	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0162_P	03/05/12 11:50	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0162	03/05/12 11:53	FMK	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

US EPA ARCHIVE DOCUMENT

Definitions/Glossary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Qualifiers

GCMS Volatiles

Qualifier	Qualifier Description
CIN	The % RSD for this compound was above 15%. The average % RSD for all compounds in the calibration met the 15% criteria specified in EPA methods 8260B/8270C.
M1	The MS and/or MSD were outside control limits.
R	Sample duplicate RPD exceeded the laboratory control limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☆	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Cedar Falls	AIHA - LAP	IHLAP		101044
TestAmerica Cedar Falls	Illinois	NELAC	5	200024
TestAmerica Cedar Falls	Iowa	State Program	7	7
TestAmerica Cedar Falls	Kansas	NELAC	7	E-10341
TestAmerica Cedar Falls	Minnesota	NELAC	5	019-999-319
TestAmerica Cedar Falls	North Dakota	State Program	8	R-186
TestAmerica Cedar Falls	Oregon	NELAC	10	IA100001
TestAmerica Cedar Falls	Wisconsin	State Program	5	999917270

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

US EPA ARCHIVE DOCUMENT

Method Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVB1583

Method	Method Description	Protocol	Laboratory
SW 8260B	Volatile Organic Compounds		TAL CF
SW 9041	VOC Preservation Check		TAL CF

Protocol References:

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

THE LEADER IN ENVIRONMENTAL TESTING

**To assist us in using the proper analytical methods,
is this work being conducted for regulatory purposes?**
Compliance Monitoring

Quote #: PO#:

TAT ☒ Standard Rush (surcharges may apply)	Date Needed:	Fax Results: Y ☒ N	Email Results: ☒	SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix SL - Sludge DW - Drinking Water GW - Groundwater S - Soil/Solid WW - Wastewater Specify, Other	Preservation & # of Containers	Analyze For:	QC Deliverables None Level 2 (Batch QC) Level 3 Level 4 Other:	REMARKS
				GP28 D	2/29/12	1149			GW	HNO ₃ HCl NaOH H ₂ SO ₄ Methanol None Other (Specify)	VOCs		
				GP28 M		1326					X		
				GP28 S		1420					X		
				GP27 O		1615					X		
				GP27 M		1842					X		
				GP27 S	2/29/12	755					X		
				GP30 D		930					X		
				GP29 D		1305					X		
				GP29 M		1425							
				GP29 S		1515							

Special Instructions:

Relinquished By: [Signature]

Rob Bergman

Date: 2/29/12 Time: 1530

Received By: [Signature]

Date: 2/29/12 Time: 1530

Relinquished By: Rob Bergman

Date: 2/29/12 Time: 1553

Received By: [Signature]

Date: 2/29/12 Time: 1553

Relinquished By:

Date: Time:

Received By:

Date: Time:

THE LEADER IN ENVIRONMENTAL TESTING

**Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613**

Phone 319-277-2401 or 800-750-2491
Fax 319-277-2425

**To assist us in using the proper analytical methods,
is this work being conducted for regulatory purposes?**
Compliance Monitoring

Client Name: Pravara - C. J. Bittendorf Client #:

Address: 2640 12th St SW

City/State/Zip Code: Cedar Rapids, IA 52404

Project Manager: John Brimeyer - Bedford Office

Email Address: _____

Telephone Number: _____ Fax: _____

Sampler Name: (Print Name) Holly Morian

Sampler Signature: [Signature]

Project Name: Chamberlain

Project #: 07107020

Site/Location ID: Wakuloo State: IA

Report To: John Brimeyer - Terracon Bethel

Invoice To:

Quote #: PO#:

[illegible]

TAL-0033 (0708)

Page ____ of ____

Sample Receipt and Temperature Log Form

Client: Turaccon Project: _____
City: Bethesda
Date: 9/29/12 Receiver's Initials: mf Time (Delivered): 15:33

Temperature Record:

Thermometer:

Courier:

Cooler ID# (If Applicable)

- ☐ IR - 111531565 'D'
☐ IR - 111531506 'E'
☐ IR - 61854108 'Front'
☐ 101681126

- ☐ UPS ☐ TA Courier
☐ FedEx ☐ TA Field Services
☐ FedEx Ground ☒ Client
☐ US Postal Service ☐ Other
☐ Spee-Dee

☐ Temp Blank None

☐ Temperature out of compliance

Custody seals present?

☐ Yes

Custody seals intact?

☐ Yes ☐ No

☐ Non-Conformance report started

2 p's per sample

Exceptions Noted

- ☐ Sample(s) not received in a cooler.
☐ Samples(s) received same day of sampling.
☒ Evidence of a chilling process
☐ No Temp. Blank. Inside temperature of cooler recorded.
☒ Temperature not taken: mf

*Refer to SOP CF-SS-01 for Temperature Criteria

F:\DeimerlyC\QA Folder\QA Forms & Log Book pgs\Cooler Receipt rev17.doc

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: 800-750-2401

TestAmerica Job ID: CVC0180
Client Project/Site: 07107020
Client Project Description: Chamberlain - Waterloo, IA

For:
TERRACON - BETTENDORF
870 40th Avenue
Bettendorf, IA 52722

Attn: John Brimeyer

Angela Muehling

Authorized for release by:
3/6/2012 2:24:08 PM

Angela Muehling
Project Coordinator
Angela.Muehling@testamericainc.com

Designee for
Derrick Klinkenberg
Organics Manager
derrick.klinkenberg@testamericainc.com

LINKS

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Expert**

Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
CVC0180-01	GP-26D	Ground Water	03/02/12 11:28	03/02/12 14:44
CVC0180-02	GP-26I	Ground Water	03/02/12 12:10	03/02/12 14:44
CVC0180-03	Trip Blank	Water	03/02/12 00:00	03/02/12 14:44

Detection Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Client Sample ID: GP-26D

Lab Sample ID: CVC0180-01

☐ No Detections

Client Sample ID: GP-26I

Lab Sample ID: CVC0180-02

☐ No Detections

Client Sample ID: Trip Blank

Lab Sample ID: CVC0180-03

☐ No Detections

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Client Sample ID: GP-26D

Lab Sample ID: CVC0180-01

Date Collected: 03/02/12 11:28

Matrix: Ground Water

Date Received: 03/02/12 14:44

Sampler Name: Rob Bergman

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Benzene	<0.500		0.500		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Bromobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Bromoform	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Bromomethane	<4.00	CIN	4.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Chloroethane	<4.00		4.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Chloroform	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Chloromethane	<3.00		3.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Dibromomethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,1-Dichloroethane	<1.00	CIN	1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
2,2-Dichloropropane	<4.00	CIN R	4.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Hexane	<1.00	CIN	1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Naphthalene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Styrene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Client Sample ID: GP-26D

Lab Sample ID: CVC0180-01

Date Collected: 03/02/12 11:28

Matrix: Ground Water

Date Received: 03/02/12 14:44

Sampler Name: Rob Bergman

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Toluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Trichloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,2,3-Trichloropropane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Xylenes, total	<3.00		3.00		ug/L		03/05/12 00:00	03/05/12 12:22	1.00
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane	98		75 - 120				03/05/12 00:00	03/05/12 12:22	1.00
Toluene-d8	100		80 - 120				03/05/12 00:00	03/05/12 12:22	1.00
4-Bromofluorobenzene	94		75 - 110				03/05/12 00:00	03/05/12 12:22	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/06/12 10:35	03/06/12 10:39	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Client Sample ID: GP-26I

Lab Sample ID: CVC0180-02

Date Collected: 03/02/12 12:10

Matrix: Ground Water

Date Received: 03/02/12 14:44

Sampler Name: Rob Bergman

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Benzene	<0.500		0.500		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Bromobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Bromoform	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Bromomethane	<4.00	CIN	4.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Chloroethane	<4.00		4.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Chloroform	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Chloromethane	<3.00		3.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Dibromomethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,1-Dichloroethane	<1.00	CIN	1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
2,2-Dichloropropane	<4.00	CIN	4.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Hexane	<1.00	CIN	1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Naphthalene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Styrene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Client Sample ID: GP-261

Lab Sample ID: CVC0180-02

Date Collected: 03/02/12 12:10

Matrix: Ground Water

Date Received: 03/02/12 14:44

Sampler Name: Rob Bergman

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Toluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Trichloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,2,3-Trichloropropane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00
Xylenes, total	<3.00		3.00		ug/L		03/05/12 00:00	03/05/12 12:47	1.00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	99		75 - 120	03/05/12 00:00	03/05/12 12:47	1.00
Toluene-d8	101		80 - 120	03/05/12 00:00	03/05/12 12:47	1.00
4-Bromofluorobenzene	98		75 - 110	03/05/12 00:00	03/05/12 12:47	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/06/12 10:35	03/06/12 10:39	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Client Sample ID: Trip Blank

Lab Sample ID: CVC0180-03

Date Collected: 03/02/12 00:00

Matrix: Water

Date Received: 03/02/12 14:44

Sampler Name: Rob Bergman

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Benzene	<0.500		0.500		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Bromobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Bromoform	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Bromomethane	<4.00	CIN	4.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Chloroethane	<4.00		4.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Chloroform	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Chloromethane	<3.00		3.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Dibromomethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,1-Dichloroethane	<1.00	CIN	1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
2,2-Dichloropropane	<4.00	CIN	4.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Hexane	<1.00	CIN	1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Naphthalene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Styrene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00

Client Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Client Sample ID: Trip Blank

Lab Sample ID: CVC0180-03

Date Collected: 03/02/12 00:00

Matrix: Water

Date Received: 03/02/12 14:44

Sampler Name: Rob Bergman

Sampler Phone Number: 563-355-0702

Method: SW 8260B - Volatile Organic Compounds (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Toluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Trichloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,2,3-Trichloropropane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00
Xylenes, total	<3.00		3.00		ug/L		03/05/12 00:00	03/05/12 13:12	1.00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	100		75 - 120	03/05/12 00:00	03/05/12 13:12	1.00
Toluene-d8	102		80 - 120	03/05/12 00:00	03/05/12 13:12	1.00
4-Bromofluorobenzene	96		75 - 110	03/05/12 00:00	03/05/12 13:12	1.00

Method: SW 9041 - VOC Preservation Check

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<2.00		2.00		units		03/06/12 10:35	03/06/12 10:39	1.00

Surrogate Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Method: SW 8260B - Volatile Organic Compounds

Matrix: Ground Water

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
CVC0180-01	GP-26D	98	100	94
CVC0180-02	GP-26I	99	101	98

Surrogate Legend

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

Method: SW 8260B - Volatile Organic Compounds

Matrix: Water

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
CVC0180-03	Trip Blank	100	102	96

Surrogate Legend

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

Method: SW 8260B - Volatile Organic Compounds

Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (75-110)
12C0186-BLK1	Method Blank	96	102	97

Surrogate Legend

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

Method: SW 8260B - Volatile Organic Compounds

Matrix: Water - NonPotable

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (75-120)	Toluene-d8 (80-120)	BFB (80-120)
12C0186-BS1	Lab Control Sample	98	101	100
12C0186-MS1	GP-26D	101	103	101
12C0186-MSD1	GP-26D	102	101	99

Surrogate Legend

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Method: SW 8260B - Volatile Organic Compounds

Lab Sample ID: 12C0186-BLK1
Matrix: Water - NonPotable
Analysis Batch: 12C0186

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 12C0186_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Benzene	<0.500		0.500		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Bromobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Bromochloromethane	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Bromodichloromethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Bromoform	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Bromomethane	<4.00	CIN	4.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
2-Butanone (MEK)	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
n-Butylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
sec-Butylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
tert-Butylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Carbon disulfide	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Carbon Tetrachloride	<2.00		2.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Chlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Chlorodibromomethane	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Chloroethane	<4.00		4.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Chloroform	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Chloromethane	<3.00		3.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
2-Chlorotoluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
4-Chlorotoluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,2-Dibromo-3-chloropropane	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,2-Dibromoethane (EDB)	<10.0		10.0		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Dibromomethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,2-Dichlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,3-Dichlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,4-Dichlorobenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Dichlorodifluoromethane	<3.00		3.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,1-Dichloroethane	<1.00	CIN	1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,2-Dichloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,1-Dichloroethene	<2.00		2.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
cis-1,2-Dichloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
trans-1,2-Dichloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,2-Dichloropropane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,3-Dichloropropane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
2,2-Dichloropropane	<4.00	CIN	4.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,1-Dichloropropene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
cis-1,3-Dichloropropene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
trans-1,3-Dichloropropene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Ethylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Hexachlorobutadiene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Hexane	<1.00	CIN	1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Isopropylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
p-Isopropyltoluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Methylene Chloride	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Methyl tert-Butyl Ether	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Naphthalene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
n-Propylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Styrene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,1,1,2-Tetrachloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00

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QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0186-BLK1

Matrix: Water - NonPotable

Analysis Batch: 12C0186

Client Sample ID: Method Blank

Prep Type: Total

Prep Batch: 12C0186_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Tetrachloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Toluene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,2,3-Trichlorobenzene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,2,4-Trichlorobenzene	<5.00		5.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,1,1-Trichloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,1,2-Trichloroethane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Trichloroethene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Trichlorofluoromethane	<4.00		4.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,2,3-Trichloropropane	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,2,4-Trimethylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
1,3,5-Trimethylbenzene	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Vinyl chloride	<1.00		1.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00
Xylenes, total	<3.00		3.00		ug/L		03/05/12 00:00	03/05/12 06:55	1.00

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	96		75 - 120	03/05/12 00:00	03/05/12 06:55	1.00
Toluene-d8	102		80 - 120	03/05/12 00:00	03/05/12 06:55	1.00
4-Bromofluorobenzene	97		75 - 110	03/05/12 00:00	03/05/12 06:55	1.00

Lab Sample ID: 12C0186-BS1

Matrix: Water - NonPotable

Analysis Batch: 12C0186

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 12C0186_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Acetone	20.0	24.6		ug/L		123	60 - 150
Benzene	20.0	20.4		ug/L		102	70 - 130
Bromobenzene	20.0	19.1		ug/L		96	75 - 130
Bromochloromethane	20.0	20.0		ug/L		100	65 - 145
Bromodichloromethane	20.0	20.4		ug/L		102	60 - 130
Bromoform	20.0	17.8		ug/L		89	30 - 125
Bromomethane	20.0	9.74	CIN	ug/L		49	35 - 130
2-Butanone (MEK)	20.0	18.6		ug/L		93	55 - 140
n-Butylbenzene	20.0	18.7		ug/L		93	55 - 135
sec-Butylbenzene	20.0	18.3		ug/L		91	65 - 135
tert-Butylbenzene	20.0	18.6		ug/L		93	60 - 135
Carbon disulfide	20.0	18.9		ug/L		94	40 - 130
Carbon Tetrachloride	20.0	19.2		ug/L		96	55 - 130
Chlorobenzene	20.0	19.1		ug/L		96	75 - 125
Chlorodibromomethane	20.0	19.2		ug/L		96	45 - 125
Chloroethane	20.0	17.2		ug/L		86	55 - 135
Chloroform	20.0	18.7		ug/L		93	70 - 125
Chloromethane	20.0	15.9		ug/L		80	30 - 125
2-Chlorotoluene	20.0	20.2		ug/L		101	75 - 135
4-Chlorotoluene	20.0	20.4		ug/L		102	70 - 140
1,2-Dibromo-3-chloropropane	20.0	15.7		ug/L		79	35 - 130
1,2-Dibromoethane (EDB)	20.0	20.1		ug/L		101	70 - 135
Dibromomethane	20.0	19.2		ug/L		96	75 - 130
1,2-Dichlorobenzene	20.0	18.1		ug/L		90	65 - 135

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0186-BS1

Matrix: Water - NonPotable

Analysis Batch: 12C0186

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 12C0186_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,3-Dichlorobenzene	20.0	17.7		ug/L		89	70 - 130
1,4-Dichlorobenzene	20.0	17.7		ug/L		88	60 - 140
Dichlorodifluoromethane	20.0	20.8		ug/L		104	35 - 130
1,1-Dichloroethane	20.0	16.5	CIN	ug/L		82	60 - 130
1,2-Dichloroethane	20.0	21.2		ug/L		106	65 - 140
1,1-Dichloroethene	20.0	15.8		ug/L		79	60 - 135
cis-1,2-Dichloroethene	20.0	19.9		ug/L		99	70 - 135
trans-1,2-Dichloroethene	20.0	18.5		ug/L		93	60 - 145
1,2-Dichloropropane	20.0	20.8		ug/L		104	65 - 130
1,3-Dichloropropane	20.0	20.5		ug/L		102	75 - 125
2,2-Dichloropropane	20.0	8.11	CIN	ug/L		41	25 - 120
1,1-Dichloropropene	20.0	21.4		ug/L		107	60 - 140
cis-1,3-Dichloropropene	20.0	20.4		ug/L		102	30 - 120
trans-1,3-Dichloropropene	20.0	19.6		ug/L		98	35 - 120
Ethylbenzene	20.0	20.3		ug/L		101	70 - 130
Hexachlorobutadiene	20.0	18.0		ug/L		90	60 - 135
Hexane	20.0	19.7	CIN	ug/L		99	40 - 135
Isopropylbenzene	20.0	19.4		ug/L		97	70 - 125
p-Isopropyltoluene	20.0	18.1		ug/L		91	60 - 140
Methylene Chloride	20.0	17.0		ug/L		85	55 - 145
Methyl tert-Butyl Ether	20.0	17.5		ug/L		87	50 - 135
Naphthalene	20.0	12.5		ug/L		62	40 - 135
n-Propylbenzene	20.0	19.5		ug/L		98	70 - 135
Styrene	20.0	19.7		ug/L		98	70 - 130
1,1,1,2-Tetrachloroethane	20.0	20.2		ug/L		101	65 - 120
1,1,2,2-Tetrachloroethane	20.0	19.2		ug/L		96	65 - 130
Tetrachloroethene	20.0	18.6		ug/L		93	70 - 135
Toluene	20.0	20.1		ug/L		100	70 - 135
1,2,3-Trichlorobenzene	20.0	14.7		ug/L		74	55 - 130
1,2,4-Trichlorobenzene	20.0	15.2		ug/L		76	40 - 135
1,1,1-Trichloroethane	20.0	20.9		ug/L		105	60 - 125
1,1,2-Trichloroethane	20.0	20.4		ug/L		102	75 - 125
Trichloroethene	20.0	20.5		ug/L		103	70 - 130
Trichlorofluoromethane	20.0	19.4		ug/L		97	55 - 145
1,2,3-Trichloropropane	20.0	20.1		ug/L		101	60 - 150
1,2,4-Trimethylbenzene	20.0	20.0		ug/L		100	70 - 140
1,3,5-Trimethylbenzene	20.0	19.6		ug/L		98	70 - 140
Vinyl chloride	20.0	18.1		ug/L		90	45 - 135
Xylenes, total	60.0	57.7		ug/L		96	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane	98		75 - 120
Toluene-d8	101		80 - 120
4-Bromofluorobenzene	100		80 - 120

US EPA ARCHIVE DOCUMENT

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0186-MS1

Matrix: Water - NonPotable

Analysis Batch: 12C0186

Client Sample ID: GP-26D

Prep Type: Total

Prep Batch: 12C0186_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	Limits
Acetone	<10.0		20.0	17.6		ug/L		81	45 - 150
Benzene	<0.500		20.0	19.1		ug/L		95	50 - 130
Bromobenzene	<1.00		20.0	18.2		ug/L		91	60 - 135
Bromochloromethane	<5.00		20.0	21.0		ug/L		105	55 - 145
Bromodichloromethane	<1.00		20.0	19.7		ug/L		98	50 - 130
Bromoform	<5.00		20.0	17.4		ug/L		87	30 - 125
Bromomethane	<4.00	CIN	20.0	12.6	CIN	ug/L		62	30 - 130
2-Butanone (MEK)	<10.0		20.0	19.5		ug/L		95	45 - 140
n-Butylbenzene	<1.00		20.0	13.6		ug/L		68	40 - 135
sec-Butylbenzene	<1.00		20.0	13.7		ug/L		68	40 - 135
tert-Butylbenzene	<1.00		20.0	14.4		ug/L		72	40 - 135
Carbon disulfide	<1.00		20.0	15.9		ug/L		79	30 - 130
Carbon Tetrachloride	<2.00		20.0	17.0		ug/L		84	35 - 130
Chlorobenzene	<1.00		20.0	18.3		ug/L		92	60 - 130
Chlorodibromomethane	<5.00		20.0	18.2		ug/L		91	35 - 130
Chloroethane	<4.00		20.0	17.2		ug/L		86	40 - 135
Chloroform	<1.00		20.0	18.3		ug/L		92	55 - 125
Chloromethane	<3.00		20.0	15.3		ug/L		76	25 - 125
2-Chlorotoluene	<1.00		20.0	18.1		ug/L		90	55 - 140
4-Chlorotoluene	<1.00		20.0	18.6		ug/L		93	50 - 140
1,2-Dibromo-3-chloropropane	<10.0		20.0	16.7		ug/L		84	35 - 130
1,2-Dibromoethane (EDB)	<10.0		20.0	20.5		ug/L		102	55 - 140
Dibromomethane	<1.00		20.0	19.8		ug/L		99	60 - 135
1,2-Dichlorobenzene	<1.00		20.0	17.1		ug/L		86	55 - 140
1,3-Dichlorobenzene	<1.00		20.0	15.9		ug/L		79	55 - 135
1,4-Dichlorobenzene	<1.00		20.0	16.2		ug/L		81	55 - 140
Dichlorodifluoromethane	<3.00		20.0	18.5		ug/L		92	15 - 130
1,1-Dichloroethane	<1.00	CIN	20.0	17.7	CIN	ug/L		88	50 - 130
1,2-Dichloroethane	<1.00		20.0	21.1		ug/L		105	55 - 140
1,1-Dichloroethene	<2.00		20.0	14.1		ug/L		71	35 - 135
cis-1,2-Dichloroethene	<1.00		20.0	19.0		ug/L		94	45 - 135
trans-1,2-Dichloroethene	<1.00		20.0	15.3		ug/L		77	45 - 145
1,2-Dichloropropane	<1.00		20.0	20.2		ug/L		101	55 - 130
1,3-Dichloropropane	<1.00		20.0	21.0		ug/L		105	60 - 135
2,2-Dichloropropane	<4.00	CIN R	20.0	15.6	CIN R	ug/L		77	20 - 120
1,1-Dichloropropene	<1.00		20.0	18.9		ug/L		94	40 - 140
cis-1,3-Dichloropropene	<5.00		20.0	21.4		ug/L		107	25 - 120
trans-1,3-Dichloropropene	<5.00		20.0	20.1		ug/L		100	25 - 120
Ethylbenzene	<1.00		20.0	17.7		ug/L		88	45 - 135
Hexachlorobutadiene	<5.00		20.0	10.5		ug/L		52	40 - 135
Hexane	<1.00	CIN	20.0	13.8	CIN	ug/L		69	25 - 135
Isopropylbenzene	<1.00		20.0	16.0		ug/L		80	45 - 125
p-Isopropyltoluene	<1.00		20.0	13.9		ug/L		69	40 - 140
Methylene Chloride	<5.00		20.0	15.0		ug/L		75	45 - 145
Methyl tert-Butyl Ether	<1.00		20.0	19.0		ug/L		95	40 - 135
Naphthalene	<5.00		20.0	15.3		ug/L		76	40 - 135
n-Propylbenzene	<1.00		20.0	16.0		ug/L		80	45 - 140
Styrene	<1.00		20.0	17.8		ug/L		89	40 - 135
1,1,1,2-Tetrachloroethane	<1.00		20.0	19.2		ug/L		96	50 - 130

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0186-MS1
Matrix: Water - NonPotable
Analysis Batch: 12C0186

Client Sample ID: GP-26D
Prep Type: Total
Prep Batch: 12C0186_P
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	Limits
1,1,2,2-Tetrachloroethane	<1.00		20.0	20.5		ug/L		103	55 - 140
Tetrachloroethene	<1.00		20.0	16.0		ug/L		79	40 - 135
Toluene	<1.00		20.0	18.4		ug/L		92	45 - 135
1,2,3-Trichlorobenzene	<5.00		20.0	15.1		ug/L		75	50 - 140
1,2,4-Trichlorobenzene	<5.00		20.0	14.3		ug/L		71	40 - 135
1,1,1-Trichloroethane	<1.00		20.0	19.4		ug/L		97	40 - 125
1,1,2-Trichloroethane	<1.00		20.0	21.3		ug/L		107	60 - 130
Trichloroethene	<1.00		20.0	18.9		ug/L		93	50 - 130
Trichlorofluoromethane	<4.00		20.0	17.5		ug/L		88	40 - 145
1,2,3-Trichloropropane	<1.00		20.0	20.4		ug/L		102	55 - 150
1,2,4-Trimethylbenzene	<1.00		20.0	17.3		ug/L		86	45 - 140
1,3,5-Trimethylbenzene	<1.00		20.0	16.7		ug/L		83	45 - 140
Vinyl chloride	<1.00		20.0	17.3		ug/L		86	30 - 135
Xylenes, total	<3.00		60.0	51.3		ug/L		86	40 - 135

Surrogate	Matrix Spike %Recovery	Matrix Spike Qualifier	Limits
Dibromofluoromethane	101		75 - 120
Toluene-d8	103		80 - 120
4-Bromofluorobenzene	101		80 - 120

Lab Sample ID: 12C0186-MSD1
Matrix: Water - NonPotable
Analysis Batch: 12C0186

Client Sample ID: GP-26D
Prep Type: Total
Prep Batch: 12C0186_P
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acetone	<10.0		20.0	20.6		ug/L		96	45 - 150	16	35
Benzene	<0.500		20.0	18.8		ug/L		94	50 - 130	2	20
Bromobenzene	<1.00		20.0	18.1		ug/L		91	60 - 135	0.5	15
Bromochloromethane	<5.00		20.0	20.3		ug/L		102	55 - 145	3	25
Bromodichloromethane	<1.00		20.0	20.6		ug/L		103	50 - 130	5	15
Bromoform	<5.00		20.0	18.1		ug/L		90	30 - 125	4	25
Bromomethane	<4.00	CIN	20.0	11.7	CIN	ug/L		58	30 - 130	8	35
2-Butanone (MEK)	<10.0		20.0	19.7		ug/L		96	45 - 140	1	35
n-Butylbenzene	<1.00		20.0	14.3		ug/L		71	40 - 135	5	20
sec-Butylbenzene	<1.00		20.0	14.4		ug/L		72	40 - 135	5	20
tert-Butylbenzene	<1.00		20.0	15.4		ug/L		77	40 - 135	7	20
Carbon disulfide	<1.00		20.0	15.9		ug/L		79	30 - 130	0.1	30
Carbon Tetrachloride	<2.00		20.0	16.6		ug/L		82	35 - 130	2	20
Chlorobenzene	<1.00		20.0	18.1		ug/L		91	60 - 130	1	15
Chlorodibromomethane	<5.00		20.0	18.9		ug/L		95	35 - 130	4	20
Chloroethane	<4.00		20.0	17.1		ug/L		85	40 - 135	1	20
Chloroform	<1.00		20.0	18.4		ug/L		92	55 - 125	0.3	15
Chloromethane	<3.00		20.0	16.0		ug/L		80	25 - 125	4	25
2-Chlorotoluene	<1.00		20.0	18.9		ug/L		95	55 - 140	5	20
4-Chlorotoluene	<1.00		20.0	18.8		ug/L		94	50 - 140	1	20
1,2-Dibromo-3-chloropropane	<10.0		20.0	18.5		ug/L		92	35 - 130	10	30
1,2-Dibromoethane (EDB)	<10.0		20.0	20.0		ug/L		100	55 - 140	2	20
Dibromomethane	<1.00		20.0	20.0		ug/L		100	60 - 135	0.9	15
1,2-Dichlorobenzene	<1.00		20.0	18.3		ug/L		91	55 - 140	7	20

QC Sample Results

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Method: SW 8260B - Volatile Organic Compounds (Continued)

Lab Sample ID: 12C0186-MSD1

Matrix: Water - NonPotable

Analysis Batch: 12C0186

Client Sample ID: GP-26D

Prep Type: Total

Prep Batch: 12C0186_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3-Dichlorobenzene	<1.00		20.0	17.2		ug/L		86	55 - 135	8	15
1,4-Dichlorobenzene	<1.00		20.0	17.4		ug/L		87	55 - 140	7	15
Dichlorodifluoromethane	<3.00		20.0	18.1		ug/L		90	15 - 130	2	25
1,1-Dichloroethane	<1.00	CIN	20.0	16.7	CIN	ug/L		84	50 - 130	6	25
1,2-Dichloroethane	<1.00		20.0	21.8		ug/L		109	55 - 140	4	15
1,1-Dichloroethene	<2.00		20.0	14.8		ug/L		74	35 - 135	4	30
cis-1,2-Dichloroethene	<1.00		20.0	19.2		ug/L		96	45 - 135	1	20
trans-1,2-Dichloroethene	<1.00		20.0	17.2		ug/L		86	45 - 145	12	35
1,2-Dichloropropane	<1.00		20.0	20.4		ug/L		102	55 - 130	0.6	15
1,3-Dichloropropane	<1.00		20.0	21.2		ug/L		106	60 - 135	1	15
2,2-Dichloropropane	<4.00	CIN R	20.0	9.47	CIN R	ug/L		47	20 - 120	49	35
1,1-Dichloropropene	<1.00		20.0	19.1		ug/L		96	40 - 140	1	20
cis-1,3-Dichloropropene	<5.00		20.0	21.2		ug/L		106	25 - 120	1	20
trans-1,3-Dichloropropene	<5.00		20.0	20.2		ug/L		101	25 - 120	0.7	20
Ethylbenzene	<1.00		20.0	18.1		ug/L		90	45 - 135	2	20
Hexachlorobutadiene	<5.00		20.0	10.0		ug/L		50	40 - 135	4	30
Hexane	<1.00	CIN	20.0	15.3	CIN	ug/L		76	25 - 135	10	35
Isopropylbenzene	<1.00		20.0	16.4		ug/L		82	45 - 125	2	15
p-Isopropyltoluene	<1.00		20.0	14.6		ug/L		73	40 - 140	5	20
Methylene Chloride	<5.00		20.0	17.0		ug/L		85	45 - 145	13	30
Methyl tert-Butyl Ether	<1.00		20.0	19.2		ug/L		96	40 - 135	1	25
Naphthalene	<5.00		20.0	15.3		ug/L		76	40 - 135	0.07	20
n-Propylbenzene	<1.00		20.0	16.9		ug/L		85	45 - 140	5	20
Styrene	<1.00		20.0	17.6		ug/L		88	40 - 135	0.9	20
1,1,1,2-Tetrachloroethane	<1.00		20.0	19.3		ug/L		96	50 - 130	0.6	20
1,1,1,2,2-Tetrachloroethane	<1.00		20.0	20.3		ug/L		101	55 - 140	1	20
Tetrachloroethene	<1.00		20.0	16.1		ug/L		80	40 - 135	0.7	20
Toluene	<1.00		20.0	18.2		ug/L		90	45 - 135	2	20
1,2,3-Trichlorobenzene	<5.00		20.0	15.5		ug/L		77	50 - 140	3	25
1,2,4-Trichlorobenzene	<5.00		20.0	15.4		ug/L		77	40 - 135	7	25
1,1,1-Trichloroethane	<1.00		20.0	18.9		ug/L		94	40 - 125	2	20
1,1,2-Trichloroethane	<1.00		20.0	20.4		ug/L		102	60 - 130	5	15
Trichloroethene	<1.00		20.0	18.7		ug/L		92	50 - 130	1	20
Trichlorofluoromethane	<4.00		20.0	17.2		ug/L		86	40 - 145	2	25
1,2,3-Trichloropropane	<1.00		20.0	20.4		ug/L		102	55 - 150	0.3	20
1,2,4-Trimethylbenzene	<1.00		20.0	17.9		ug/L		90	45 - 140	4	20
1,3,5-Trimethylbenzene	<1.00		20.0	17.3		ug/L		86	45 - 140	4	20
Vinyl chloride	<1.00		20.0	17.0		ug/L		85	30 - 135	2	20
Xylenes, total	<3.00		60.0	52.1		ug/L		87	40 - 135	2	20

Surrogate	Matrix Spike Dup %Recovery	Matrix Spike Dup Qualifier	Matrix Spike Dup Limits
Dibromofluoromethane	102		75 - 120
Toluene-d8	101		80 - 120
4-Bromofluorobenzene	99		80 - 120

QC Association Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

GCMS Volatiles

Analysis Batch: 12C0186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12C0186-BLK1	Method Blank	Total	Water - NonPotable	SW 8260B	12C0186_P
12C0186-BS1	Lab Control Sample	Total	Water - NonPotable	SW 8260B	12C0186_P
12C0186-MS1	GP-26D	Total	Water - NonPotable	SW 8260B	12C0186_P
12C0186-MSD1	GP-26D	Total	Water - NonPotable	SW 8260B	12C0186_P
CVC0180-01	GP-26D	Total	Ground Water	SW 8260B	12C0186_P
CVC0180-02	GP-26I	Total	Ground Water	SW 8260B	12C0186_P
CVC0180-03	Trip Blank	Total	Water	SW 8260B	12C0186_P

Analysis Batch: 12C0203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVC0180-01	GP-26D	Total	Ground Water	SW 9041	12C0203_P
CVC0180-02	GP-26I	Total	Ground Water	SW 9041	12C0203_P
CVC0180-03	Trip Blank	Total	Water	SW 9041	12C0203_P

Prep Batch: 12C0186_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12C0186-BLK1	Method Blank	Total	Water - NonPotable	SW 5030B	
12C0186-BS1	Lab Control Sample	Total	Water - NonPotable	SW 5030B	
12C0186-MS1	GP-26D	Total	Water - NonPotable	SW 5030B	
12C0186-MSD1	GP-26D	Total	Water - NonPotable	SW 5030B	
CVC0180-01	GP-26D	Total	Ground Water	SW 5030B	
CVC0180-02	GP-26I	Total	Ground Water	SW 5030B	
CVC0180-03	Trip Blank	Total	Water	SW 5030B	

Prep Batch: 12C0203_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVC0180-01	GP-26D	Total	Ground Water	Default Prep VOC	
CVC0180-02	GP-26I	Total	Ground Water	Default Prep VOC	
CVC0180-03	Trip Blank	Total	Water	Default Prep VOC	

Lab Chronicle

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Client Sample ID: GP-26D

Lab Sample ID: CVC0180-01

Date Collected: 03/02/12 11:28

Matrix: Ground Water

Date Received: 03/02/12 14:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0186_P	03/05/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0186	03/05/12 12:22	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0203_P	03/06/12 10:35	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0203	03/06/12 10:39	FMK	TAL CF

Client Sample ID: GP-26I

Lab Sample ID: CVC0180-02

Date Collected: 03/02/12 12:10

Matrix: Ground Water

Date Received: 03/02/12 14:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0186_P	03/05/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0186	03/05/12 12:47	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0203_P	03/06/12 10:35	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0203	03/06/12 10:39	FMK	TAL CF

Client Sample ID: Trip Blank

Lab Sample ID: CVC0180-03

Date Collected: 03/02/12 00:00

Matrix: Water

Date Received: 03/02/12 14:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5030B		1.00	5 mL	5 mL	12C0186_P	03/05/12 00:00	SJN	TAL CF
Total	Analysis	SW 8260B		1.00			12C0186	03/05/12 13:12	SJN	TAL CF
Total	Prep	Default Prep VOC		1.00	5 mL	5 mL	12C0203_P	03/06/12 10:35	FMK	TAL CF
Total	Analysis	SW 9041		1.00			12C0203	03/06/12 10:39	FMK	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

Definitions/Glossary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Qualifiers

GCMS Volatiles

Qualifier	Qualifier Description
CIN	The % RSD for this compound was above 15%. The average % RSD for all compounds in the calibration met the 15% criteria specified in EPA methods 8260B/8270C.
R	Sample duplicate RPD exceeded the laboratory control limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☆	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: TERRACON - BETTENDORF
Project/Site: 07107020

TestAmerica Job ID: CVC0180

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Cedar Falls	AIHA - LAP	IHLAP		101044
TestAmerica Cedar Falls	Illinois	NELAC	5	200024
TestAmerica Cedar Falls	Iowa	State Program	7	7
TestAmerica Cedar Falls	Kansas	NELAC	7	E-10341
TestAmerica Cedar Falls	Minnesota	NELAC	5	019-999-319
TestAmerica Cedar Falls	North Dakota	State Program	8	R-186
TestAmerica Cedar Falls	Oregon	NELAC	10	IA100001
TestAmerica Cedar Falls	Wisconsin	State Program	5	999917270

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

TestAmerica Job ID: CVC0180

Client: TERRACON - BETTENDORF
Project/Site: 07107020

Method	Method Description	Protocol	Laboratory
SW 8260B	Volatile Organic Compounds		TAL CF
SW 9041	VOC Preservation Check		TAL CF

Protocol References:

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

US EPA ARCHIVE DOCUMENT

THE LEADER IN ENVIRONMENTAL TESTING

Phone 319-277-2401 or 800-750-2401
Fax 319-277-2425

**To assist us in using the proper analytical methods,
is this work being conducted for regulatory purposes?**
Compliance Monitoring

Sampler Signature: Rob Beaman

Quote #: _____ PO#: _____

[illegible]

TAL-0033 (0708)

Page _____ of _____

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 ENTERPRISE DRIVE • CEDAR FALLS, IA 50613
800-750-2401 • 319-277-2425 FAX

Sample Receipt and Temperature Log Form

Client: Tenneco Project: Chamberlain
City: Bethesda
Date: 3/2/12 Receiver's Initials: mf Time (Delivered): 1444

Temperature Record:

Cooler ID# (If Applicable)

ESC

3.0 °C On Ice

Thermometer:

- ☒ IR - 111531565 'D'
☐ IR - 111531506 'E'
☐ IR - 61854108 'Front'
☐ 101681126

Courier:

- | | |
|--|--|
| ☐ UPS | ☐ TA Courier |
| ☐ FedEx | ☐ TA Field Services |
| ☐ FedEx Ground | ☒ Client |
| ☐ US Postal Service | ☐ Other |
| ☐ Spee-Dee | |

☒ Temp Blank

☐ Temperature out of compliance

Custody seals present?

☐ Yes

Custody seals intact?

☐ Yes ☐ No

☐ Non-Conformance report started

Exceptions Noted

- ☐ Sample(s) not received in a cooler.
- ☐ Sample(s) received same day of sampling.
- ☐ Evidence of a chilling process
- ☐ No Temp. Blank. Inside temperature of cooler recorded.
- ☐ Temperature not taken:

*Refer to SOP CF-SS-01 for Temperature Criteria

F:\DeimeryC\QA Folder\QA Forms & Log Book pgs\Cooler Receipt rev17.doc

Appendix D

Field Forms

Well GP-275
Date 2/29/12
Time 745
DTW 15 ~~00.5~~ feet
TD 35 feet
WV .5 gallons
3WV 1.5 gallons

Time	Total Volume	Temp (C)	pH	Spec Cond.
745	0	8.67	8.84	0.466
748	.5	9.10	9.18	0.466
751	1	9.15	9.14	0.465
755	1.5	9.19	9.08	0.465

Sample Time 755
DO .38
ORP -15.5
DTW 14.49 feet

Well GP-29-5
 Date 2/29/12
 Time 1510
 DTW 24' feet
 TD 35 feet
 WV .2 gallons
 3WV .6 gallons

Time	Total Volume	Temp (C)	pH	Spec Cond.
1508	0	9.53	5.63	514
1510	.2	10.19		522
1512	.4	10.22		529
	.6	10.20		522

GP-Dup

Sample Time 1515
 DO 1.56
 ORP 767
 DTW _____

Well GP-29-M
Date 2/29/12
Time 2:14:05
DTW 29' feet
TD 60 feet
WV .75 gallons
3WV 2.25 gallons

Time	Total Volume	Temp (C)	pH	Spec Cond.
1408	0	6.31	8.52	413
1412	.75	9.00	8.59	479
1417	1.5	9.33	8.80	485
1422	2.25	9.26	8.82	483

Sample Time 11:25
DO .81
ORP 60.9
DTW 24.31

Well GP-29-D
 Date 2/29/12
 Time 1045
 DTW 28.52 feet
 TD 87 feet
 WV 1.5 gallons
 3WV 4.5 gallons

Time	Total Volume	Temp (C)	pH	Spec Cond.
1240	0	8.88	8.50	0.231
1241	1.5	10.04	8.73	0.463
1251	3	10.26	8.71	0.467
1300	4.5	10.12	8.67	0.466

Sample Time 1305
 DO 0.19
 ORP -22.0
 DTW 27.98

Well GP-30-D

Date 2/29/12

Time 920

DTW 26.32 feet

TD 36 feet

WV .25 gallons

SWV .75 gallons

DSMV = 5
UW = 25.85

Time Total Volume Temp (C) pH Spec Cond.

922	0	12.15	4.27	0.680
924	.25	12.57	4.25	0.694
926	.5	12.47	4.36	0.689
928	.75	12.46	4.38	0.686
930	1			

Sample Time 930

DO 2.01

ORP 173.3

DTW 28.92