

October 16<sup>th</sup>, 2012

Ms. Lynn Dittmer  
Metropolitan Area Planning Agency  
2222 Cuming Street  
Omaha, NE 68102

Re: Brownfields Coalition Assessment Grant  
Supplemental Limited Phase II ESA Report  
Former Business Printing Facility  
4012 S. 24<sup>th</sup> Street, Omaha, NE

Dear Ms. Dittmer:

The purpose of this letter is to summarize the supplemental Phase II Environmental Site Assessment (ESA) sampling activities that were performed by Alfred Benesch & Company (Benesch) at the former Business Printing Facility located at 4012 S. 24<sup>th</sup> Street in Omaha, Nebraska. This supplemental Phase II ESA is being prepared for the Metro Area Planning Agency (MAPA) and was conducted as part of the Brownfields Coalition Assessment Grant being administered by MAPA. A Phase II ESA was previously prepared for this facility (August 24, 2012; Benesch) to assess the soil and soil vapor in the subsurface surrounding the building, specifically beneath the parking lot adjacent south of the building, where a dry cleaning facility previously operated. Boring SB-16, installed adjacent to the building as part of the initial Phase II ESA, exhibited a soil vapor tetrachloroethene (PCE) concentration above the "Draft" Nebraska Department of Environmental Quality (NDEQ) Voluntary Cleanup Program (VCP) Soil Gas Remediation Goal (RG) for residential settings. This supplemental assessment was conducted to determine the presence of PCE in soil vapor beneath the floor of the Business Printing Facility structure north of SB-16.

The activities conducted as part of the supplemental Phase II ESA included sub-surface soil and soil vapor sampling within the building, adjacent to SB-16. The fieldwork was governed by the Supplemental investigation Work Plan prepared by Benesch and approved by EPA with comments on September 21, 2012. Field activities were conducted on October 1<sup>st</sup>, 2012. The project area is depicted on the attached Project Location Map (Figure 1).

## **Field Activities**

### *Soil Sampling*

Benesch placed five (5) borings in the project area within the building (SB-26 through SB-30). The borings were placed along the interior wall adjacent to SB-16, two rows deep. All borings were spaced at 15' intervals, with three borings (SB-26 through SB-28) placed in the first row along the east wall, and two borings (SB-29, SB-30) placed in a second row 15' further north. The boring locations are depicted on the attached Boring Location Map (Figure 2).

The borings were installed using a track mounted Geoprobe unit operated by Saberprobe, LLC. The samples were collected using Macro-Core samplers fitted with polyvinyl chloride (PVC) liners. Borings were advanced to a total depth of 15' below ground surface (bgs). Composite samples were collected for field screening purposes from the 0-3', 3-7', 7-11' and 10-15' intervals in all borings. Groundwater was not encountered in any of the borings. The composite samples were split into two aliquots with one aliquot placed in a glass jar, covered with aluminum foil and allowed to equilibrate

at ambient temperature (minimum of 65 deg. F) for a minimum of 15 minutes. The remaining aliquot was placed into one 4-ounce jar, sealed and packed on ice.

A headspace analysis of each equilibrated sample was conducted using a field photoionization detector (PID) equipped with an 11.7 eV bulb. The remaining soil from the sampler tubes was then containerized until lab results were received, at which time it was disposed of as normal trash. The three soil samples exhibiting the highest PID readings were submitted for analysis of VOCs.

Fill material, including a mixture of silt and clay was observed within the upper 4 to 9 feet of the borings. Trash and glass pieces were also observed in the upper 3' of boring SB-30. The fill material was observed to a depth of approximately 4' in the first row with an increase in thickness of fill material observed in the second row. No discoloration or odor was observed in any of the borings. PID readings ranged from 0.1 to 0.7 relative response units (rru). Boring logs for all borings are included as an attachment to this report.

Based on PID readings, the samples from borings SB-26 (7-11'), SB-27 (0-3'), and SB-30 (0-3') were labeled, packed on ice, and submitted under chain of custody to TestAmerica in Cedar Falls, Iowa for Volatile Organic Compound (VOC) analysis by EPA method SW8260B. Borings SB-26 and SB-27 were located in the first row, with SB-27 being located adjacent to exterior boring SB-16; and SB-30 was located in the second row.

All soil samples were non-detect for VOCs. The laboratory reports and chain of custodies are also included as an attachment. All borings were backfilled with hydrated bentonite chips once completed, and the surface was restored to its original condition.

#### *Soil Vapor*

Soil vapor points were installed in the same borings selected for soil analysis; borings SB-26, SB-27, and SB-30 to determine the presence of PCE in soil vapor below the facility floor in these locations. The locations were selected based on PID readings, the proximity of SB-27 to SB-16, and the location of SB-30 at an increased distance from the apparent source near SB-16 to determine lateral extent of potential soil vapor impacts. The vapor points were set at 6' bgs and vapor samples were collected using 1L SUMMA® canisters. Samples were collected according to the Benesch Environmental Standard Operating Procedures for Soil Vapor Sampling.

The vapor samples were labeled and submitted under chain of custody to TestAmerica Laboratories, Inc. in Knoxville, TN for full VOC analysis by EPA method TO-15. The laboratory reports and chain of custodies are also included as an attachment.

Since the initial Phase II ESA report was completed (August 24, 2012), the NDEQ has revised the "Draft" Soil Gas RGs for the Vapor Intrusion Pathway. PCE remediation goals were significantly increased for both residential and industrial settings. Several VOCs were detected in the vapor samples collected from all three borings; however, all constituents were detected below the revised VCP RGs for both residential and industrial/commercial standards. PCE was detected in SB-26 (4,000 ug/m<sup>3</sup>), SB-27 (2,700 ug/m<sup>3</sup>) and SB-30 (740 ug/m<sup>3</sup>).

Previously, as reported in the August 24, 2012 Phase II ESA, the VCP residential remediation goal for silty soils for PCE was 238 ug/m<sup>3</sup>; it was increased to 5,430 ug/m<sup>3</sup>. The previous VCP industrial remediation goal for silty soils for PCE was 48,000 ug/m<sup>3</sup>; it was increased to 404,000 ug/m<sup>3</sup>. Other constituents were decreased under the revised remediation goals; however, all detected constituents were below the revised VCP RGs.

Once the samples were collected, the tubing was removed from the boring and the surface was restored to its original condition.

### *Quality Assurance/Quality Control*

Duplicate soil and soil vapor samples were collected for QA/QC purposes and were submitted for the same analysis as the parent samples. These samples were submitted for analysis to assess the precision of the analysis and the variability of the media. A duplicate soil sample was collected from SB-26 from the 7-11' interval for VOCs. A duplicate soil vapor sample was collected from SB-26. Based on review of the duplicate sample data, all data can be relied upon for its intended purpose.

### **Analysis and Recommendations**

Five soil borings were installed inside the facility, adjacent to SB-16, which previously showed a PCE concentration in excess of "Draft" Residential NDEQ VCP remediation goals for soil gas. Soil and soil vapor samples were collected from three borings to assess the soil vapor to enclosed space pathway. Since the initial Phase II ESA was conducted, NDEQ has revised the "Draft" Soil Gas VCP RGs. The revised RGs reflected a significant increase for PCE for both residential and industrial settings. Due to the increase in the PCE RG, there were no soil gas detections above either the residential or industrial RGs in the borings completed within the building footprint. Other VOCs were detected; however, they were also below the residential and industrial RGs. VOCs were not detected in soil, and therefore, the RGs for the soil exposure pathway were not exceeded.

Based on the results of this Supplemental Phase II ESA, the increase in the PCE soil gas RGs, and the diminished concentration of PCE in soil vapor detected north of SB-16 it is Benesch's opinion that the impacts observed at the site do not pose an immediate threat to human health or the environment given the current and proposed commercial use of the facility. Benesch recommends no further action to assess the soil exposure pathway at this facility. Should future soil disturbance occur in the parking area south of the structure, it is advisable to develop a soil management plan for any soils to be removed from this area.

If you have any questions regarding the conduct or conclusions of this study, please do not hesitate to contact either of the undersigned at (402) 333-5792.

Respectfully Submitted,

Alfred Benesch & Company



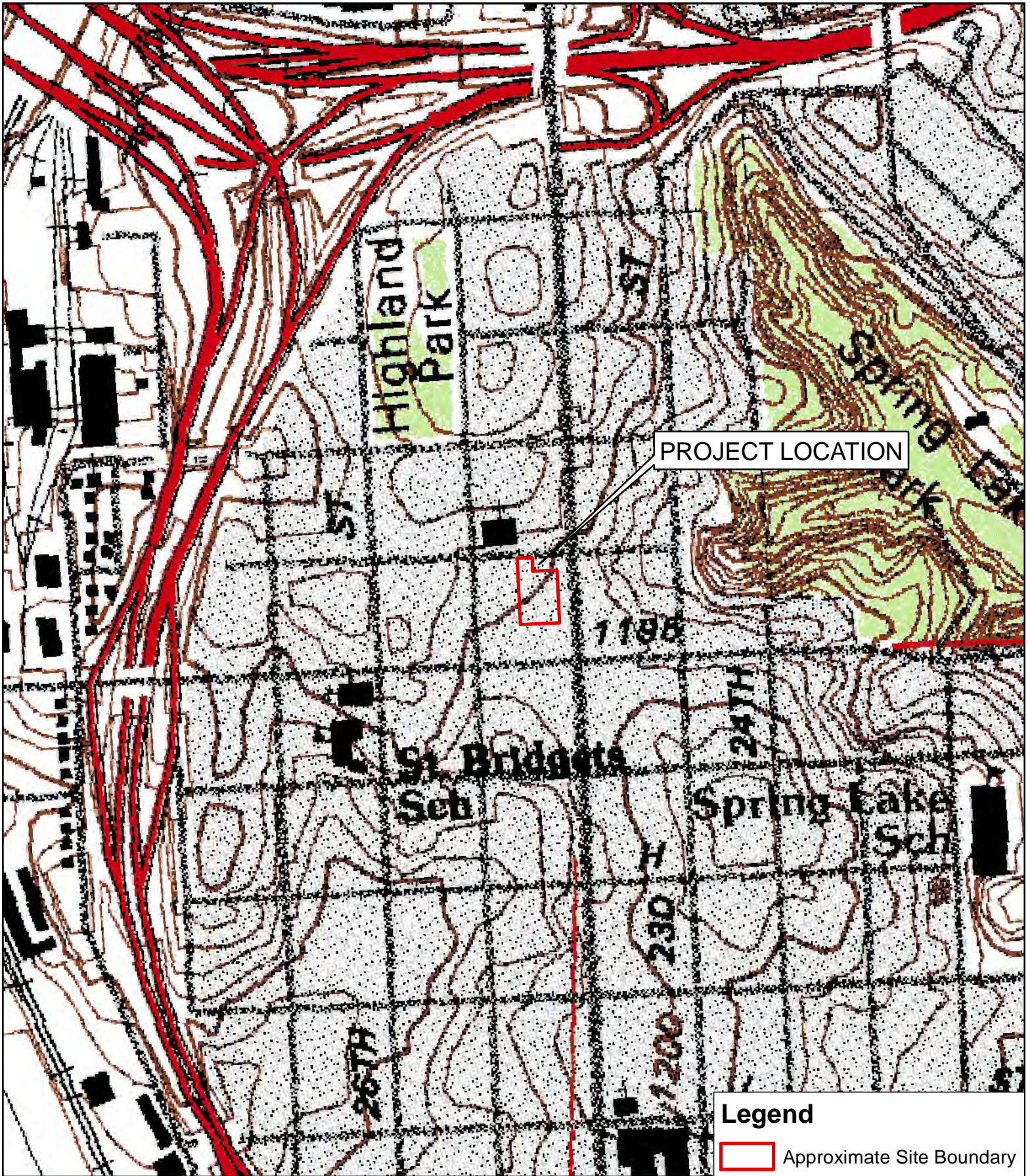
Brian Fettin  
Project Scientist



Frank Uhlarik  
Senior Project Manager

Attachments

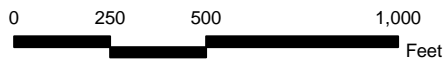
## FIGURES



**Legend**

 Approximate Site Boundary

NIROC 2010 Douglas County Aerial Imagery



**PROJECT LOCATION MAP - FIGURE 1**

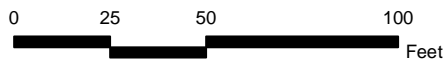
Omaha MAPA Brownfields  
 South Omaha Redevelopment Area  
 Former Business Printing Facility  
 4012 S 24th St  
 Omaha, Douglas County, Nebraska



### Legend

- Approximate Site Boundary
- Geoprobe Locations
- Borings Which Exceeded "Draft" Soil Vapor Residential Standards for PCE

NIROC 2010 Douglas County Aerial Imagery



### BORING PLAN - FIGURE 2

Proposed Boring Plan  
 Omaha MAPA Brownfields  
 South Omaha Redevelopment Area  
 4012 S 24th St  
 Omaha, Douglas County, Nebraska

**LABORATORY DATA/  
DATA VALIDATION FORMS**

<b>H2J040429 Analytical Report .....</b>	<b>1</b>
<b>Sample Receipt Documentation .....</b>	<b>18</b>
<b>Total Number of Pages .....</b>	<b>20</b>



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

## ANALYTICAL REPORT

Former Business Printing

Lot #: H2J040429

Brian Fettin

Alfred Benesch & Company  
14748 West Center Road  
Suite 200  
Omaha, NE 68144

TESTAMERICA LABORATORIES, INC.



Ryan Henry  
Project Manager

October 8, 2012

# ANALYTICAL METHODS SUMMARY

H2J040429

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Volatile Organics by TO15	EPA-2 TO-15

**References:**

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

## SAMPLE SUMMARY

H2J040429

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
MWTML	001	SB-26	10/01/12	13:31
MWTMM	002	SB-27	10/01/12	13:35
MWTMN	003	SB-30	10/01/12	13:39
MWTMP	004	FD-1	10/01/12	

**NOTE (S) :**

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

## PROJECT NARRATIVE

### H2J040429

The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

This report shall not be reproduced except in full, without the written approval of the laboratory.

**The original chain of custody documentation is included with this report.**

#### Sample Receipt

There were no problems with the condition of the samples received.

#### Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria. Even though the calibration verification analyzed on 10/4/12 exhibited a % difference of > 30% for 1,2-dichloro-1,1,2,2-tetrachloroethane, the results were within the LCS acceptance limits.

## CERTIFICATION SUMMARY

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Knoxville	ACLASS	DoD ELAP		ADE-1434
TestAmerica Knoxville	Arkansas	State Program	6	88-0688
TestAmerica Knoxville	California	State Program	9	2423
TestAmerica Knoxville	Colorado	State Program	8	N/A
TestAmerica Knoxville	Connecticut	State Program	1	PH-0223
TestAmerica Knoxville	Florida	NELAC	4	E87177
TestAmerica Knoxville	Georgia	State Program	4	906
TestAmerica Knoxville	Hawaii	State Program	9	N/A
TestAmerica Knoxville	Indiana	State Program	5	C-TN-02
TestAmerica Knoxville	Iowa	State Program	7	375
TestAmerica Knoxville	Kansas	NELAC	7	E-10349
TestAmerica Knoxville	Kentucky	State Program	4	90101
TestAmerica Knoxville	Louisiana	NELAC	6	LA110001
TestAmerica Knoxville	Louisiana	NELAC	6	83979
TestAmerica Knoxville	Maryland	State Program	3	277
TestAmerica Knoxville	Michigan	State Program	5	9933
TestAmerica Knoxville	Minnesota	NELAC	5	047-999-429
TestAmerica Knoxville	Nevada	State Program	9	TN00009
TestAmerica Knoxville	New Jersey	NELAC	2	TN001
TestAmerica Knoxville	New York	NELAC	2	10781
TestAmerica Knoxville	North Carolina	North Carolina DENR	4	64
TestAmerica Knoxville	North Carolina	North Carolina PHL	4	21705
TestAmerica Knoxville	Ohio	OVAP	5	CL0059
TestAmerica Knoxville	Oklahoma	State Program	6	9415
TestAmerica Knoxville	Pennsylvania	NELAC	3	68-00576
TestAmerica Knoxville	South Carolina	State Program	4	84001
TestAmerica Knoxville	Tennessee	State Program	4	2014
TestAmerica Knoxville	Texas	NELAC	6	T104704380-TX
TestAmerica Knoxville	USDA	USDA		P330-11-00035
TestAmerica Knoxville	Utah	NELAC	8	QUAN3
TestAmerica Knoxville	Virginia	State Program	3	165
TestAmerica Knoxville	Washington	State Program	10	C593
TestAmerica Knoxville	West Virginia	West Virginia DEP	3	345
TestAmerica Knoxville	West Virginia	West Virginia DHHR (DW)	3	9955C
TestAmerica Knoxville	Wisconsin	State Program	5	998044300

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.

## Alfred Benesch &amp; Company

Client Sample ID: SB-26

## GC/MS Volatiles

Lot-Sample # H2J040429 - 001 Work Order # MWTML1AD Matrix.....: AIR

Date Sampled...: 10/01/2012 Date Received...: 10/04/2012  
 Prep Date.....: 10/04/2012 Analysis Time....: 10/05/2012  
 Prep Batch #.....: 2278085 Analysis Time....: 04:08  
 Dilution Factor.: 34.4 Method.....: TO-15

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Acetone	ND	170	48	ND	410	110
2,2,4-Trimethylpentane	ND	17	1.3	ND	80	6.3
Naphthalene	ND	17	3.1	ND	90	16
2-Butanone (MEK)	ND	34	6.9	ND	100	20
n-Hexane	1.5 J	17	1.1	5.3 J	61	3.9
Carbon disulfide	1.3 J	17	1.1	3.9 J	54	3.3
Dichlorodifluoromethane	ND	6.9	2.3	ND	34	12
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	6.9	1.1	ND	48	7.7
Chloromethane	ND	17	5.5	ND	36	11
Vinyl chloride	ND	6.9	2.4	ND	18	6.2
Bromomethane	ND	6.9	1.1	ND	27	4.3
Chloroethane	ND	6.9	1.2	ND	18	3.2
Trichlorofluoromethane	5.7 J	6.9	0.83	32 J	39	4.6
1,1-Dichloroethane	ND	6.9	1.1	ND	27	4.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	6.9	1.1	ND	53	8.2
Methylene chloride	16 J B	17	1.5	55 J B	60	5.4
1,1-Dichloroethane	ND	6.9	0.89	ND	28	3.6
cis-1,2-Dichloroethene	ND	6.9	2.1	ND	27	8.2
Chloroform	17	6.9	1.3	85	34	6.4
1,1,1-Trichloroethane	ND	6.9	1.0	ND	38	5.6
Carbon tetrachloride	ND	6.9	1.3	ND	43	8.2
Benzene	1.9 J	6.9	1.9	6.2 J	22	6.2
1,2-Dichloroethane	ND	6.9	1.6	ND	28	6.5
Trichloroethene	ND	6.9	1.2	ND	37	6.7
1,2-Dichloropropane	ND	6.9	1.8	ND	32	8.3
cis-1,3-Dichloropropene	ND	6.9	2.5	ND	31	12
Toluene	7.5	6.9	1.9	28	26	7.0
trans-1,3-Dichloropropene	ND	6.9	1.7	ND	31	7.5
1,1,2-Trichloroethane	ND	6.9	1.9	ND	38	10
Tetrachloroethene	590	6.9	1.4	4000	47	9.3
1,2-Dibromoethane (EDB)	ND	6.9	1.5	ND	53	12
Chlorobenzene	ND	6.9	1.7	ND	32	7.8
Ethylbenzene	ND	6.9	2.3	ND	30	10
m-Xylene & p-Xylene	ND	6.9	4.1	ND	30	18
o-Xylene	ND	6.9	2.1	ND	30	9.1
Styrene	ND	6.9	2.0	ND	29	8.5
1,1,2,2-Tetrachloroethane	ND	6.9	2.1	ND	47	14
1,3,5-Trimethylbenzene	ND	6.9	2.2	ND	34	11
1,2,4-Trimethylbenzene	ND	6.9	2.2	ND	34	11
1,3-Dichlorobenzene	ND	6.9	2.2	ND	41	13
1,4-Dichlorobenzene	ND	6.9	2.2	ND	41	13
1,2-Dichlorobenzene	ND	6.9	2.4	ND	41	14
Benzyl chloride	ND	14	2.7	ND	71	14
1,2,4-Trichlorobenzene	ND	34	3.4	ND	260	25

## Alfred Benesch &amp; Company

Client Sample ID: SB-26

## GC/MS Volatiles

Lot-Sample # H2J040429 - 001 Work Order # MWTML1AD Matrix.....: AIR

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Hexachlorobutadiene	ND	34	2.7	ND	370	29

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
4-Bromofluorobenzene	102	60 - 140

**Qualifiers**

- B Method blank contamination. The associated method blank contains the target analyte at a reportable level.  
 J Estimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

## Alfred Benesch &amp; Company

Client Sample ID: SB-27

## GC/MS Volatiles

Lot-Sample # H2J040429 - 002 Work Order # MWTMM1AE Matrix.....: AIR

Date Sampled...: 10/01/2012 Date Received...: 10/04/2012  
 Prep Date.....: 10/04/2012 Analysis Time....: 10/05/2012  
 Prep Batch #....: 2278085 Analysis Time....: 05:00  
 Dilution Factor.: 28.2 Method.....: TO-15

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Carbon disulfide	1.6 J	14	0.87	5.1 J	44	2.7
n-Hexane	1.0 J	14	0.90	3.6 J	50	3.2
2-Butanone (MEK)	ND	28	5.6	ND	83	17
Naphthalene	ND	14	2.5	ND	74	13
2,2,4-Trimethylpentane	ND	14	1.1	ND	66	5.1
Acetone	ND	140	39	ND	330	94
Dichlorodifluoromethane	ND	5.6	1.9	ND	28	9.5
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	5.6	0.90	ND	39	6.3
Chloromethane	ND	14	4.5	ND	29	9.3
Vinyl chloride	ND	5.6	2.0	ND	14	5.1
Bromomethane	ND	5.6	0.90	ND	22	3.5
Chloroethane	ND	5.6	0.99	ND	15	2.6
Trichlorofluoromethane	5.7	5.6	0.68	32	32	3.8
1,1-Dichloroethene	ND	5.6	0.90	ND	22	3.6
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.6	0.87	ND	43	6.7
Methylene chloride	14 B	14	1.3	48 B	49	4.4
1,1-Dichloroethane	ND	5.6	0.73	ND	23	3.0
cis-1,2-Dichloroethene	ND	5.6	1.7	ND	22	6.7
Chloroform	34	5.6	1.1	170	28	5.2
1,1,1-Trichloroethane	ND	5.6	0.85	ND	31	4.6
Carbon tetrachloride	ND	5.6	1.1	ND	35	6.7
Benzene	ND	5.6	1.6	ND	18	5.0
1,2-Dichloroethane	ND	5.6	1.3	ND	23	5.4
Trichloroethene	ND	5.6	1.0	ND	30	5.5
1,2-Dichloropropane	ND	5.6	1.5	ND	26	6.8
cis-1,3-Dichloropropene	ND	5.6	2.1	ND	26	9.5
Toluene	3.9 J	5.6	1.5	15 J	21	5.7
trans-1,3-Dichloropropene	ND	5.6	1.4	ND	26	6.1
1,1,2-Trichloroethane	ND	5.6	1.5	ND	31	8.3
Tetrachloroethene	400	5.6	1.1	2700	38	7.7
1,2-Dibromoethane (EDB)	ND	5.6	1.2	ND	43	9.5
Chlorobenzene	ND	5.6	1.4	ND	26	6.4
Ethylbenzene	ND	5.6	1.9	ND	24	8.3
m-Xylene & p-Xylene	ND	5.6	3.4	ND	24	15
o-Xylene	ND	5.6	1.7	ND	24	7.5
Styrene	ND	5.6	1.6	ND	24	7.0
1,1,2,2-Tetrachloroethane	ND	5.6	1.7	ND	39	12
1,3,5-Trimethylbenzene	ND	5.6	1.8	ND	28	9.0
1,2,4-Trimethylbenzene	ND	5.6	1.8	ND	28	8.7
1,3-Dichlorobenzene	ND	5.6	1.8	ND	34	11
1,4-Dichlorobenzene	ND	5.6	1.8	ND	34	11
1,2-Dichlorobenzene	ND	5.6	2.0	ND	34	12
Benzyl chloride	ND	11	2.2	ND	58	11
1,2,4-Trichlorobenzene	ND	28	2.8	ND	210	21



## Alfred Benesch &amp; Company

Client Sample ID: SB-27

## GC/MS Volatiles

Lot-Sample # H2J040429 - 002 Work Order # MWTMM1AE Matrix.....: AIR

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Hexachlorobutadiene	ND	28	2.2	ND	300	23

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
4-Bromofluorobenzene	102	60 - 140

Qualifiers

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

## Alfred Benesch &amp; Company

Client Sample ID: SB-30

## GC/MS Volatiles

Lot-Sample # H2J040429 - 003      Work Order # MWTMN1AD      Matrix.....: AIR

Date Sampled...: 10/01/2012      Date Received...: 10/04/2012

Prep Date.....: 10/04/2012      Analysis Time....: 10/05/2012

Prep Batch #....: 2278085      Analysis Time....: 05:52

Dilution Factor.: 10      Method.....: TO-15

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Acetone	71	50	14	170	120	33
2,2,4-Trimethylpentane	ND	5.0	0.39	ND	23	1.8
Naphthalene	ND	5.0	0.90	ND	26	4.7
2-Butanone (MEK)	4.8 J	10	2.0	14 J	29	5.9
n-Hexane	4.6 J	5.0	0.32	16 J	18	1.1
Carbon disulfide	1.6 J	5.0	0.31	5.0 J	16	0.97
Dichlorodifluoromethane	0.94 J	2.0	0.68	4.7 J	9.9	3.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	0.32	ND	14	2.2
Chloromethane	ND	5.0	1.6	ND	10	3.3
Vinyl chloride	ND	2.0	0.71	ND	5.1	1.8
Bromomethane	ND	2.0	0.32	ND	7.8	1.2
Chloroethane	ND	2.0	0.35	ND	5.3	0.92
Trichlorofluoromethane	6.7	2.0	0.24	38	11	1.3
1,1-Dichloroethene	ND	2.0	0.32	ND	7.9	1.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	0.31	ND	15	2.4
Methylene chloride	11 B	5.0	0.45	37 B	17	1.6
1,1-Dichloroethane	ND	2.0	0.26	ND	8.1	1.1
cis-1,2-Dichloroethene	ND	2.0	0.60	ND	7.9	2.4
Chloroform	9.4	2.0	0.38	46	9.8	1.9
1,1,1-Trichloroethane	1.4 J	2.0	0.30	7.6 J	11	1.6
Carbon tetrachloride	ND	2.0	0.38	ND	13	2.4
Benzene	1.7 J	2.0	0.56	5.3 J	6.4	1.8
1,2-Dichloroethane	ND	2.0	0.47	ND	8.1	1.9
Trichloroethene	1.3 J	2.0	0.36	6.9 J	11	1.9
1,2-Dichloropropane	ND	2.0	0.52	ND	9.2	2.4
cis-1,3-Dichloropropene	ND	2.0	0.74	ND	9.1	3.4
Toluene	13	2.0	0.54	48	7.5	2.0
trans-1,3-Dichloropropene	ND	2.0	0.48	ND	9.1	2.2
1,1,2-Trichloroethane	ND	2.0	0.54	ND	11	2.9
Tetrachloroethene	110	2.0	0.40	740	14	2.7
1,2-Dibromoethane (EDB)	ND	2.0	0.44	ND	15	3.4
Chlorobenzene	ND	2.0	0.49	ND	9.2	2.3
Ethylbenzene	1.7 J	2.0	0.68	7.4 J	8.7	3.0
m-Xylene & p-Xylene	6.6	2.0	1.2	28	8.7	5.2
o-Xylene	2.4	2.0	0.61	11	8.7	2.6
Styrene	ND	2.0	0.58	ND	8.5	2.5
1,1,2,2-Tetrachloroethane	ND	2.0	0.61	ND	14	4.2
1,3,5-Trimethylbenzene	ND	2.0	0.65	ND	9.8	3.2
1,2,4-Trimethylbenzene	1.7 J	2.0	0.63	8.2 J	9.8	3.1
1,3-Dichlorobenzene	ND	2.0	0.65	ND	12	3.9
1,4-Dichlorobenzene	ND	2.0	0.64	ND	12	3.8
1,2-Dichlorobenzene	ND	2.0	0.70	ND	12	4.2
Benzyl chloride	ND	4.0	0.78	ND	21	4.0

## Alfred Benesch &amp; Company

Client Sample ID: SB-30

GC/MS Volatiles

Lot-Sample # H2J040429 - 003 Work Order # MWTMN1AD Matrix.....: AIR

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,2,4-Trichlorobenzene	ND	10	0.98	ND	74	7.3
Hexachlorobutadiene	ND	10	0.78	ND	110	8.3

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
4-Bromofluorobenzene	103	60 - 140

**Qualifiers**

- B Method blank contamination. The associated method blank contains the target analyte at a reportable level.  
 J Estimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

## Alfred Benesch &amp; Company

Client Sample ID: FD-1

## GC/MS Volatiles

Lot-Sample # H2J040429 - 004 Work Order # MWTMP1AD Matrix.....: AIR

Date Sampled...: 10/01/2012 Date Received...: 10/04/2012  
 Prep Date.....: 10/04/2012 Analysis Time....: 10/05/2012  
 Prep Batch #....: 2278085 Analysis Time....: 06:43  
 Dilution Factor.: 34.2 Method.....: TO-15

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Carbon disulfide	1.4 J	17	1.1	4.5 J	53	3.3
n-Hexane	1.8 J	17	1.1	6.5 J	60	3.9
2-Butanone (MEK)	ND	34	6.8	ND	100	20
Naphthalene	ND	17	3.1	ND	90	16
2,2,4-Trimethylpentane	ND	17	1.3	ND	80	6.2
Acetone	ND	170	48	ND	410	110
Dichlorodifluoromethane	ND	6.8	2.3	ND	34	12
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	6.8	1.1	ND	48	7.7
Chloromethane	ND	17	5.5	ND	35	11
Vinyl chloride	ND	6.8	2.4	ND	17	6.2
Bromomethane	ND	6.8	1.1	ND	27	4.2
Chloroethane	ND	6.8	1.2	ND	18	3.2
Trichlorofluoromethane	5.2 J	6.8	0.82	29 J	38	4.6
1,1-Dichloroethene	ND	6.8	1.1	ND	27	4.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	6.8	1.1	ND	52	8.1
Methylene chloride	14 J B	17	1.5	48 J B	59	5.3
1,1-Dichloroethane	ND	6.8	0.89	ND	28	3.6
cis-1,2-Dichloroethene	ND	6.8	2.1	ND	27	8.1
Chloroform	17	6.8	1.3	85	33	6.3
1,1,1-Trichloroethane	ND	6.8	1.0	ND	37	5.6
Carbon tetrachloride	ND	6.8	1.3	ND	43	8.2
Benzene	1.9 J	6.8	1.9	6.1 J	22	6.1
1,2-Dichloroethane	ND	6.8	1.6	ND	28	6.5
Trichloroethene	ND	6.8	1.2	ND	37	6.6
1,2-Dichloropropane	ND	6.8	1.8	ND	32	8.2
cis-1,3-Dichloropropene	ND	6.8	2.5	ND	31	11
Toluene	8.3	6.8	1.8	31	26	7.0
trans-1,3-Dichloropropene	ND	6.8	1.6	ND	31	7.5
1,1,2-Trichloroethane	ND	6.8	1.8	ND	37	10
Tetrachloroethene	610	6.8	1.4	4100	46	9.3
1,2-Dibromoethane (EDB)	ND	6.8	1.5	ND	53	12
Chlorobenzene	ND	6.8	1.7	ND	31	7.7
Ethylbenzene	ND	6.8	2.3	ND	30	10
m-Xylene & p-Xylene	ND	6.8	4.1	ND	30	18
o-Xylene	ND	6.8	2.1	ND	30	9.1
Styrene	ND	6.8	2.0	ND	29	8.4
1,1,2,2-Tetrachloroethane	ND	6.8	2.1	ND	47	14
1,3,5-Trimethylbenzene	ND	6.8	2.2	ND	34	11
1,2,4-Trimethylbenzene	ND	6.8	2.2	ND	34	11
1,3-Dichlorobenzene	ND	6.8	2.2	ND	41	13
1,4-Dichlorobenzene	ND	6.8	2.2	ND	41	13
1,2-Dichlorobenzene	ND	6.8	2.4	ND	41	14
Benzyl chloride	ND	14	2.7	ND	71	14
1,2,4-Trichlorobenzene	ND	34	3.4	ND	250	25

## Alfred Benesch &amp; Company

Client Sample ID: FD-1

GC/MS Volatiles

Lot-Sample # H2J040429 - 004 Work Order # MWTMPIAD Matrix.....: AIR

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Hexachlorobutadiene	ND	34	2.7	ND	360	28

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
4-Bromofluorobenzene	100	60 - 140

Qualifiers

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

MDL (ng/m3) = MDL (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

Alfred Benesch & Company  
 Client Sample ID: INTRA-LAB BLANK  
 GC/MS Volatiles

Lot-Sample # H2J040000 - 085B      Work Order # MWTP91AA      Matrix.....: AIR

Prep Date.....: 10/03/2012      Date Received..: 10/04/2012  
 Prep Date.....: 10/04/2012      Analysis Time....: 10/04/2012  
 Prep Batch #.....: 2278085      Analysis Time....: 15:46  
 Dilution Factor.: 1      Method.....: TO-15

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
2,2,4-Trimethylpentane	ND	0.50	0.039	ND	2.3	0.18
n-Hexane	ND	0.50	0.032	ND	1.8	0.11
2-Butanone (MEK)	ND	1.0	0.20	ND	2.9	0.59
Naphthalene	ND	0.50	0.090	ND	2.6	0.47
Acetone	ND	5.0	1.4	ND	12	3.3
Carbon disulfide	ND	0.50	0.031	ND	1.6	0.097
Dichlorodifluoromethane	ND	0.20	0.068	ND	0.99	0.34
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.20	0.032	ND	1.4	0.22
Chloromethane	ND	0.50	0.16	ND	1.0	0.33
Vinyl chloride	ND	0.20	0.071	ND	0.51	0.18
Bromomethane	ND	0.20	0.032	ND	0.78	0.12
Chloroethane	ND	0.20	0.035	ND	0.53	0.092
Trichlorofluoromethane	ND	0.20	0.024	ND	1.1	0.13
1,1-Dichloroethane	ND	0.20	0.032	ND	0.79	0.13
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.20	0.031	ND	1.5	0.24
<b>Methylene chloride</b>	<b>0.057 J</b>	<b>0.50</b>	<b>0.045</b>	<b>0.20 J</b>	<b>1.7</b>	<b>0.16</b>
1,1-Dichloroethane	ND	0.20	0.026	ND	0.81	0.11
cis-1,2-Dichloroethene	ND	0.20	0.060	ND	0.79	0.24
Chloroform	ND	0.20	0.038	ND	0.98	0.19
1,1,1-Trichloroethane	ND	0.20	0.030	ND	1.1	0.16
Carbon tetrachloride	ND	0.20	0.038	ND	1.3	0.24
Benzene	ND	0.20	0.056	ND	0.64	0.18
1,2-Dichloroethane	ND	0.20	0.047	ND	0.81	0.19
Trichloroethene	ND	0.20	0.036	ND	1.1	0.19
1,2-Dichloropropane	ND	0.20	0.052	ND	0.92	0.24
cis-1,3-Dichloropropene	ND	0.20	0.074	ND	0.91	0.34
Toluene	ND	0.20	0.054	ND	0.75	0.20
trans-1,3-Dichloropropene	ND	0.20	0.048	ND	0.91	0.22
1,1,2-Trichloroethane	ND	0.20	0.054	ND	1.1	0.29
Tetrachloroethene	ND	0.20	0.040	ND	1.4	0.27
1,2-Dibromoethane (EDB)	ND	0.20	0.044	ND	1.5	0.34
Chlorobenzene	ND	0.20	0.049	ND	0.92	0.23
Ethylbenzene	ND	0.20	0.068	ND	0.87	0.30
m-Xylene & p-Xylene	ND	0.20	0.12	ND	0.87	0.52
o-Xylene	ND	0.20	0.061	ND	0.87	0.26
Styrene	ND	0.20	0.058	ND	0.85	0.25
1,1,2,2-Tetrachloroethane	ND	0.20	0.061	ND	1.4	0.42
1,3,5-Trimethylbenzene	ND	0.20	0.065	ND	0.98	0.32
1,2,4-Trimethylbenzene	ND	0.20	0.063	ND	0.98	0.31
1,3-Dichlorobenzene	ND	0.20	0.065	ND	1.2	0.39
1,4-Dichlorobenzene	ND	0.20	0.064	ND	1.2	0.38
1,2-Dichlorobenzene	ND	0.20	0.070	ND	1.2	0.42
Benzyl chloride	ND	0.40	0.078	ND	2.1	0.40
1,2,4-Trichlorobenzene	ND	1.0	0.098	ND	7.4	0.73

**Alfred Benesch & Company**  
**Client Sample ID: INTRA-LAB BLANK**  
**GC/MS Volatiles**

**Lot-Sample #** H2J040000 - 085B      **Work Order #** MWTP91AA      **Matrix.....:** AIR

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Hexachlorobutadiene	ND	1.0	0.078	ND	11	0.83

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
4-Bromofluorobenzene	97	60 - 140

**Qualifiers**

J      Estimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

## Alfred Benesch &amp; Company

Client Sample ID: CHECK SAMPLE

## GC/MS Volatiles

Lot-Sample # H2J040000 - 085C Work Order # MWTP91AC Matrix.....: AIR

Prep Date.....: 10/03/2012 Date Received..: 10/04/2012

Prep Batch #.....: 2278085 Analysis Time....: 10/04/2012

Dilution Factor.: 1 Analysis Time....: 11:03

Method.....: TO-15

PARAMETER	SPIKE AMOUNT (ppb(v/v))	MEASURED AMOUNT (ppb(v/v))	SPIKE AMOUNT (ug/m3)	MEASURED AMOUNT (ug/m3)	PERCENT RECOVERY	RECOVERY LIMITS
Carbon disulfide	5.00	5.63	15.6	17.5	113	70 - 130
Acetone	5.00	3.85	11.9	9.15	77	60 - 140
Naphthalene	5.00	5.58	26.2	29.2	112	40 - 140
2-Butanone (MEK)	5.00	3.83	14.7	11.3	77	60 - 140
n-Hexane	5.00	5.21	17.6	18.4	104	70 - 130
2,2,4-Trimethylpentane	5.00	5.03	23.4	23.5	101	70 - 130
Dichlorodifluoromethane	5.00	6.32	24.7	31.3	126	60 - 140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	5.00	6.61	35.0	46.2	132	60 - 140
Chloromethane	5.00	5.99	10.3	12.4	120	60 - 140
Vinyl chloride	5.00	6.30	12.8	16.1	126	70 - 130
Bromomethane	5.00	6.05	19.4	23.5	121	70 - 130
Chloroethane	5.00	5.70	13.2	15.1	114	70 - 130
Trichlorofluoromethane	5.00	5.92	28.1	33.2	118	60 - 140
1,1-Dichloroethane	5.00	5.62	19.8	22.3	112	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	5.94	38.3	45.5	119	70 - 130
Methylene chloride	5.00	5.59	17.4	19.4	112	70 - 130
1,1-Dichloroethane	5.00	5.54	20.2	22.4	111	70 - 130
cis-1,2-Dichloroethene	5.00	5.37	19.8	21.3	107	70 - 130
Chloroform	5.00	5.30	24.4	25.9	106	70 - 130
1,1,1-Trichloroethane	5.00	5.13	27.3	28.0	103	70 - 130
Carbon tetrachloride	5.00	5.76	31.5	36.3	115	70 - 130
Benzene	5.00	4.90	16.0	15.7	98	70 - 130
1,2-Dichloroethane	5.00	4.94	20.2	20.0	99	70 - 130
Trichloroethene	5.00	4.73	26.9	25.4	95	70 - 130
1,2-Dichloropropane	5.00	5.19	23.1	24.0	104	70 - 130
cis-1,3-Dichloropropene	5.00	4.85	22.7	22.0	97	70 - 130
Toluene	5.00	4.70	18.8	17.7	94	70 - 130
trans-1,3-Dichloropropene	5.00	4.80	22.7	21.8	96	70 - 130
1,1,2-Trichloroethane	5.00	5.10	27.3	27.8	102	70 - 130
Tetrachloroethene	5.00	4.74	33.9	32.1	95	70 - 130
1,2-Dibromoethane (EDB)	5.00	4.86	38.4	37.4	97	70 - 130
Chlorobenzene	5.00	4.84	23.0	22.3	97	70 - 130
Ethylbenzene	5.00	4.75	21.7	20.6	95	70 - 130
m-Xylene & p-Xylene	10.0	9.70	43.4	42.1	97	70 - 130
o-Xylene	5.00	4.77	21.7	20.7	95	70 - 130
Styrene	5.00	4.72	21.3	20.1	94	70 - 130
1,1,2,2-Tetrachloroethane	5.00	5.21	34.3	35.7	104	70 - 130
1,3,5-Trimethylbenzene	5.00	4.36	24.6	21.4	87	70 - 130
1,2,4-Trimethylbenzene	5.00	4.66	24.6	22.9	93	70 - 130



## Alfred Benesch &amp; Company

Client Sample ID: CHECK SAMPLE

## GC/MS Volatiles

Lot-Sample #	H2J040000 - 085C		Work Order #	MWTP91AC		Matrix.....:	AIR
PARAMETER	SPIKE AMOUNT (ppb(v/v))	MEASURED AMOUNT (ppb(v/v))	SPIKE AMOUNT (ug/m3)	MEASURED AMOUNT (ug/m3)	PERCENT RECOVERY	RECOVERY LIMITS	
1,3-Dichlorobenzene	5.00	4.48	30.1	26.9	90	70 - 130	
1,4-Dichlorobenzene	5.00	4.50	30.1	27.0	90	70 - 130	
1,2-Dichlorobenzene	5.00	4.59	30.1	27.6	92	70 - 130	
Benzyl chloride	5.00	4.65	25.9	24.1	93	70 - 130	
1,2,4-Trichlorobenzene	5.00	4.93	37.1	36.6	99	60 - 140	
Hexachlorobutadiene	5.00	4.04	53.3	43.0	81	60 - 140	
SURROGATE		PERCENT RECOVERY			LABORATORY CONTROL LIMITS (%)		
4-Bromofluorobenzene		110			60 - 140		

Result (ug/m3) = Result (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] \* (Molecular Weight/24.45)

TAL Knoxville  
5815 Middlebrook Pike  
Knoxville, TN 37921  
phone 865-291-3000 fax 865-584-4315

# Canister Samples Chain of Custody Record

HAJDUH24

# TestAmerica

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <b>BRIAN FETTIN</b>		Sampled By: <b>RON PROCHASKA</b>		1 of 1 COCs	
Company: <b>BENESCH</b>		Phone:		EPA 25C		Other (Please specify in notes section)	
Address: <b>14148 W. CENTER, STE 200</b>		Site Contact:		EPA 3C		Landfill Gas	
City/State/Zip: <b>OMAHA, NE 68144</b>		TAL Contact:		TO-14A		Ambient Air	
Phone:				TO-15		Indoor Air	
FAX:				TO-16		Ambient Air	
Project Name: <b>SOUTH OMAHA RED. AREA</b>		Analysis Turnaround Time		ASTM D-1946		Other (Please specify in notes section)	
Site/location: <b>4012 S. 24th ST.</b>		Standard (Specify) <b>X</b>		EPA 25C		Other (Please specify in notes section)	
PO #		Rush (Specify)		EPA 3C		Other (Please specify in notes section)	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID
SB-26	10-1-12	1331	GRAB	28.5	1.5		10081 X
SB-27	↓	1335	↓	28.0	1.0		L3881 X
SB-30	↓	1339	↓	28.0	1.0		SL1281 X
FD-1	10-1-12	---	GRAB	28.5	1.5		LA7209 X
Sampled by: <b>RON PROCHASKA</b>							
Temperature (Fahrenheit)				Pressure (inches of Hg)			
Interior		Ambient		Interior		Ambient	
Start		Start		Start		Start	
Stop		Stop		Stop		Stop	
Special Instructions/QC Requirements & Comments:							
CUSTODY SEALS INTACT RECEIVED AT AMBIENT TEMP 6:50 10-4-12 1 COC FOR VPS# 1763198403 0004 3637 HUMAN / O'NEALS / IT							
Canisters Shipped by: <b>UPS</b>		Date/Time: 10-2-12/1600		Canisters Received by:			
Samples Relinquished by:		Date/Time: 10-2-12/1600		Received by:		Date/Time: 10-4-12 13:50	
Relinquished by:		Date/Time:		Received by:		Date/Time:	

TEST AMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: 12J04H24

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	<input checked="" type="checkbox"/>			<input type="checkbox"/> 1a Do not match COC <input type="checkbox"/> 1b Incomplete information <input type="checkbox"/> 1c Marking smeared <input type="checkbox"/> 1d Label torn <input type="checkbox"/> 1e No label <input type="checkbox"/> 1f COC not received <input type="checkbox"/> 1g Other: _____	
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C)	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/> 2a Temp Blank = _____ <input type="checkbox"/> 2b Cooler Temp = _____ <input type="checkbox"/> 2c Cooling initiated for recently collected samples, ice present. <input type="checkbox"/> 3a Sample preservative = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?	<input checked="" type="checkbox"/>				
4. Were custody seals present/intact on cooler and/or containers?	<input checked="" type="checkbox"/>			<input type="checkbox"/> 4a Not present <input type="checkbox"/> 4b Not intact <input type="checkbox"/> 4c Other: _____	
5. Were all of the samples listed on the COC received?	<input checked="" type="checkbox"/>			<input type="checkbox"/> 5a Samples received-not on COC <input type="checkbox"/> 5b Samples not received-on COC <input type="checkbox"/> 6a Leaking <input type="checkbox"/> 6b Broken <input type="checkbox"/> 7a Headspace (VOA only) <input type="checkbox"/> 8a Improper container	
6. Were all of the sample containers received intact?	<input checked="" type="checkbox"/>				
7. Were VOA samples received without headspace?	<input checked="" type="checkbox"/>				
8. Were samples received in appropriate containers?	<input checked="" type="checkbox"/>				
9. Did you check for residual chlorine, if necessary?	<input checked="" type="checkbox"/>			<input type="checkbox"/> 9a Could not be determined due to matrix interference <input type="checkbox"/> 10a Holding time expired <input type="checkbox"/> Incomplete information	
10. Were samples received within holding time?	<input checked="" type="checkbox"/>				
11. For rad samples, was sample activity info. provided?	<input checked="" type="checkbox"/>				
12. For 1613B water samples is pH < 9?	<input checked="" type="checkbox"/>			If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____ <input type="checkbox"/> 13a Leaking <input type="checkbox"/> 13b Other: _____	
13. Are the shipping containers intact?	<input checked="" type="checkbox"/>				
14. Was COC relinquished? (Signed/Dated/Timed)	<input checked="" type="checkbox"/>			<input type="checkbox"/> 14a Not relinquished <input type="checkbox"/> 15a Incomplete information <input type="checkbox"/> 15b Incomplete information	
15. Are tests/parameters listed for each sample?	<input checked="" type="checkbox"/>				
16. Is the matrix of the samples noted?	<input checked="" type="checkbox"/>				
17. Is the date/time of sample collection noted?	<input checked="" type="checkbox"/>				
18. Is the client and project name/# identified?	<input checked="" type="checkbox"/>				
19. Was the sampler identified on the COC?	<input checked="" type="checkbox"/>			<input type="checkbox"/> 15a Incomplete information <input type="checkbox"/> 19a Other	
Quote #: <u>90876</u> PM Instructions: _____					

Sample Receiving Associate: [Signature] Date: 10-1-12 QA026R23.doc, 022812

Test America - Knoxville ---- Air Canister Dilution Log

Lot Number: H2J040429

Initial Can Pressure					Subsequent Dilutions													
Analyst/Date	Tedlar Bag Time	Pbarr (in)	Sample ID	Can #	Pres. upon receipt (-in or +psig)	Adj. Initial Pres. (-in or +psig)	Analyst/Date	I / S	Pbarr (in)	Initial Pres. Pi (in)	Final Pres. Pf (psig)	First In-Can Final Pres. Pf (psig)	Second In-Can Final Pres. Pf (psig)	Third In-Can Final Pres. Pf (psig)	Serial Dilution Can #	Vol (mL)	Final Pres. Pf (psig)	Comments
X <sup>3</sup> 10/4/12	NA	29.08	MWITML	I5201 ✓	-3.0	-	10/4/12	X1	29.08	-3.6	+28.8							10087
			MWITMM	I3831 ✓	-2.8	-		X1		-3.4	+21.3							
			MWITMN	SL1231 ✓	-2.2	-												
			MWITMP	LA7209 ✓	-3.0	-	10/4/12	X1	29.08	-3.5	+28.7							

# 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: CVJ0204

Client Project/Site: 00120137.00.00003.00002

Client Project Description:

South Omaha Red Area/4012 S 24th - NE

For:

ALFRED BENESCH & COMPANY

14748 West Center Road, Suite 200

Omaha, NE 68144-2209

Attn: Brian Fettin



Authorized for release by:

10/10/2012 1:18:35 PM

Angela Muehling

Project Coordinator

[Angela.Muehling@testamericainc.com](mailto:Angela.Muehling@testamericainc.com)

Designee for

Derrick Klinkenberg

Organics Manager

[derrick.klinkenberg@testamericainc.com](mailto:derrick.klinkenberg@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?



Visit us at:

[www.testamericainc.com](http://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: ALFRED BENESCH & COMPANY  
Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
CVJ0204-01	SB-26 (7-11')	Soil	10/01/12 11:29	10/03/12 08:55
CVJ0204-02	SB-27 (0-3')	Soil	10/01/12 09:35	10/03/12 08:55
CVJ0204-03	SB-30 (0-3')	Soil	10/01/12 10:37	10/03/12 08:55
CVJ0204-04	FD-1	Soil	10/01/12 00:00	10/03/12 08:55

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## Detection Summary

Client: ALFRED BENESCH & COMPANY  
Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

**Client Sample ID: SB-26 (7-11')**

**Lab Sample ID: CVJ0204-01**

No Detections

**Client Sample ID: SB-27 (0-3')**

**Lab Sample ID: CVJ0204-02**

No Detections

**Client Sample ID: SB-30 (0-3')**

**Lab Sample ID: CVJ0204-03**

No Detections

**Client Sample ID: FD-1**

**Lab Sample ID: CVJ0204-04**

No Detections

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# Client Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

**Client Sample ID: SB-26 (7-11')**

**Lab Sample ID: CVJ0204-01**

**Date Collected: 10/01/12 11:29**

**Matrix: Soil**

**Date Received: 10/03/12 08:55**

**Percent Solids: 77.9**

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<141		141		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Benzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Bromobenzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Bromochloromethane	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Bromodichloromethane	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Bromoform	<28.3		28.3		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Bromomethane	<56.5		56.5		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
2-Butanone (MEK)	<141		141		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
n-Butylbenzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
sec-Butylbenzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
tert-Butylbenzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Carbon disulfide	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Carbon Tetrachloride	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Chlorobenzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Chlorodibromomethane	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Chloroethane	<56.5		56.5		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Chloroform	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Chloromethane	<56.5		56.5		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
2-Chlorotoluene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
4-Chlorotoluene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,2-Dibromo-3-chloropropane	<141		141		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,2-Dibromoethane (EDB)	<141		141		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Dibromomethane	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,2-Dichlorobenzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,3-Dichlorobenzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,4-Dichlorobenzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Dichlorodifluoromethane	<42.4		42.4		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,1-Dichloroethane	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,2-Dichloroethane	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,1-Dichloroethene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
cis-1,2-Dichloroethene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
trans-1,2-Dichloroethene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,2-Dichloropropane	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,3-Dichloropropane	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
2,2-Dichloropropane	<56.5		56.5		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,1-Dichloropropene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
cis-1,3-Dichloropropene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
trans-1,3-Dichloropropene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Ethylbenzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Hexachlorobutadiene	<70.6		70.6		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Hexane	<70.6		70.6		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Isopropylbenzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
p-Isopropyltoluene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Methylene Chloride	<141	L	141		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Methyl tert-Butyl Ether	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Naphthalene	<70.6		70.6		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
n-Propylbenzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Styrene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,1,1,2-Tetrachloroethane	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,1,2,2-Tetrachloroethane	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Tetrachloroethene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00

# Client Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

**Client Sample ID: SB-26 (7-11')**

**Lab Sample ID: CVJ0204-01**

**Date Collected: 10/01/12 11:29**

**Matrix: Soil**

**Date Received: 10/03/12 08:55**

**Percent Solids: 77.9**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,2,3-Trichlorobenzene	<70.6		70.6		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,2,4-Trichlorobenzene	<70.6		70.6		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,1,1-Trichloroethane	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,1,2-Trichloroethane	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Trichloroethene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Trichlorofluoromethane	<56.5		56.5		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,2,3-Trichloropropane	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,2,4-Trimethylbenzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
1,3,5-Trimethylbenzene	<14.1		14.1		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Vinyl chloride	<42.4		42.4		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
Xylenes, total	<42.4		42.4		ug/kg dry	☼	10/04/12 00:00	10/04/12 13:41	1.00
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane	92		75 - 125				10/04/12 00:00	10/04/12 13:41	1.00
Toluene-d8	95		80 - 120				10/04/12 00:00	10/04/12 13:41	1.00
4-Bromofluorobenzene	102		80 - 120				10/04/12 00:00	10/04/12 13:41	1.00

**Method: SM 2540 G - General Chemistry Parameters**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
% Solids	77.9		0.1		%		10/03/12 17:50	10/03/12 17:50	1.00

# Client Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

**Client Sample ID: SB-27 (0-3')**

**Lab Sample ID: CVJ0204-02**

**Date Collected: 10/01/12 09:35**

**Matrix: Soil**

**Date Received: 10/03/12 08:55**

**Percent Solids: 80.3**

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<142		142		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Benzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Bromobenzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Bromochloromethane	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Bromodichloromethane	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Bromoform	<28.5		28.5		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Bromomethane	<57.0		57.0		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
2-Butanone (MEK)	<142		142		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
n-Butylbenzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
sec-Butylbenzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
tert-Butylbenzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Carbon disulfide	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Carbon Tetrachloride	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Chlorobenzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Chlorodibromomethane	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Chloroethane	<57.0		57.0		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Chloroform	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Chloromethane	<57.0		57.0		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
2-Chlorotoluene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
4-Chlorotoluene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,2-Dibromo-3-chloropropane	<142		142		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,2-Dibromoethane (EDB)	<142		142		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Dibromomethane	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,2-Dichlorobenzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,3-Dichlorobenzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,4-Dichlorobenzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Dichlorodifluoromethane	<42.7		42.7		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,1-Dichloroethane	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,2-Dichloroethane	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,1-Dichloroethene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
cis-1,2-Dichloroethene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
trans-1,2-Dichloroethene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,2-Dichloropropane	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,3-Dichloropropane	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
2,2-Dichloropropane	<57.0		57.0		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,1-Dichloropropene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
cis-1,3-Dichloropropene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
trans-1,3-Dichloropropene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Ethylbenzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Hexachlorobutadiene	<71.2		71.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Hexane	<71.2		71.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Isopropylbenzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
p-Isopropyltoluene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Methylene Chloride	<142 L		142		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Methyl tert-Butyl Ether	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Naphthalene	<71.2		71.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
n-Propylbenzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Styrene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,1,1,2-Tetrachloroethane	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,1,1,2,2-Tetrachloroethane	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Tetrachloroethene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00

# Client Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

**Client Sample ID: SB-27 (0-3')**

**Lab Sample ID: CVJ0204-02**

**Date Collected: 10/01/12 09:35**

**Matrix: Soil**

**Date Received: 10/03/12 08:55**

**Percent Solids: 80.3**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,2,3-Trichlorobenzene	<71.2		71.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,2,4-Trichlorobenzene	<71.2		71.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,1,1-Trichloroethane	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,1,2-Trichloroethane	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Trichloroethene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Trichlorofluoromethane	<57.0		57.0		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,2,3-Trichloropropane	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,2,4-Trimethylbenzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
1,3,5-Trimethylbenzene	<14.2		14.2		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Vinyl chloride	<42.7		42.7		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
Xylenes, total	<42.7		42.7		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:04	1.00
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane	91		75 - 125				10/04/12 00:00	10/04/12 14:04	1.00
Toluene-d8	96		80 - 120				10/04/12 00:00	10/04/12 14:04	1.00
4-Bromofluorobenzene	102		80 - 120				10/04/12 00:00	10/04/12 14:04	1.00

**Method: SM 2540 G - General Chemistry Parameters**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
% Solids	80.3		0.1		%		10/03/12 17:50	10/03/12 17:50	1.00

# Client Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

**Client Sample ID: SB-30 (0-3')**

**Lab Sample ID: CVJ0204-03**

**Date Collected: 10/01/12 10:37**

**Matrix: Soil**

**Date Received: 10/03/12 08:55**

**Percent Solids: 82.5**

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3030	L	3030		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Benzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Bromobenzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Bromochloromethane	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Bromodichloromethane	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Bromoform	<606		606		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Bromomethane	<1210		1210		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
2-Butanone (MEK)	<3030		3030		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
n-Butylbenzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
sec-Butylbenzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
tert-Butylbenzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Carbon disulfide	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Carbon Tetrachloride	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Chlorobenzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Chlorodibromomethane	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Chloroethane	<1210		1210		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Chloroform	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Chloromethane	<1210		1210		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
2-Chlorotoluene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
4-Chlorotoluene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,2-Dibromo-3-chloropropane	<3030		3030		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,2-Dibromoethane (EDB)	<3030		3030		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Dibromomethane	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,2-Dichlorobenzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,3-Dichlorobenzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,4-Dichlorobenzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Dichlorodifluoromethane	<909		909		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,1-Dichloroethane	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,2-Dichloroethane	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,1-Dichloroethene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
cis-1,2-Dichloroethene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
trans-1,2-Dichloroethene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,2-Dichloropropane	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,3-Dichloropropane	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
2,2-Dichloropropane	<1210		1210		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,1-Dichloropropene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
cis-1,3-Dichloropropene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
trans-1,3-Dichloropropene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Ethylbenzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Hexachlorobutadiene	<1510		1510		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Hexane	<1510		1510		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Isopropylbenzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
p-Isopropyltoluene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Methylene Chloride	<3030	CIN	3030		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Methyl tert-Butyl Ether	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Naphthalene	<1510		1510		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
n-Propylbenzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Styrene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,1,1,2-Tetrachloroethane	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,1,2,2-Tetrachloroethane	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Tetrachloroethene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0

# Client Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

**Client Sample ID: SB-30 (0-3')**

**Lab Sample ID: CVJ0204-03**

**Date Collected: 10/01/12 10:37**

**Matrix: Soil**

**Date Received: 10/03/12 08:55**

**Percent Solids: 82.5**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,2,3-Trichlorobenzene	<1510	L	1510		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,2,4-Trichlorobenzene	<1510		1510		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,1,1-Trichloroethane	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,1,2-Trichloroethane	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Trichloroethene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Trichlorofluoromethane	<1210		1210		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,2,3-Trichloropropane	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,2,4-Trimethylbenzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
1,3,5-Trimethylbenzene	<303		303		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Vinyl chloride	<909		909		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
Xylenes, total	<909		909		ug/kg dry	☼	10/09/12 00:00	10/09/12 12:32	50.0
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane	109		75 - 125				10/09/12 00:00	10/09/12 12:32	50.0
Toluene-d8	102		80 - 120				10/09/12 00:00	10/09/12 12:32	50.0
4-Bromofluorobenzene	98		80 - 120				10/09/12 00:00	10/09/12 12:32	50.0

**Method: SM 2540 G - General Chemistry Parameters**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
% Solids	82.5		0.1		%		10/03/12 17:50	10/03/12 17:50	1.00

# Client Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

**Client Sample ID: FD-1**

**Lab Sample ID: CVJ0204-04**

**Date Collected: 10/01/12 00:00**

**Matrix: Soil**

**Date Received: 10/03/12 08:55**

**Percent Solids: 78.5**

**Method: SW 8260B - Volatile Organic Compounds**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<117		117		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Benzene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Bromobenzene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Bromochloromethane	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Bromodichloromethane	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Bromoform	<23.3		23.3		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Bromomethane	<46.7		46.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
2-Butanone (MEK)	<117		117		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
n-Butylbenzene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
sec-Butylbenzene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
tert-Butylbenzene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Carbon disulfide	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Carbon Tetrachloride	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Chlorobenzene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Chlorodibromomethane	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Chloroethane	<46.7		46.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Chloroform	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Chloromethane	<46.7		46.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
2-Chlorotoluene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
4-Chlorotoluene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
1,2-Dibromo-3-chloropropane	<117		117		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
1,2-Dibromoethane (EDB)	<117		117		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Dibromomethane	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
1,2-Dichlorobenzene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
1,3-Dichlorobenzene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
1,4-Dichlorobenzene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Dichlorodifluoromethane	<35.0		35.0		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
1,1-Dichloroethane	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
1,2-Dichloroethane	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
1,1-Dichloroethene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
cis-1,2-Dichloroethene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
trans-1,2-Dichloroethene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
1,2-Dichloropropane	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
1,3-Dichloropropane	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
2,2-Dichloropropane	<46.7		46.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
1,1-Dichloropropene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
cis-1,3-Dichloropropene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
trans-1,3-Dichloropropene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Ethylbenzene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Hexachlorobutadiene	<58.3		58.3		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Hexane	<58.3		58.3		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Isopropylbenzene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
p-Isopropyltoluene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Methylene Chloride	<117	L	117		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Methyl tert-Butyl Ether	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Naphthalene	<58.3		58.3		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
n-Propylbenzene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Styrene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
1,1,1,2-Tetrachloroethane	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
1,1,1,2,2-Tetrachloroethane	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00
Tetrachloroethene	<11.7		11.7		ug/kg dry	*	10/04/12 00:00	10/04/12 14:51	1.00

# Client Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

**Client Sample ID: FD-1**

**Lab Sample ID: CVJ0204-04**

**Date Collected: 10/01/12 00:00**

**Matrix: Soil**

**Date Received: 10/03/12 08:55**

**Percent Solids: 78.5**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<11.7		11.7		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:51	1.00
1,2,3-Trichlorobenzene	<58.3		58.3		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:51	1.00
1,2,4-Trichlorobenzene	<58.3		58.3		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:51	1.00
1,1,1-Trichloroethane	<11.7		11.7		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:51	1.00
1,1,2-Trichloroethane	<11.7		11.7		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:51	1.00
Trichloroethene	<11.7		11.7		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:51	1.00
Trichlorofluoromethane	<46.7		46.7		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:51	1.00
1,2,3-Trichloropropane	<11.7		11.7		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:51	1.00
1,2,4-Trimethylbenzene	<11.7		11.7		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:51	1.00
1,3,5-Trimethylbenzene	<11.7		11.7		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:51	1.00
Vinyl chloride	<35.0		35.0		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:51	1.00
Xylenes, total	<35.0		35.0		ug/kg dry	☼	10/04/12 00:00	10/04/12 14:51	1.00
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Dibromofluoromethane	91		75 - 125				10/04/12 00:00	10/04/12 14:51	1.00
Toluene-d8	97		80 - 120				10/04/12 00:00	10/04/12 14:51	1.00
4-Bromofluorobenzene	104		80 - 120				10/04/12 00:00	10/04/12 14:51	1.00

**Method: SM 2540 G - General Chemistry Parameters**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
% Solids	78.5		0.1		%		10/03/12 17:50	10/03/12 17:50	1.00



# Surrogate Summary

Client: ALFRED BENESCH & COMPANY  
Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

## Method: SW 8260B - Volatile Organic Compounds

Matrix: Soil

Prep Type: Total

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DBFM (75-125)	Toluene-d8 (80-120)	BFB (80-120)
CVJ0204-01	SB-26 (7-11')	92	95	102
CVJ0204-02	SB-27 (0-3')	91	96	102
CVJ0204-03	SB-30 (0-3')	109	102	98
CVJ0204-04	FD-1	91	97	104

#### Surrogate Legend

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

## Method: SW 8260B - Volatile Organic Compounds

Matrix: Solid/Soil

Prep Type: Total

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DBFM (75-125)	Toluene-d8 (80-120)	BFB (80-120)
12J0305-BLK1	Method Blank	92	96	102
12J0305-BS1	Lab Control Sample	89	95	104
12J0305-MS1	Matrix Spike	93	95	105
12J0305-MSD1	Matrix Spike Duplicate	90	95	102
12J0477-BLK1	Method Blank	117	103	98
12J0477-BS1	Lab Control Sample	114	102	100
12J0477-BSD1	Lab Control Sample Dup	115	101	99

#### Surrogate Legend

DBFM = Dibromofluoromethane

Toluene-d8 = Toluene-d8

BFB = 4-Bromofluorobenzene

# QC Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

## Method: SW 8260B - Volatile Organic Compounds

**Lab Sample ID: 12J0305-BLK1**

**Matrix: Solid/Soil**

**Analysis Batch: 12J0305**

**Client Sample ID: Method Blank**

**Prep Type: Total**

**Prep Batch: 12J0305\_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<72.4		72.4		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Benzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Bromobenzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Bromochloromethane	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Bromodichloromethane	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Bromoform	<14.5		14.5		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Bromomethane	<28.9		28.9		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
2-Butanone (MEK)	<72.4		72.4		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
n-Butylbenzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
sec-Butylbenzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
tert-Butylbenzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Carbon disulfide	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Carbon Tetrachloride	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Chlorobenzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Chlorodibromomethane	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Chloroethane	<28.9		28.9		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Chloroform	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Chloromethane	<28.9		28.9		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
2-Chlorotoluene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
4-Chlorotoluene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,2-Dibromo-3-chloropropane	<72.4		72.4		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,2-Dibromoethane (EDB)	<72.4		72.4		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Dibromomethane	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,2-Dichlorobenzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,3-Dichlorobenzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,4-Dichlorobenzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Dichlorodifluoromethane	<21.7		21.7		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,1-Dichloroethane	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,2-Dichloroethane	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,1-Dichloroethene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
cis-1,2-Dichloroethene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
trans-1,2-Dichloroethene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,2-Dichloropropane	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,3-Dichloropropane	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
2,2-Dichloropropane	<28.9		28.9		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,1-Dichloropropene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
cis-1,3-Dichloropropene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
trans-1,3-Dichloropropene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Ethylbenzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Hexachlorobutadiene	<36.2		36.2		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Hexane	<36.2		36.2		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Isopropylbenzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
p-Isopropyltoluene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Methylene Chloride	<72.4		72.4		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Methyl tert-Butyl Ether	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Naphthalene	<36.2		36.2		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
n-Propylbenzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Styrene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,1,1,2-Tetrachloroethane	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00

# QC Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

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

**Lab Sample ID: 12J0305-BLK1**  
**Matrix: Solid/Soil**  
**Analysis Batch: 12J0305**

**Client Sample ID: Method Blank**  
**Prep Type: Total**  
**Prep Batch: 12J0305\_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Tetrachloroethene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Toluene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,2,3-Trichlorobenzene	<36.2		36.2		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,2,4-Trichlorobenzene	<36.2		36.2		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,1,1-Trichloroethane	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,1,2-Trichloroethane	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Trichloroethene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Trichlorofluoromethane	<28.9		28.9		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,2,3-Trichloropropane	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,2,4-Trimethylbenzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
1,3,5-Trimethylbenzene	<7.24		7.24		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Vinyl chloride	<21.7		21.7		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00
Xylenes, total	<21.7		21.7		ug/kg wet		10/04/12 00:00	10/04/12 10:57	1.00

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	92		75 - 125	10/04/12 00:00	10/04/12 10:57	1.00
Toluene-d8	96		80 - 120	10/04/12 00:00	10/04/12 10:57	1.00
4-Bromofluorobenzene	102		80 - 120	10/04/12 00:00	10/04/12 10:57	1.00

**Lab Sample ID: 12J0305-BS1**  
**Matrix: Solid/Soil**  
**Analysis Batch: 12J0305**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total**  
**Prep Batch: 12J0305\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	42.1	44.1		ug/kg wet		105	65 - 150
Benzene	42.1	41.6		ug/kg wet		99	55 - 135
Bromobenzene	42.1	42.0		ug/kg wet		100	65 - 125
Bromochloromethane	42.1	42.1		ug/kg wet		100	65 - 130
Bromodichloromethane	42.1	38.7		ug/kg wet		92	65 - 130
Bromoform	42.1	38.9		ug/kg wet		92	50 - 135
Bromomethane	42.1	36.3		ug/kg wet		86	45 - 135
2-Butanone (MEK)	42.1	37.5		ug/kg wet		89	50 - 145
n-Butylbenzene	42.1	35.6		ug/kg wet		85	55 - 130
sec-Butylbenzene	42.1	40.1		ug/kg wet		95	60 - 125
tert-Butylbenzene	42.1	40.0		ug/kg wet		95	55 - 125
Carbon disulfide	42.1	34.3		ug/kg wet		81	40 - 135
Carbon Tetrachloride	42.1	42.5		ug/kg wet		101	55 - 130
Chlorobenzene	42.1	42.2		ug/kg wet		100	60 - 120
Chlorodibromomethane	42.1	42.4		ug/kg wet		101	55 - 130
Chloroethane	42.1	36.5		ug/kg wet		87	50 - 145
Chloroform	42.1	35.3		ug/kg wet		84	65 - 130
Chloromethane	42.1	39.2		ug/kg wet		93	40 - 135
2-Chlorotoluene	42.1	40.7		ug/kg wet		97	60 - 125
4-Chlorotoluene	42.1	38.0		ug/kg wet		90	60 - 125
1,2-Dibromo-3-chloropropane	42.1	36.1		ug/kg wet		86	50 - 140
1,2-Dibromoethane (EDB)	42.1	42.1		ug/kg wet		100	55 - 140
Dibromomethane	42.1	40.6		ug/kg wet		96	65 - 135
1,2-Dichlorobenzene	42.1	42.0		ug/kg wet		100	65 - 120

# QC Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

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

**Lab Sample ID: 12J0305-BS1**  
**Matrix: Solid/Soil**  
**Analysis Batch: 12J0305**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total**  
**Prep Batch: 12J0305\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	42.1	41.1		ug/kg wet		98	60 - 125
1,4-Dichlorobenzene	42.1	40.1		ug/kg wet		95	60 - 125
Dichlorodifluoromethane	42.1	39.0		ug/kg wet		93	40 - 135
1,1-Dichloroethane	42.1	38.8		ug/kg wet		92	55 - 135
1,2-Dichloroethane	42.1	36.2		ug/kg wet		86	60 - 140
1,1-Dichloroethene	42.1	38.8		ug/kg wet		92	50 - 145
cis-1,2-Dichloroethene	42.1	38.8		ug/kg wet		92	60 - 135
trans-1,2-Dichloroethene	42.1	39.5		ug/kg wet		94	55 - 135
1,2-Dichloropropane	42.1	40.1		ug/kg wet		95	55 - 130
1,3-Dichloropropane	42.1	41.8		ug/kg wet		99	55 - 140
2,2-Dichloropropane	42.1	37.0		ug/kg wet		88	40 - 135
1,1-Dichloropropene	42.1	36.2		ug/kg wet		86	55 - 130
cis-1,3-Dichloropropene	42.1	40.0		ug/kg wet		95	50 - 115
trans-1,3-Dichloropropene	42.1	37.8		ug/kg wet		90	55 - 130
Ethylbenzene	42.1	39.5		ug/kg wet		94	60 - 125
Hexachlorobutadiene	42.1	41.4		ug/kg wet		98	40 - 135
Hexane	42.1	30.2		ug/kg wet		72	45 - 140
Isopropylbenzene	42.1	40.7		ug/kg wet		97	60 - 125
p-Isopropyltoluene	42.1	38.3		ug/kg wet		91	60 - 120
Methylene Chloride	42.1	70.7	L	ug/kg wet		168	55 - 145
Methyl tert-Butyl Ether	42.1	40.7		ug/kg wet		97	55 - 130
Naphthalene	42.1	40.4		ug/kg wet		96	50 - 130
n-Propylbenzene	42.1	37.8		ug/kg wet		90	50 - 125
Styrene	42.1	40.7		ug/kg wet		97	60 - 125
1,1,1,2-Tetrachloroethane	42.1	41.4		ug/kg wet		98	65 - 125
1,1,1,2,2-Tetrachloroethane	42.1	43.0		ug/kg wet		102	60 - 125
Tetrachloroethene	42.1	42.5		ug/kg wet		101	55 - 125
Toluene	42.1	40.5		ug/kg wet		96	60 - 130
1,2,3-Trichlorobenzene	42.1	41.9		ug/kg wet		100	50 - 130
1,2,4-Trichlorobenzene	42.1	38.1		ug/kg wet		90	45 - 135
1,1,1-Trichloroethane	42.1	42.5		ug/kg wet		101	60 - 125
1,1,2-Trichloroethane	42.1	42.5		ug/kg wet		101	55 - 135
Trichloroethene	42.1	41.6		ug/kg wet		99	60 - 130
Trichlorofluoromethane	42.1	37.6		ug/kg wet		89	50 - 145
1,2,3-Trichloropropane	42.1	39.5		ug/kg wet		94	50 - 145
1,2,4-Trimethylbenzene	42.1	38.3		ug/kg wet		91	55 - 125
1,3,5-Trimethylbenzene	42.1	38.1		ug/kg wet		91	50 - 130
Vinyl chloride	42.1	37.0		ug/kg wet		88	45 - 140
Xylenes, total	126	123		ug/kg wet		97	50 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane	89		75 - 125
Toluene-d8	95		80 - 120
4-Bromofluorobenzene	104		80 - 120

# QC Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

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

**Lab Sample ID: 12J0305-MS1**

**Matrix: Solid/Soil**

**Analysis Batch: 12J0305**

**Client Sample ID: Matrix Spike**

**Prep Type: Total**

**Prep Batch: 12J0305\_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	Limits
Acetone	<20.1		46.0	45.5		ug/kg dry	☼	99	55 - 150
Benzene	0.632		46.0	42.8		ug/kg dry	☼	92	40 - 135
Bromobenzene	<0.455		46.0	42.8		ug/kg dry	☼	93	30 - 125
Bromochloromethane	<2.22		46.0	44.5		ug/kg dry	☼	97	55 - 130
Bromodichloromethane	<0.531		46.0	38.9		ug/kg dry	☼	85	50 - 130
Bromoform	0.733		46.0	39.4		ug/kg dry	☼	84	35 - 135
Bromomethane	<1.95		46.0	36.8		ug/kg dry	☼	80	40 - 135
2-Butanone (MEK)	<1.62		46.0	37.0		ug/kg dry	☼	80	40 - 145
n-Butylbenzene	0.430		46.0	37.2		ug/kg dry	☼	80	20 - 130
sec-Butylbenzene	<0.480		46.0	40.5		ug/kg dry	☼	88	25 - 125
tert-Butylbenzene	<0.379		46.0	40.8		ug/kg dry	☼	89	25 - 125
Carbon disulfide	1.31		46.0	35.8		ug/kg dry	☼	75	35 - 135
Carbon Tetrachloride	<1.16		46.0	42.7		ug/kg dry	☼	93	45 - 130
Chlorobenzene	0.303		46.0	43.2		ug/kg dry	☼	93	35 - 120
Chlorodibromomethane	<0.884		46.0	43.2		ug/kg dry	☼	94	45 - 130
Chloroethane	<1.47		46.0	39.9		ug/kg dry	☼	87	45 - 145
Chloroform	0.733		46.0	36.5		ug/kg dry	☼	78	55 - 130
Chloromethane	<1.74		46.0	40.8		ug/kg dry	☼	89	40 - 135
2-Chlorotoluene	<0.531		46.0	40.3		ug/kg dry	☼	88	25 - 125
4-Chlorotoluene	<0.455		46.0	38.7		ug/kg dry	☼	84	25 - 125
1,2-Dibromo-3-chloropropane	<2.98		46.0	41.1		ug/kg dry	☼	90	35 - 140
1,2-Dibromoethane (EDB)	<0.682		46.0	43.9		ug/kg dry	☼	96	45 - 140
Dibromomethane	<0.606		46.0	41.8		ug/kg dry	☼	91	50 - 135
1,2-Dichlorobenzene	<0.859		46.0	41.9		ug/kg dry	☼	91	25 - 120
1,3-Dichlorobenzene	<0.404		46.0	41.4		ug/kg dry	☼	90	25 - 125
1,4-Dichlorobenzene	<0.581		46.0	40.2		ug/kg dry	☼	88	20 - 125
Dichlorodifluoromethane	<0.606		46.0	40.4		ug/kg dry	☼	88	35 - 135
1,1-Dichloroethane	<0.707		46.0	40.2		ug/kg dry	☼	88	50 - 135
1,2-Dichloroethane	<1.29		46.0	37.0		ug/kg dry	☼	81	50 - 140
1,1-Dichloroethene	<0.707		46.0	40.6		ug/kg dry	☼	88	45 - 145
cis-1,2-Dichloroethene	<1.09		46.0	42.1		ug/kg dry	☼	92	50 - 135
trans-1,2-Dichloroethene	<0.758		46.0	41.9		ug/kg dry	☼	91	45 - 135
1,2-Dichloropropane	<2.37		46.0	40.4		ug/kg dry	☼	88	50 - 130
1,3-Dichloropropane	<0.480		46.0	42.9		ug/kg dry	☼	93	45 - 140
2,2-Dichloropropane	<0.834		46.0	40.8		ug/kg dry	☼	89	40 - 135
1,1-Dichloropropene	<0.859		46.0	37.4		ug/kg dry	☼	81	40 - 130
cis-1,3-Dichloropropene	<2.07		46.0	41.4		ug/kg dry	☼	90	35 - 115
trans-1,3-Dichloropropene	<1.19		46.0	38.5		ug/kg dry	☼	84	35 - 130
Ethylbenzene	1.47		46.0	40.8		ug/kg dry	☼	86	30 - 125
Hexachlorobutadiene	<0.505		46.0	41.0		ug/kg dry	☼	89	10 - 135
Hexane	1.59		46.0	31.9		ug/kg dry	☼	66	20 - 140
Isopropylbenzene	<1.39		46.0	42.2		ug/kg dry	☼	92	25 - 125
p-Isopropyltoluene	0.379		46.0	39.5		ug/kg dry	☼	85	20 - 120
Methylene Chloride	53.3		46.0	77.8		ug/kg dry	☼	53	35 - 145
Methyl tert-Butyl Ether	<0.556		46.0	41.6		ug/kg dry	☼	91	55 - 130
Naphthalene	<3.36		46.0	40.8		ug/kg dry	☼	89	15 - 130
n-Propylbenzene	0.556		46.0	38.9		ug/kg dry	☼	83	20 - 125
Styrene	0.455		46.0	41.7		ug/kg dry	☼	90	20 - 125
1,1,1,2-Tetrachloroethane	<0.354		46.0	42.8		ug/kg dry	☼	93	45 - 120

# QC Sample Results

Client: ALFRED BENESCH & COMPANY  
Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

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

**Lab Sample ID: 12J0305-MS1**

**Matrix: Solid/Soil**

**Analysis Batch: 12J0305**

**Client Sample ID: Matrix Spike**

**Prep Type: Total**

**Prep Batch: 12J0305\_P**

Analyte	Sample	Sample	Spike	Matrix Spike	Matrix Spike	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
1,1,2,2-Tetrachloroethane	<0.556		46.0	43.3		ug/kg dry	☼	94	40 - 125	
Tetrachloroethene	0.404		46.0	44.5		ug/kg dry	☼	96	30 - 125	
Toluene	1.21		46.0	43.3		ug/kg dry	☼	91	35 - 130	
1,2,3-Trichlorobenzene	0.758		46.0	40.3		ug/kg dry	☼	86	10 - 130	
1,2,4-Trichlorobenzene	0.632		46.0	37.8		ug/kg dry	☼	81	15 - 135	
1,1,1-Trichloroethane	<0.505		46.0	44.6		ug/kg dry	☼	97	45 - 125	
1,1,2-Trichloroethane	<6.14		46.0	43.5		ug/kg dry	☼	95	45 - 135	
Trichloroethene	<0.632		46.0	41.5		ug/kg dry	☼	90	40 - 130	
Trichlorofluoromethane	0.430		46.0	39.3		ug/kg dry	☼	84	45 - 145	
1,2,3-Trichloropropane	<0.707		46.0	42.4		ug/kg dry	☼	92	50 - 145	
1,2,4-Trimethylbenzene	1.62		46.0	40.2		ug/kg dry	☼	84	20 - 125	
1,3,5-Trimethylbenzene	<1.04		46.0	39.1		ug/kg dry	☼	85	20 - 130	
Vinyl chloride	<0.733		46.0	38.1		ug/kg dry	☼	83	40 - 140	
Xylenes, total	6.70		138	130		ug/kg dry	☼	90	30 - 130	

Surrogate	Matrix Spike %Recovery	Matrix Spike Qualifier	Matrix Spike Limits
Dibromofluoromethane	93		75 - 125
Toluene-d8	95		80 - 120
4-Bromofluorobenzene	105		80 - 120

**Lab Sample ID: 12J0305-MSD1**

**Matrix: Solid/Soil**

**Analysis Batch: 12J0305**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total**

**Prep Batch: 12J0305\_P**

Analyte	Sample	Sample	Spike	Matrix Spike Dup	Matrix Spike Dup	Unit	D	%Rec	%Rec.	Limits	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier								
Acetone	<20.1		44.8	42.9		ug/kg dry	☼	96	55 - 150	6	40		
Benzene	0.632		44.8	42.3		ug/kg dry	☼	93	40 - 135	1	40		
Bromobenzene	<0.455		44.8	41.9		ug/kg dry	☼	94	30 - 125	2	40		
Bromochloromethane	<2.22		44.8	39.9		ug/kg dry	☼	89	55 - 130	11	35		
Bromodichloromethane	<0.531		44.8	39.5		ug/kg dry	☼	88	50 - 130	2	35		
Bromoform	0.733		44.8	38.4		ug/kg dry	☼	84	35 - 135	3	40		
Bromomethane	<1.95		44.8	35.5		ug/kg dry	☼	79	40 - 135	4	35		
2-Butanone (MEK)	<1.62		44.8	36.7		ug/kg dry	☼	82	40 - 145	0.8	40		
n-Butylbenzene	0.430		44.8	35.2		ug/kg dry	☼	78	20 - 130	5	40		
sec-Butylbenzene	<0.480		44.8	38.7		ug/kg dry	☼	86	25 - 125	5	40		
tert-Butylbenzene	<0.379		44.8	40.4		ug/kg dry	☼	90	25 - 125	1	40		
Carbon disulfide	1.31		44.8	35.1		ug/kg dry	☼	75	35 - 135	2	40		
Carbon Tetrachloride	<1.16		44.8	42.1		ug/kg dry	☼	94	45 - 130	1	35		
Chlorobenzene	0.303		44.8	41.9		ug/kg dry	☼	93	35 - 120	3	35		
Chlorodibromomethane	<0.884		44.8	43.7		ug/kg dry	☼	97	45 - 130	1	40		
Chloroethane	<1.47		44.8	38.1		ug/kg dry	☼	85	45 - 145	4	35		
Chloroform	0.733		44.8	36.2		ug/kg dry	☼	79	55 - 130	0.9	35		
Chloromethane	<1.74		44.8	39.5		ug/kg dry	☼	88	40 - 135	3	40		
2-Chlorotoluene	<0.531		44.8	39.3		ug/kg dry	☼	88	25 - 125	3	40		
4-Chlorotoluene	<0.455		44.8	38.2		ug/kg dry	☼	85	25 - 125	1	40		
1,2-Dibromo-3-chloropropane	<2.98		44.8	37.1		ug/kg dry	☼	83	35 - 140	10	40		
1,2-Dibromoethane (EDB)	<0.682		44.8	42.5		ug/kg dry	☼	95	45 - 140	3	35		
Dibromomethane	<0.606		44.8	40.9		ug/kg dry	☼	91	50 - 135	2	35		
1,2-Dichlorobenzene	<0.859		44.8	39.8		ug/kg dry	☼	89	25 - 120	5	40		

# QC Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

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

Lab Sample ID: 12J0305-MSD1

Matrix: Solid/Soil

Analysis Batch: 12J0305

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total

Prep Batch: 12J0305\_P

Analyte	Sample	Sample	Spike	Matrix Spike Dup	Matrix Spike Dup	D	%Rec	%Rec.	Limits	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
1,3-Dichlorobenzene	<0.404		44.8	38.4		*	86	25 - 125	8	40		
1,4-Dichlorobenzene	<0.581		44.8	37.9		*	85	20 - 125	6	40		
Dichlorodifluoromethane	<0.606		44.8	37.9		*	85	35 - 135	6	35		
1,1-Dichloroethane	<0.707		44.8	39.5		*	88	50 - 135	2	35		
1,2-Dichloroethane	<1.29		44.8	36.3		*	81	50 - 140	2	40		
1,1-Dichloroethene	<0.707		44.8	38.9		*	87	45 - 145	4	35		
cis-1,2-Dichloroethene	<1.09		44.8	39.9		*	89	50 - 135	5	35		
trans-1,2-Dichloroethene	<0.758		44.8	40.6		*	91	45 - 135	3	40		
1,2-Dichloropropane	<2.37		44.8	40.4		*	90	50 - 130	0.03	35		
1,3-Dichloropropane	<0.480		44.8	43.1		*	96	45 - 140	0.5	40		
2,2-Dichloropropane	<0.834		44.8	37.9		*	85	40 - 135	7	35		
1,1-Dichloropropene	<0.859		44.8	35.7		*	80	40 - 130	5	35		
cis-1,3-Dichloropropene	<2.07		44.8	40.9		*	91	35 - 115	1	40		
trans-1,3-Dichloropropene	<1.19		44.8	37.6		*	84	35 - 130	2	40		
Ethylbenzene	1.47		44.8	40.3		*	87	30 - 125	1	40		
Hexachlorobutadiene	<0.505		44.8	37.9		*	85	10 - 135	8	40		
Hexane	1.59		44.8	31.3		*	66	20 - 140	2	40		
Isopropylbenzene	<1.39		44.8	40.1		*	90	25 - 125	5	40		
p-Isopropyltoluene	0.379		44.8	38.1		*	84	20 - 120	4	40		
Methylene Chloride	53.3		44.8	78.1		*	55	35 - 145	0.3	35		
Methyl tert-Butyl Ether	<0.556		44.8	41.8		*	93	55 - 130	0.5	40		
Naphthalene	<3.36		44.8	39.0		*	87	15 - 130	4	40		
n-Propylbenzene	0.556		44.8	37.6		*	83	20 - 125	4	40		
Styrene	0.455		44.8	41.7		*	92	20 - 125	0.05	40		
1,1,1,2-Tetrachloroethane	<0.354		44.8	42.1		*	94	45 - 120	2	35		
1,1,1,2,2-Tetrachloroethane	<0.556		44.8	42.3		*	94	40 - 125	2	40		
Tetrachloroethene	0.404		44.8	42.5		*	94	30 - 125	5	40		
Toluene	1.21		44.8	42.0		*	91	35 - 130	3	40		
1,2,3-Trichlorobenzene	0.758		44.8	38.7		*	85	10 - 130	4	40		
1,2,4-Trichlorobenzene	0.632		44.8	36.0		*	79	15 - 135	5	40		
1,1,1-Trichloroethane	<0.505		44.8	44.7		*	100	45 - 125	0.3	35		
1,1,2-Trichloroethane	<6.14		44.8	42.4		*	95	45 - 135	3	40		
Trichloroethene	<0.632		44.8	41.0		*	92	40 - 130	1	35		
Trichlorofluoromethane	0.430		44.8	37.6		*	83	45 - 145	4	35		
1,2,3-Trichloropropane	<0.707		44.8	39.3		*	88	50 - 145	8	40		
1,2,4-Trimethylbenzene	1.62		44.8	38.6		*	83	20 - 125	4	40		
1,3,5-Trimethylbenzene	<1.04		44.8	37.2		*	83	20 - 130	5	35		
Vinyl chloride	<0.733		44.8	35.8		*	80	40 - 140	6	40		
Xylenes, total	6.70		134	124		*	87	30 - 130	5	40		

Surrogate	Matrix Spike Dup	Matrix Spike Dup	Limits
	%Recovery	Qualifier	
Dibromofluoromethane	90		75 - 125
Toluene-d8	95		80 - 120
4-Bromofluorobenzene	102		80 - 120

# QC Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

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

**Lab Sample ID: 12J0477-BLK1**

**Matrix: Solid/Soil**

**Analysis Batch: 12J0477**

**Client Sample ID: Method Blank**

**Prep Type: Total**

**Prep Batch: 12J0477\_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<2500		2500		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Benzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Bromobenzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Bromochloromethane	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Bromodichloromethane	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Bromoform	<500		500		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Bromomethane	<1000		1000		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
2-Butanone (MEK)	<2500		2500		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
n-Butylbenzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
sec-Butylbenzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
tert-Butylbenzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Carbon disulfide	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Carbon Tetrachloride	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Chlorobenzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Chlorodibromomethane	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Chloroethane	<1000		1000		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Chloroform	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Chloromethane	<1000		1000		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
2-Chlorotoluene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
4-Chlorotoluene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,2-Dibromo-3-chloropropane	<2500		2500		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,2-Dibromoethane (EDB)	<2500		2500		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Dibromomethane	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,2-Dichlorobenzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,3-Dichlorobenzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,4-Dichlorobenzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Dichlorodifluoromethane	<750		750		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,1-Dichloroethane	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,2-Dichloroethane	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,1-Dichloroethene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
cis-1,2-Dichloroethene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
trans-1,2-Dichloroethene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,2-Dichloropropane	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,3-Dichloropropane	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
2,2-Dichloropropane	<1000		1000		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,1-Dichloropropene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
cis-1,3-Dichloropropene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
trans-1,3-Dichloropropene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Ethylbenzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Hexachlorobutadiene	<1250		1250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Hexane	<1250		1250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Isopropylbenzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
p-Isopropyltoluene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Methylene Chloride	<2500	CIN	2500		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Methyl tert-Butyl Ether	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Naphthalene	<1250		1250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
n-Propylbenzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Styrene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,1,1,2-Tetrachloroethane	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0



# QC Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

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

**Lab Sample ID: 12J0477-BLK1**  
**Matrix: Solid/Soil**  
**Analysis Batch: 12J0477**

**Client Sample ID: Method Blank**  
**Prep Type: Total**  
**Prep Batch: 12J0477\_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Tetrachloroethene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Toluene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,2,3-Trichlorobenzene	<1250		1250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,2,4-Trichlorobenzene	<1250		1250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,1,1-Trichloroethane	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,1,2-Trichloroethane	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Trichloroethene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Trichlorofluoromethane	<1000		1000		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,2,3-Trichloropropane	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,2,4-Trimethylbenzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
1,3,5-Trimethylbenzene	<250		250		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Vinyl chloride	<750		750		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0
Xylenes, total	<750		750		ug/kg wet		10/09/12 00:00	10/09/12 10:30	50.0

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	117		75 - 125	10/09/12 00:00	10/09/12 10:30	50.0
Toluene-d8	103		80 - 120	10/09/12 00:00	10/09/12 10:30	50.0
4-Bromofluorobenzene	98		80 - 120	10/09/12 00:00	10/09/12 10:30	50.0

**Lab Sample ID: 12J0477-BS1**  
**Matrix: Solid/Soil**  
**Analysis Batch: 12J0477**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total**  
**Prep Batch: 12J0477\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	966	1390		ug/kg wet		144	65 - 150
Benzene	966	1030		ug/kg wet		106	55 - 135
Bromobenzene	966	1080		ug/kg wet		112	65 - 125
Bromochloromethane	966	1140		ug/kg wet		118	65 - 130
Bromodichloromethane	966	981		ug/kg wet		102	65 - 130
Bromoform	966	931		ug/kg wet		96	50 - 135
Bromomethane	966	935		ug/kg wet		97	45 - 135
2-Butanone (MEK)	966	1080		ug/kg wet		112	50 - 145
n-Butylbenzene	966	1080		ug/kg wet		111	55 - 130
sec-Butylbenzene	966	1070		ug/kg wet		111	60 - 125
tert-Butylbenzene	966	1050		ug/kg wet		109	55 - 125
Carbon disulfide	966	945		ug/kg wet		98	40 - 135
Carbon Tetrachloride	966	953		ug/kg wet		99	55 - 130
Chlorobenzene	966	1060		ug/kg wet		110	60 - 120
Chlorodibromomethane	966	946		ug/kg wet		98	55 - 130
Chloroethane	966	970		ug/kg wet		100	50 - 145
Chloroform	966	1070		ug/kg wet		111	65 - 130
Chloromethane	966	997		ug/kg wet		103	40 - 135
2-Chlorotoluene	966	1070		ug/kg wet		110	60 - 125
4-Chlorotoluene	966	1050		ug/kg wet		109	60 - 125
1,2-Dibromo-3-chloropropane	966	1010		ug/kg wet		105	50 - 140
1,2-Dibromoethane (EDB)	966	1100		ug/kg wet		114	55 - 140
Dibromomethane	966	1050		ug/kg wet		109	65 - 135
1,2-Dichlorobenzene	966	1110		ug/kg wet		115	65 - 120

# QC Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

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

Lab Sample ID: 12J0477-BS1

Matrix: Solid/Soil

Analysis Batch: 12J0477

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 12J0477\_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
1,3-Dichlorobenzene	966	1090		ug/kg wet		113	60 - 125
1,4-Dichlorobenzene	966	1100		ug/kg wet		114	60 - 125
Dichlorodifluoromethane	966	611		ug/kg wet		63	40 - 135
1,1-Dichloroethane	966	1070		ug/kg wet		111	55 - 135
1,2-Dichloroethane	966	1100		ug/kg wet		114	60 - 140
1,1-Dichloroethene	966	956		ug/kg wet		99	50 - 145
cis-1,2-Dichloroethene	966	1120		ug/kg wet		116	60 - 135
trans-1,2-Dichloroethene	966	1050		ug/kg wet		109	55 - 135
1,2-Dichloropropane	966	1040		ug/kg wet		107	55 - 130
1,3-Dichloropropane	966	1080		ug/kg wet		112	55 - 140
2,2-Dichloropropane	966	1080		ug/kg wet		112	40 - 135
1,1-Dichloropropene	966	1060		ug/kg wet		110	55 - 130
cis-1,3-Dichloropropene	966	989		ug/kg wet		102	50 - 115
trans-1,3-Dichloropropene	966	1010		ug/kg wet		105	55 - 130
Ethylbenzene	966	1050		ug/kg wet		108	60 - 125
Hexachlorobutadiene	966	1080		ug/kg wet		112	40 - 135
Hexane	966	781		ug/kg wet		81	45 - 140
Isopropylbenzene	966	1070		ug/kg wet		111	60 - 125
p-Isopropyltoluene	966	1070		ug/kg wet		111	60 - 120
Methylene Chloride	966	1040	CIN	ug/kg wet		108	55 - 145
Methyl tert-Butyl Ether	966	1140		ug/kg wet		118	55 - 130
Naphthalene	966	1040		ug/kg wet		108	50 - 130
n-Propylbenzene	966	1090		ug/kg wet		113	50 - 125
Styrene	966	1070		ug/kg wet		110	60 - 125
1,1,1,2-Tetrachloroethane	966	1080		ug/kg wet		111	65 - 125
1,1,1,2,2-Tetrachloroethane	966	1100		ug/kg wet		114	60 - 125
Tetrachloroethene	966	1040		ug/kg wet		107	55 - 125
Toluene	966	1040		ug/kg wet		108	60 - 130
1,2,3-Trichlorobenzene	966	1050		ug/kg wet		108	50 - 130
1,2,4-Trichlorobenzene	966	1110		ug/kg wet		114	45 - 135
1,1,1-Trichloroethane	966	1030		ug/kg wet		106	60 - 125
1,1,2-Trichloroethane	966	1050		ug/kg wet		108	55 - 135
Trichloroethene	966	1000		ug/kg wet		104	60 - 130
Trichlorofluoromethane	966	967		ug/kg wet		100	50 - 145
1,2,3-Trichloropropane	966	1130		ug/kg wet		117	50 - 145
1,2,4-Trimethylbenzene	966	1090		ug/kg wet		113	55 - 125
1,3,5-Trimethylbenzene	966	1100		ug/kg wet		114	50 - 130
Vinyl chloride	966	971		ug/kg wet		101	45 - 140
Xylenes, total	2900	3200		ug/kg wet		110	50 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane	114		75 - 125
Toluene-d8	102		80 - 120
4-Bromofluorobenzene	100		80 - 120

# QC Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

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

**Lab Sample ID: 12J0477-BSD1**

**Matrix: Solid/Soil**

**Analysis Batch: 12J0477**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total**

**Prep Batch: 12J0477\_P**

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD
									Limit
Acetone	974	1580	L	ug/kg wet		162	65 - 150	13	40
Benzene	974	1080		ug/kg wet		111	55 - 135	5	25
Bromobenzene	974	1130		ug/kg wet		116	65 - 125	5	35
Bromochloromethane	974	1210		ug/kg wet		124	65 - 130	6	35
Bromodichloromethane	974	1030		ug/kg wet		106	65 - 130	5	30
Bromoform	974	955		ug/kg wet		98	50 - 135	3	40
Bromomethane	974	1040		ug/kg wet		106	45 - 135	10	40
2-Butanone (MEK)	974	1110		ug/kg wet		114	50 - 145	2	40
n-Butylbenzene	974	1110		ug/kg wet		114	55 - 130	4	30
sec-Butylbenzene	974	1140		ug/kg wet		117	60 - 125	6	30
tert-Butylbenzene	974	1120		ug/kg wet		114	55 - 125	6	25
Carbon disulfide	974	1040		ug/kg wet		107	40 - 135	10	40
Carbon Tetrachloride	974	1020		ug/kg wet		104	55 - 130	6	30
Chlorobenzene	974	1100		ug/kg wet		113	60 - 120	3	30
Chlorodibromomethane	974	994		ug/kg wet		102	55 - 130	5	40
Chloroethane	974	1110		ug/kg wet		114	50 - 145	14	40
Chloroform	974	1150		ug/kg wet		118	65 - 130	7	30
Chloromethane	974	1090		ug/kg wet		112	40 - 135	9	40
2-Chlorotoluene	974	1110		ug/kg wet		114	60 - 125	4	35
4-Chlorotoluene	974	1090		ug/kg wet		112	60 - 125	4	35
1,2-Dibromo-3-chloropropane	974	1030		ug/kg wet		106	50 - 140	2	35
1,2-Dibromoethane (EDB)	974	1140		ug/kg wet		117	55 - 140	3	30
Dibromomethane	974	1090		ug/kg wet		112	65 - 135	4	30
1,2-Dichlorobenzene	974	1140		ug/kg wet		117	65 - 120	3	30
1,3-Dichlorobenzene	974	1110		ug/kg wet		114	60 - 125	2	30
1,4-Dichlorobenzene	974	1120		ug/kg wet		115	60 - 125	2	30
Dichlorodifluoromethane	974	794		ug/kg wet		82	40 - 135	26	35
1,1-Dichloroethane	974	1130		ug/kg wet		116	55 - 135	6	40
1,2-Dichloroethane	974	1160		ug/kg wet		119	60 - 140	6	30
1,1-Dichloroethene	974	1030		ug/kg wet		106	50 - 145	7	40
cis-1,2-Dichloroethene	974	1160		ug/kg wet		119	60 - 135	4	40
trans-1,2-Dichloroethene	974	1120		ug/kg wet		115	55 - 135	7	40
1,2-Dichloropropane	974	1100		ug/kg wet		113	55 - 130	6	30
1,3-Dichloropropane	974	1130		ug/kg wet		116	55 - 140	5	30
2,2-Dichloropropane	974	1160		ug/kg wet		119	40 - 135	7	45
1,1-Dichloropropene	974	1140		ug/kg wet		117	55 - 130	8	30
cis-1,3-Dichloropropene	974	1050		ug/kg wet		108	50 - 115	6	35
trans-1,3-Dichloropropene	974	1060		ug/kg wet		108	55 - 130	4	30
Ethylbenzene	974	1100		ug/kg wet		113	60 - 125	5	30
Hexachlorobutadiene	974	1150		ug/kg wet		118	40 - 135	6	35
Hexane	974	919		ug/kg wet		94	45 - 140	16	35
Isopropylbenzene	974	1110		ug/kg wet		114	60 - 125	4	35
p-Isopropyltoluene	974	1120		ug/kg wet		115	60 - 120	4	30
Methylene Chloride	974	1100	CIN	ug/kg wet		112	55 - 145	5	40
Methyl tert-Butyl Ether	974	1200		ug/kg wet		124	55 - 130	6	30
Naphthalene	974	1230		ug/kg wet		126	50 - 130	17	30
n-Propylbenzene	974	1130		ug/kg wet		116	50 - 125	4	35
Styrene	974	1110		ug/kg wet		114	60 - 125	4	35
1,1,1,2-Tetrachloroethane	974	1110		ug/kg wet		114	65 - 125	3	30

# QC Sample Results

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

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

**Lab Sample ID: 12J0477-BSD1**

**Matrix: Solid/Soil**

**Analysis Batch: 12J0477**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total**

**Prep Batch: 12J0477\_P**

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
1,1,2,2-Tetrachloroethane	974	1140		ug/kg wet		117	60 - 125	4	35	
Tetrachloroethene	974	1090		ug/kg wet		112	55 - 125	5	40	
Toluene	974	1090		ug/kg wet		112	60 - 130	4	35	
1,2,3-Trichlorobenzene	974	1300	L	ug/kg wet		133	50 - 130	21	35	
1,2,4-Trichlorobenzene	974	1230		ug/kg wet		126	45 - 135	10	35	
1,1,1-Trichloroethane	974	1050		ug/kg wet		108	60 - 125	3	30	
1,1,2-Trichloroethane	974	1100		ug/kg wet		113	55 - 135	5	30	
Trichloroethene	974	1090		ug/kg wet		112	60 - 130	8	30	
Trichlorofluoromethane	974	1060		ug/kg wet		109	50 - 145	9	40	
1,2,3-Trichloropropane	974	1160		ug/kg wet		120	50 - 145	3	35	
1,2,4-Trimethylbenzene	974	1140		ug/kg wet		117	55 - 125	5	35	
1,3,5-Trimethylbenzene	974	1140		ug/kg wet		117	50 - 130	3	35	
Vinyl chloride	974	1020		ug/kg wet		105	45 - 140	5	40	
Xylenes, total	2920	3320		ug/kg wet		114	50 - 130	4	30	

Surrogate	LCS Dup %Recovery	LCS Dup Qualifier	Limits
Dibromofluoromethane	115		75 - 125
Toluene-d8	101		80 - 120
4-Bromofluorobenzene	99		80 - 120

## Method: SM 2540 G - General Chemistry Parameters

**Lab Sample ID: 12J0190-DUP1**

**Matrix: Solid/Soil**

**Analysis Batch: 12J0190**

**Client Sample ID: Duplicate**

**Prep Type: Total**

**Prep Batch: 12J0190\_P**

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	
							RPD	Limit
% Solids	98.7		98.8		%		0.1	10

**Lab Sample ID: 12J0190-DUP2**

**Matrix: Solid/Soil**

**Analysis Batch: 12J0190**

**Client Sample ID: Duplicate**

**Prep Type: Total**

**Prep Batch: 12J0190\_P**

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	
							RPD	Limit
% Solids	100		100		%		0.005	10

# QC Association Summary

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

## GCMS Volatiles

### Analysis Batch: 12J0305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12J0305-BLK1	Method Blank	Total	Solid/Soil	SW 8260B	12J0305_P
12J0305-BS1	Lab Control Sample	Total	Solid/Soil	SW 8260B	12J0305_P
12J0305-MS1	Matrix Spike	Total	Solid/Soil	SW 8260B	12J0305_P
12J0305-MSD1	Matrix Spike Duplicate	Total	Solid/Soil	SW 8260B	12J0305_P
CVJ0204-01	SB-26 (7-11')	Total	Soil	SW 8260B	12J0305_P
CVJ0204-02	SB-27 (0-3')	Total	Soil	SW 8260B	12J0305_P
CVJ0204-04	FD-1	Total	Soil	SW 8260B	12J0305_P

### Analysis Batch: 12J0477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12J0477-BLK1	Method Blank	Total	Solid/Soil	SW 8260B	12J0477_P
12J0477-BS1	Lab Control Sample	Total	Solid/Soil	SW 8260B	12J0477_P
12J0477-BSD1	Lab Control Sample Dup	Total	Solid/Soil	SW 8260B	12J0477_P
CVJ0204-03	SB-30 (0-3')	Total	Soil	SW 8260B	12J0477_P

### Prep Batch: 12J0305\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12J0305-BLK1	Method Blank	Total	Solid/Soil	SW 5035	
12J0305-BS1	Lab Control Sample	Total	Solid/Soil	SW 5035	
12J0305-MS1	Matrix Spike	Total	Solid/Soil	SW 5035	
12J0305-MSD1	Matrix Spike Duplicate	Total	Solid/Soil	SW 5035	
CVJ0204-01	SB-26 (7-11')	Total	Soil	SW 5035	
CVJ0204-02	SB-27 (0-3')	Total	Soil	SW 5035	
CVJ0204-04	FD-1	Total	Soil	SW 5035	

### Prep Batch: 12J0477\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12J0477-BLK1	Method Blank	Total	Solid/Soil	SW 5035	
12J0477-BS1	Lab Control Sample	Total	Solid/Soil	SW 5035	
12J0477-BSD1	Lab Control Sample Dup	Total	Solid/Soil	SW 5035	
CVJ0204-03	SB-30 (0-3')	Total	Soil	SW 5035	

## WetChem

### Analysis Batch: 12J0190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12J0190-DUP1	Duplicate	Total	Solid/Soil	SM 2540 G	12J0190_P
12J0190-DUP2	Duplicate	Total	Solid/Soil	SM 2540 G	12J0190_P
CVJ0204-01	SB-26 (7-11')	Total	Soil	SM 2540 G	12J0190_P
CVJ0204-02	SB-27 (0-3')	Total	Soil	SM 2540 G	12J0190_P
CVJ0204-03	SB-30 (0-3')	Total	Soil	SM 2540 G	12J0190_P
CVJ0204-04	FD-1	Total	Soil	SM 2540 G	12J0190_P

### Prep Batch: 12J0190\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12J0190-DUP1	Duplicate	Total	Solid/Soil	Solids - Solid/Soil	
12J0190-DUP2	Duplicate	Total	Solid/Soil	Solids - Solid/Soil	
CVJ0204-01	SB-26 (7-11')	Total	Soil	Solids - Solid/Soil	
CVJ0204-02	SB-27 (0-3')	Total	Soil	Solids - Solid/Soil	

# QC Association Summary

Client: ALFRED BENESCH & COMPANY  
Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

## WetChem (Continued)

### Prep Batch: 12J0190\_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CVJ0204-03	SB-30 (0-3')	Total	Soil	Solids - Solid/Soil	
CVJ0204-04	FD-1	Total	Soil	Solids - Solid/Soil	

- 1
- 2
- 3
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# Lab Chronicle

Client: ALFRED BENESCH & COMPANY  
 Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

## Client Sample ID: SB-26 (7-11')

Date Collected: 10/01/12 11:29

Date Received: 10/03/12 08:55

## Lab Sample ID: CVJ0204-01

Matrix: Soil

Percent Solids: 77.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5035		2.20	2.271 g	5 mL	12J0305_P	10/04/12 00:00	ZTB	TAL CF
Total	Analysis	SW 8260B		1.00			12J0305	10/04/12 13:41	ZTB	TAL CF
Total	Analysis	SM 2540 G		1.00			12J0190	10/03/12 17:50	SAS	TAL CF
Total	Prep	Solids - Solid/Soil		1.00	1 g	1 g	12J0190_P	10/03/12 17:50	SAS	TAL CF

## Client Sample ID: SB-27 (0-3')

Date Collected: 10/01/12 09:35

Date Received: 10/03/12 08:55

## Lab Sample ID: CVJ0204-02

Matrix: Soil

Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5035		2.29	2.186 g	5 mL	12J0305_P	10/04/12 00:00	ZTB	TAL CF
Total	Analysis	SW 8260B		1.00			12J0305	10/04/12 14:04	ZTB	TAL CF
Total	Analysis	SM 2540 G		1.00			12J0190	10/03/12 17:50	SAS	TAL CF
Total	Prep	Solids - Solid/Soil		1.00	1 g	1 g	12J0190_P	10/03/12 17:50	SAS	TAL CF

## Client Sample ID: SB-30 (0-3')

Date Collected: 10/01/12 10:37

Date Received: 10/03/12 08:55

## Lab Sample ID: CVJ0204-03

Matrix: Soil

Percent Solids: 82.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5035		0.972	10.284 g	10 mL	12J0477_P	10/09/12 00:00	ZTB	TAL CF
Total	Analysis	SW 8260B		50.0			12J0477	10/09/12 12:32	ZTB	TAL CF
Total	Analysis	SM 2540 G		1.00			12J0190	10/03/12 17:50	SAS	TAL CF
Total	Prep	Solids - Solid/Soil		1.00	1 g	1 g	12J0190_P	10/03/12 17:50	SAS	TAL CF

## Client Sample ID: FD-1

Date Collected: 10/01/12 00:00

Date Received: 10/03/12 08:55

## Lab Sample ID: CVJ0204-04

Matrix: Soil

Percent Solids: 78.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	SW 5035		1.83	2.73 g	5 mL	12J0305_P	10/04/12 00:00	ZTB	TAL CF
Total	Analysis	SW 8260B		1.00			12J0305	10/04/12 14:51	ZTB	TAL CF
Total	Analysis	SM 2540 G		1.00			12J0190	10/03/12 17:50	SAS	TAL CF
Total	Prep	Solids - Solid/Soil		1.00	1 g	1 g	12J0190_P	10/03/12 17:50	SAS	TAL CF

### Laboratory References:

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

## Definitions/Glossary

Client: ALFRED BENESCH & COMPANY  
Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

### Qualifiers

#### GCMS Volatiles

Qualifier	Qualifier Description
L	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the control limits. Analyte not detected, data not impacted.
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.

### 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: ALFRED BENESCH & COMPANY  
Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204

## Laboratory: TestAmerica Cedar Falls

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

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA - LAP	IHLAP		101044	11-01-14
Illinois	NELAC	5	200024	11-29-12
Iowa	State Program	7	7	12-01-13
Kansas	NELAC	7	E-10341	01-31-13
Minnesota	NELAC	5	019-999-319	12-31-12
North Dakota	State Program	8	R-186	09-29-13
Oregon	NELAC	10	IA100001	09-29-13
Wisconsin	State Program	5	999917270	08-31-13

# Method Summary

Client: ALFRED BENESCH & COMPANY  
Project/Site: 00120137.00.00003.00002

TestAmerica Job ID: CVJ0204


Method	Method Description	Protocol	Laboratory
SW 8260B	Volatile Organic Compounds		TAL CF
SM 2540 G	General Chemistry Parameters		TAL CF

**Protocol References:**

**Laboratory References:**

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


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Client Name: BENESCH Client #: \_\_\_\_\_  
Address: 14748 WEST CENTER RD, SUITE 200  
City/State/Zip Code: OMAHA, NE 68144  
Project Manager: BRIAN FETTIN  
Email Address: \_\_\_\_\_  
Telephone Number: 402-333-5792 Fax: \_\_\_\_\_  
Sampler Name: (Print Name) RON PROCHASKA  
Sampler Signature: 

Project Name: SOUTH OMAHA RED. AREA / 1/2 S. 24th  
Project #: 00120137.00.00003.00002  
Site/Location ID: 4012 S. 24 State: NE  
Report To: BRIAN FETTIN  
Invoice To: SAME  
Quote #: \_\_\_\_\_ PO#: \_\_\_\_\_

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix						Other (Specify)	Analyze For:	QC Deliverables	REMARKS		
					SL - Sludge	DW - Drinking Water	GW - Groundwater	S - Soil/Solid	WW - Wastewater	Specify, Other					HNO <sub>3</sub>	HCl
SB-26 (7-11')	10-1-12	1129	G													
SB-27 (0-3')	↓	0935	G													
SB-30 (0-3')	↓	1037	G													
FD-1	10-1-12	—	G													

**Special Instructions:**

Relinquished By:  Date: 10-9-12 Time: 1600  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received By: M. J. Tussell Date: 10/3/12 Time: 8:25  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**LABORATORY COMMENTS:**

TAL-0033 (0708)



THE LEADER IN ENVIRONMENTAL TESTING

## Sample Receipt and Temperature Log Form

Client: Benesch Project: \_\_\_\_\_

City: \_\_\_\_\_

Date: 10-3-12 Receiver's Initials: CH Time (Delivered): 8:55

### Temperature Record:

Cooler ID# (If Applicable)  
Client

4.5° C On Ice

### Thermometer:

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

### Courier:

<input checked="" type="checkbox"/> UPS	<input type="checkbox"/> TA Courier
<input type="checkbox"/> FedEx	<input type="checkbox"/> TA Field Services
<input type="checkbox"/> FedEx Ground	<input type="checkbox"/> Client
<input type="checkbox"/> US Postal Service	<input type="checkbox"/> Other
<input type="checkbox"/> Spee-Dee	

Temp Blank

Temperature out of compliance

Custody seals present?

Yes

Custody seals intact?

Yes  No

Non-Conformance report started

### Exceptions Noted

<input type="checkbox"/> Sample(s) not received in a cooler.
<input type="checkbox"/> Samples(s) received same day of sampling.
<input type="checkbox"/> Evidence of a chilling process
<input type="checkbox"/> No Temp. Blank. Inside temperature of cooler recorded.
<input type="checkbox"/> Temperature not taken:

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

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13

## **BORING LOGS**



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

# BORING LOG

BORING NO.: SB-1

SHEET 1 of 1

DATE: 8-9-2012

## WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PID (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		ML - ELASTIC SILT; brown to dark brown; dry; soft. (Fill)			
	2.0		ML - ELASTIC SILT; brown; dry; soft		0.0	2.5
	4.0		ML - ELASTIC SILT; gray slightly mottled with Fe staining; dry; soft			
	7.0		ML - ELASTIC SILT; gray slightly mottled with Fe staining; slightly moist		0.2	7.5
	10.0		ML - ELASTIC SILT; grayish brown; slightly moist			10.0
	13.0		ML - ELASTIC SILT; grayish brown; moist		0.0	12.5
	15.0		Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

**BORING LOG**

LOCATION: Omaha, Nebraska

BORING NO.: SB-10

JOB NO.: 00120137.00

SHEET 1 of 1

RIG / METHOD: Geoprobe / Geoprobe

DATE: 8-9-2012

CREW: Tom Payton & Brian Fettin

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PID (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		CL - LEAN CLAY; clay, cinders, brick and gravel; reddish brown with grayish green mottled with black; moist; soft; firm at 1 foot, slight odor. 0.5 foot to 4.0 foot submitted for lab analysis and 4.0 foot to 8.0 foot submitted for lab analysis		0.1	2.5
						5.0
					0.2	7.5
	8.0		ML - ELASTIC SILT; gray to light brown mottled with reddish yellow			10.0
						12.5
	15.0		Boring Terminated at: 15.0 ft		0.0	12.5

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

# BORING LOG

BORING NO.: SB-11

SHEET 1 of 1

DATE: 8-9-2012

## WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PID (ppm)	DEPTH (feet)	WELL CONSTRUCTION	DEPTH (feet)
	0.0		Concrete					0.0
	0.5		CL - LEAN CLAY; brownish red mottled with gray. (Fill)					
	1.0		CL - LEAN CLAY; green mottled with black; 4.0 foot to 8.0 foot submitted for lab analysis					
					0.1		poly tubing	
							hydrated granular bentonite	2.5
	5.0		CL - LEAN CLAY; dark brown mottled with black; heavy black concentration			5.0		5.0
	6.0		ML - ELASTIC SILT; gray to light brown			5.5	sand filter pack	5.5
	7.0		ML - ELASTIC SILT; gray to light brown mottled with Fe staining		0.1	6.0	screen	6.0
						6.5		6.5
					0.1			7.5
								10.0
					0.1			12.5
	15.0		Boring Terminated at: 15.0 ft					15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure





PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

**BORING LOG**

BORING NO.: SB-12

SHEET 1 of 1

DATE: 8-9-2012

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PID (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		CL - LEAN CLAY; reddish brown			
	1.0		CL - LEAN CLAY; blackish green, brick rubble, slight odor			
	2.5				0.1	2.5
	3.0		CL - LEAN CLAY; brown mottled with black			
	5.0		ML - ELASTIC SILT; brown			5.0
	7.0		ML - ELASTIC SILT; dark brown			
	7.5				0.0	7.5
	10.0		ML - ELASTIC SILT; brown			10.0
	12.5				0.0	12.5
	13.0		ML - ELASTIC SILT; brownish gray mottled with Fe staining			
	15.0		Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

# BORING LOG

BORING NO.: SB-13

SHEET 1 of 1

DATE: 8-9-2012

## WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PID (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		CL - LEAN CLAY; Rubble, brick and clay			
	2.0		ML - ELASTIC SILT; grayish brown mottled with Fe staining		0.0	2.5
	5.0		ML - ELASTIC SILT; brownish gray; soft			5.0
					0.0	7.5
						10.0
					0.0	12.5
	13.0		ML - ELASTIC SILT; brown			
	15.0		Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

**BORING LOG**

LOCATION: Omaha, Nebraska

BORING NO.: SB-14

JOB NO.: 00120137.00

SHEET 1 of 1

RIG / METHOD: Geoprobe / Geoprobe

DATE: 8-9-2012

CREW: Tom Payton & Brian Fettin

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PI D (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		CL - LEAN CLAY; dark brown. (Fill)			
	2.0		ML - SILT; grayish brown mottled with Fe staining; soft		0.0	2.5
	5.0		ML - SILT; brownish gray			5.0
					0.0	7.5
						10.0
					0.0	12.5
	13.0		ML - SILT; brown			
	15.0		Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

**BORING LOG**

LOCATION: Omaha, Nebraska

BORING NO.: SB-15

JOB NO.: 00120137.00

SHEET 1 of 1

RIG / METHOD: Geoprobe / Geoprobe

DATE: 8-9-2012

CREW: Tom Payton & Brian Fettin

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PI D (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		CL - LEAN CLAY; reddish brown. (Fill)			
	2.0		CL - LEAN CLAY; dark brown mottled with Fe staining and gray. (Fill)		0.0	2.5
	3.0		CL - SILTY CLAY; brown mottled with Fe staining			
	4.0		ML - ELASTIC SILT; grayish brown mottled with Fe staining			
	5.0		ML - ELASTIC SILT; gray mottled with Fe staining; soft			5.0
	8.5		ML - ELASTIC SILT; gray; medium stiff		0.0	7.5
	12.0		ML - ELASTIC SILT; brown		0.0	12.5
	15.0		Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

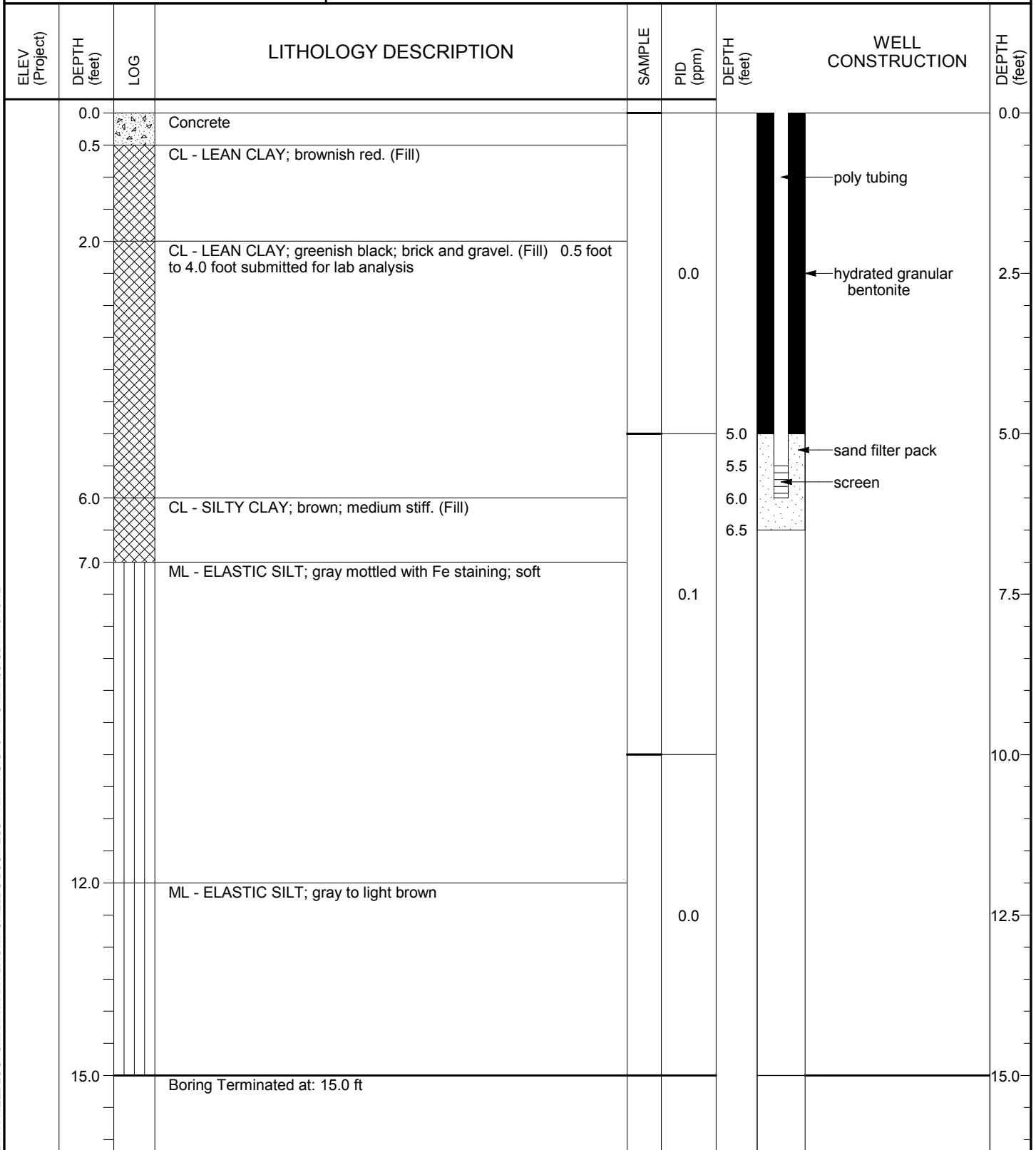
# BORING LOG

BORING NO.: SB-16

SHEET 1 of 1

DATE: 8-9-2012

## WATER LEVELS



ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

# BORING LOG

BORING NO.: SB-17

SHEET 1 of 1

DATE: 8-10-2012

## WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PI D (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		CL - LEAN CLAY; brown to reddish brown; rubble. (Fill)			
	2.0		CL - LEAN CLAY; black to green; medium stiff; with brick		0.0	2.5
	5.0		CL - LEAN CLAY; brown; soft. (Fill)			5.0
	6.0		ML - ELASTIC SILT; light brown to gray mottled with Fe staining; with Fe concretions		0.1	7.5
	10.0					10.0
	12.5				0.0	12.5
	15.0		Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

**BORING LOG**

BORING NO.: SB-18

SHEET 1 of 1

DATE: 8-10-2012

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PID (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		Clay, greenish black. medium stiff from 1 foot to 5 feet, brown at 5 feet, soft, moist, with brick and glass to 7 feet. (Fill)		0.0	2.5
	7.0		ML - ELASTIC SILT; dark brown to brown		0.0	7.5
	12.0		ML - ELASTIC SILT; gray		0.0	12.5
	15.0		Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

**BORING LOG**

LOCATION: Omaha, Nebraska

BORING NO.: SB-19

JOB NO.: 00120137.00

SHEET 1 of 1

RIG / METHOD: Geoprobe / Geoprobe

DATE: 8-10-2012

CREW: Tom Payton & Brian Fettin

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	DEPTH (feet)
	0.0		Concrete		0.0
	0.5		CL - LEAN CLAY; dark brown. (Fill)		
	5.0		CL - LEAN CLAY; brown; dry. (Fill)		5.0
	8.0		ML - ELASTIC SILT; gray to light brown mottled with Fe staining; soft		7.5
	10.0		Boring Terminated at: 10.0 ft		10.0
					12.5
					15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure





PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

**BORING LOG**

BORING NO.: SB-2

SHEET 1 of 1

DATE: 8-9-2012

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PID (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		CL - SILTY CLAY; brown to dark brown; with cinders. (Fill)		0.0	2.5
	4.0		ML - ELASTIC SILT; gray; mottled with iron staining and nodules; dry; soft.			5.0
	10.0		ML - ELASTIC SILT; gray; moist		0.3	7.5
	12.0		ML - ELASTIC SILT; brown		0.1	12.5
	15.0		Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

**BORING LOG**

LOCATION: Omaha, Nebraska

BORING NO.: SB-20

JOB NO.: 00120137.00

SHEET 1 of 1

RIG / METHOD: Geoprobe / Geoprobe

DATE: 8-10-2012

CREW: Tom Payton & Brian Fettin

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	DEPTH (feet)
	0.0		CL - SILTY CLAY; dark brown; dry; soft. (Fill)		0.0
	7.0		Same as above except slightly moist.		7.5
	8.0		ML - SILT; light brown mottled with gray with occasional Fe staining		
	10.0		Boring Terminated at: 10.0 ft		10.0
					12.5
					15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin


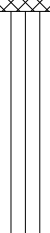
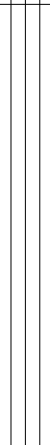
**BORING LOG**

BORING NO.: SB-21

SHEET 1 of 1

DATE: 8-10-2012

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	DEPTH (feet)
	0.0		Silty clay; brown; topsoil from 0.0 inches to 3.0 inches. (Fill) 0.0 foot to 4.0 foot submitted for lab analysis		0.0
	2.5		ML - SILT; brown to dark brown		2.5
	5.0		ML - SILT; light gray mottled with Fe staining; soft		5.0
	10.0		Boring Terminated at: 10.0 ft		10.0
					12.5
					15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

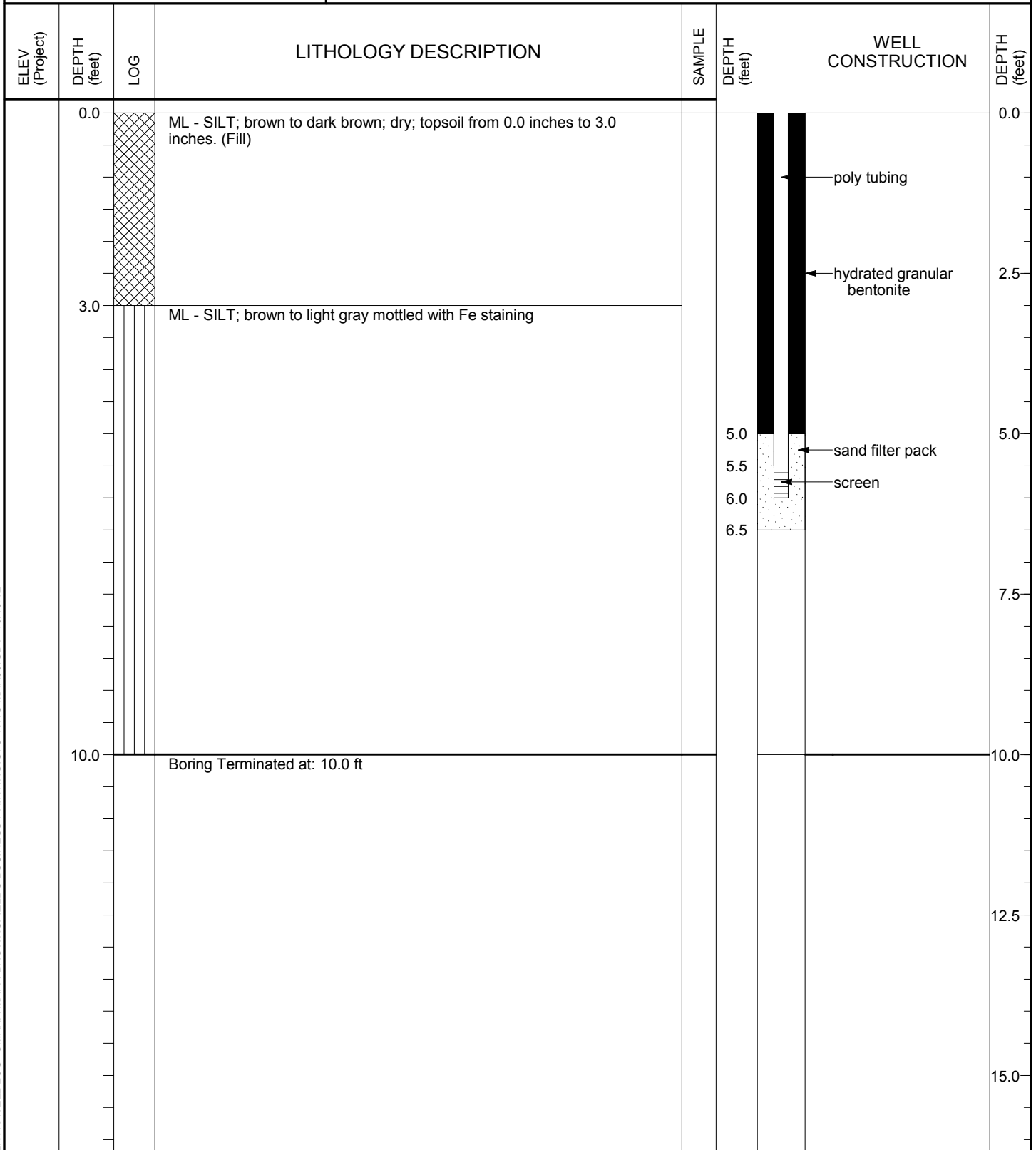
# BORING LOG

BORING NO.: SB-22

SHEET 1 of 1

DATE: 8-10-2012

## WATER LEVELS



ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

**BORING LOG**

LOCATION: Omaha, Nebraska

BORING NO.: SB-23

JOB NO.: 00120137.00



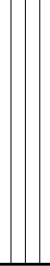
SHEET 1 of 1

RIG / METHOD: Geoprobe / Geoprobe

DATE: 8-10-2012

CREW: Tom Payton & Brian Fettin

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	DEPTH (feet)
	0.0		CL - LEAN CLAY; with grass. (Topsoil)		0.0
	0.5		ML - SILT; brown; occasional brick and rock pieces, dry. (Fill)		2.5
	7.0		ML - SILT; yellowish gray mottled with Fe staining		7.5
	10.0		Boring Terminated at: 10.0 ft		10.0
					12.5
					15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

**BORING LOG**

BORING NO.: SB-24

SHEET 1 of 1

DATE: 8-10-2012

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	DEPTH (feet)
	0.0		Concrete		0.0
	0.5		ML - ELASTIC SILT; brown mottled with Fe staining; soft		
	5.0		ML - ELASTIC SILT; brownish gray		5.0
	10.0				10.0
			Boring Terminated at: 15.0 ft		15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

**BORING LOG**

BORING NO.: SB-25

SHEET 1 of 1

DATE: 8-10-2012

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PID (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		Silty clay; brown. (Fill)			
	1.0		CL - LEAN CLAY; brown			
					0.0	2.5
	4.0		CL - LEAN CLAY; gray to light brown mottled with Fe staining; soft			
						5.0
	7.0		CL - LEAN CLAY; gray			
					0.0	7.5
	10.0					
					0.0	12.5
			Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

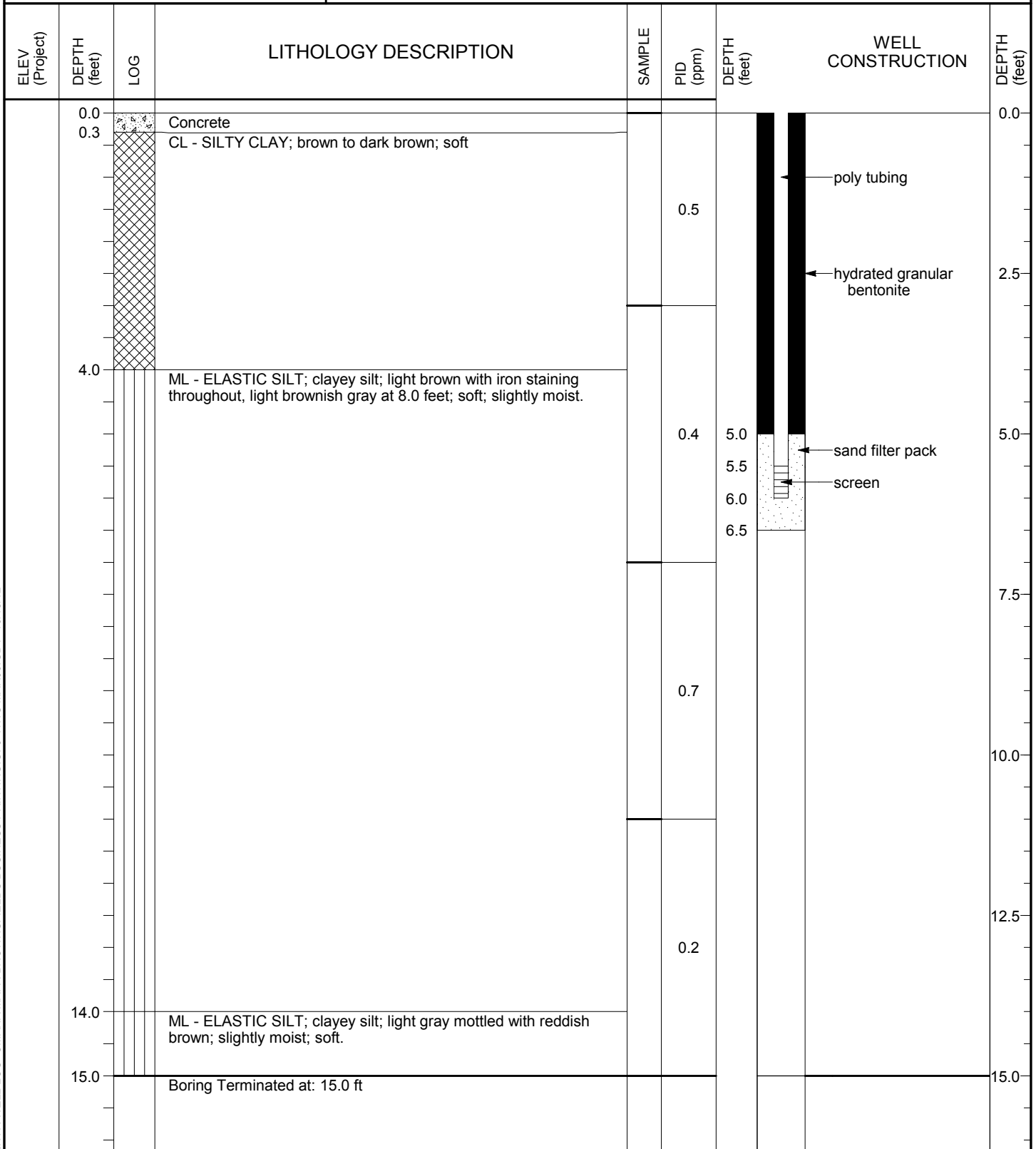
# BORING LOG

BORING NO.: SB-26

SHEET 1 of 1

DATE: 10-1-2012

## WATER LEVELS



ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure





PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

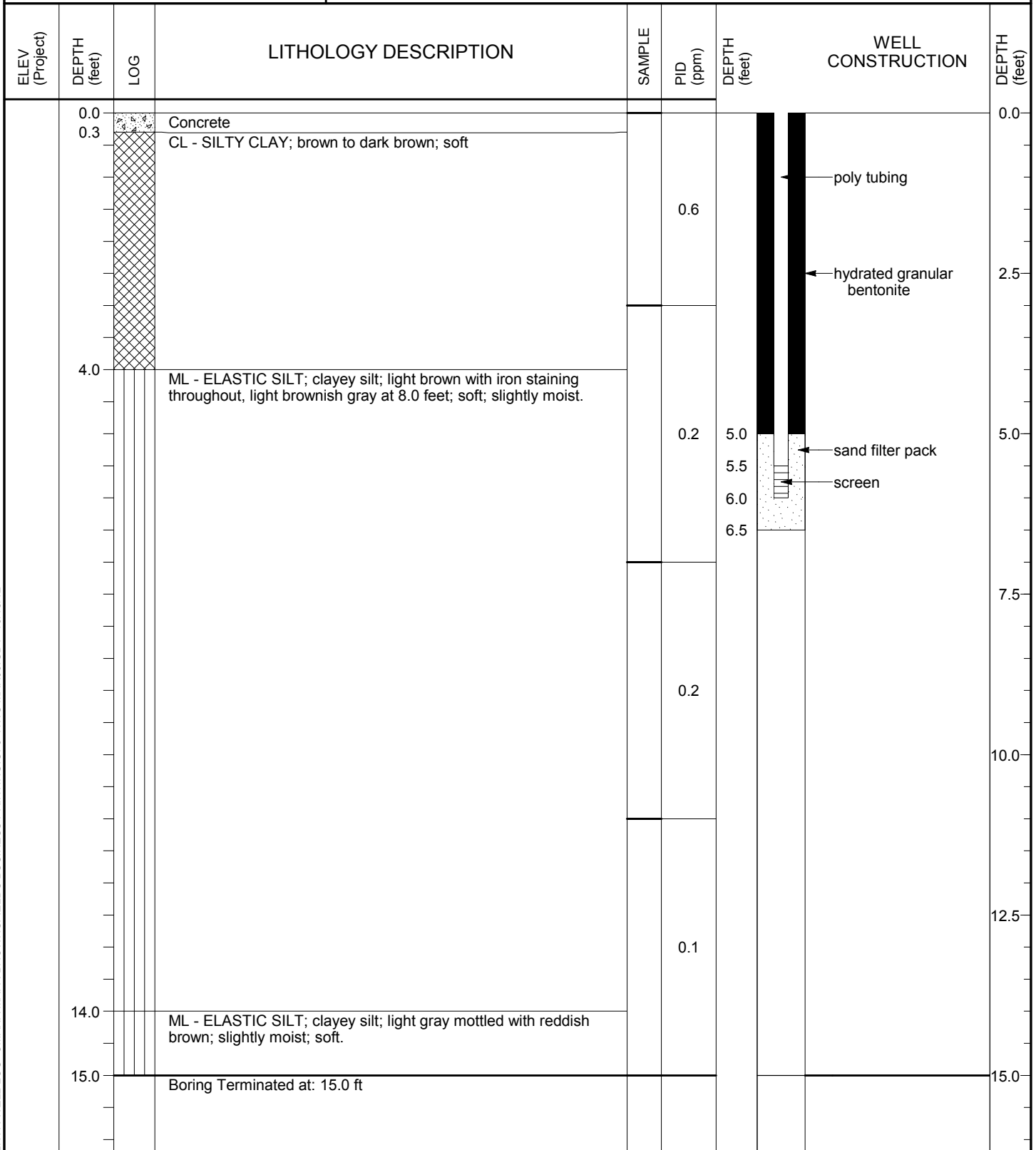
# BORING LOG

BORING NO.: SB-27

SHEET 1 of 1

DATE: 10-1-2012

## WATER LEVELS



ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

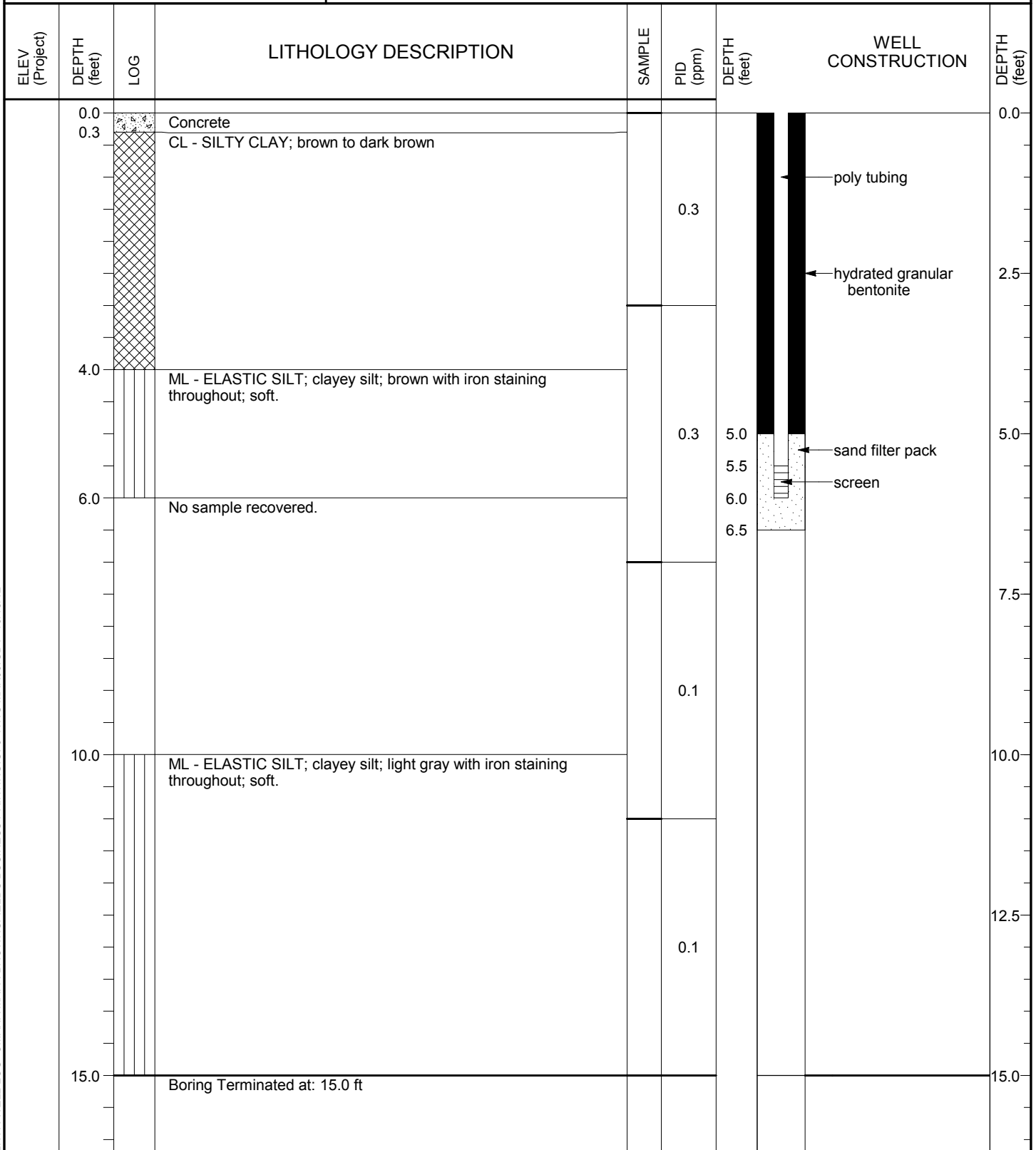
# BORING LOG

BORING NO.: SB-28

SHEET 1 of 1

DATE: 10-1-2012

## WATER LEVELS



ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

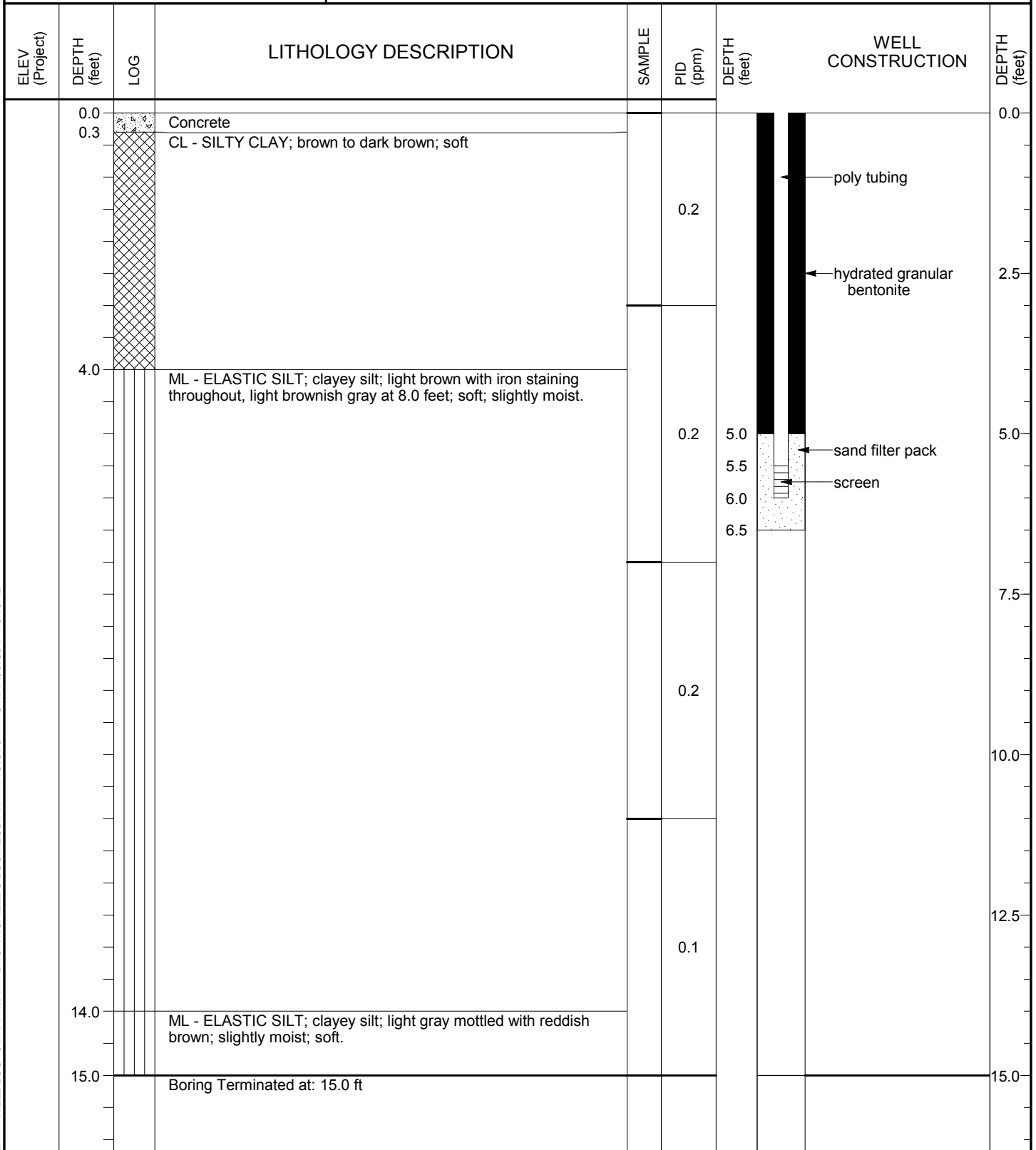
# BORING LOG

BORING NO.: SB-29

SHEET 1 of 1

DATE: 10-1-2012

## WATER LEVELS



ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

**BORING LOG**

LOCATION: Omaha, Nebraska

BORING NO.: SB-3

JOB NO.: 00120137.00

SHEET 1 of 1

RIG / METHOD: Geoprobe / Geoprobe

DATE: 8-9-2012

CREW: Tom Payton & Brian Fettin

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PI D (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		CL - LEAN CLAY; brown to dark brown mottled with Fe staining; slightly moist. (Fill)			
	3.0		ML - ELASTIC SILT; brown to dark brown		0.0	2.5
	5.0		ML - ELASTIC SILT; gray			5.0
	10.0		ML - ELASTIC SILT; gray; moist		0.0	7.5
	12.0		ML - ELASTIC SILT; brown		0.0	12.5
	15.0		Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

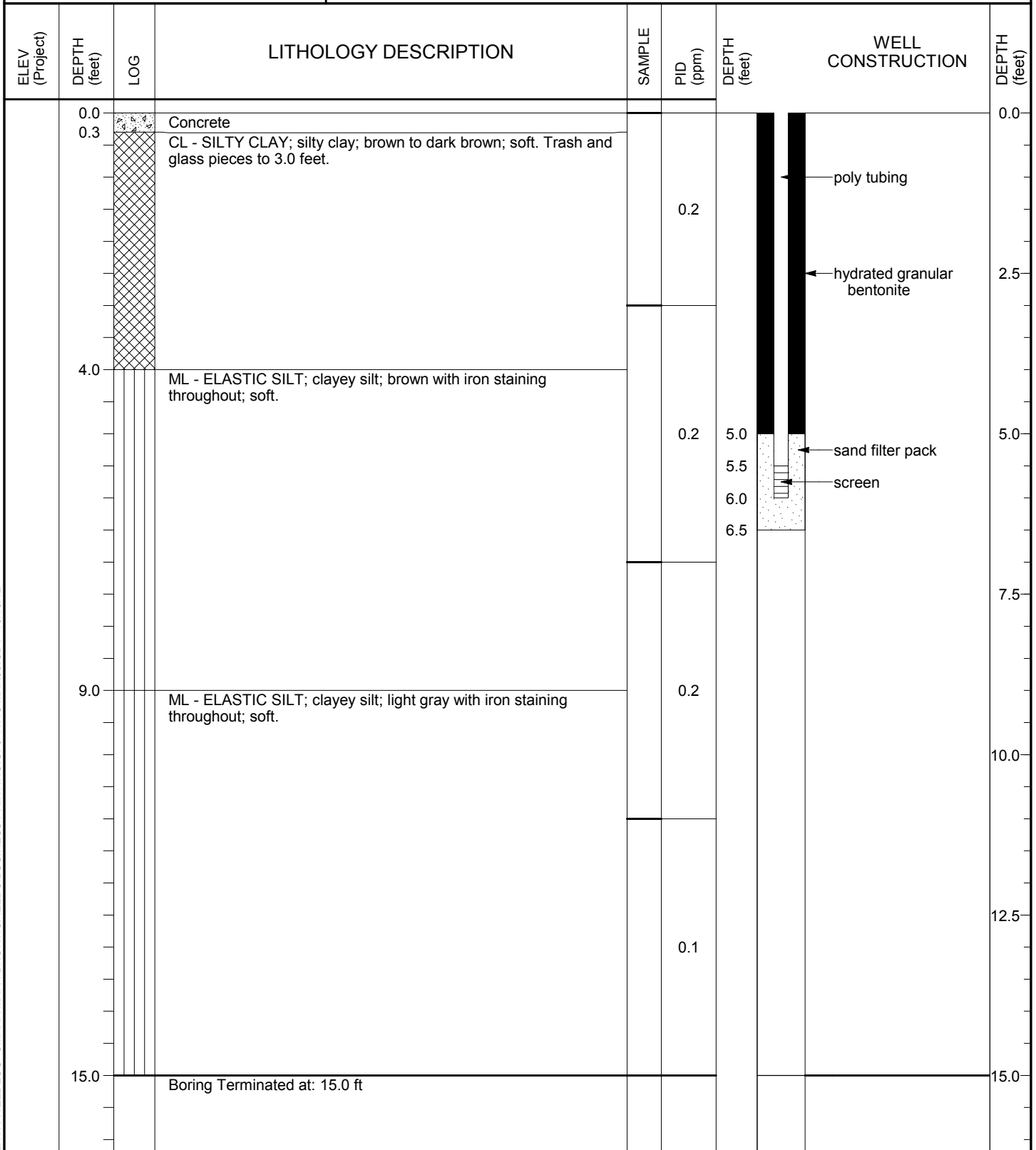
# BORING LOG

BORING NO.: SB-30

SHEET 1 of 1

DATE: 10-1-2012

## WATER LEVELS



ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

# BORING LOG

BORING NO.: SB-4

SHEET 1 of 1

DATE: 8-9-2012

## WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PID (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		CL - LEAN CLAY; dark brown to black. (Fill)			
	3.0		ML - ELASTIC SILT; brown mottled with Fe staining; moist		0.0	2.5
	5.0		ML - ELASTIC SILT; gray; moist; soft			5.0
	7.5				0.0	7.5
	10.0					10.0
	12.5				0.0	12.5
	13.0		ML - ELASTIC SILT; brownish gray; moist; soft			
	15.0		Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

# BORING LOG

BORING NO.: SB-5

SHEET 1 of 1

DATE: 8-9-2012

## WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PID (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		CL - SILTY CLAY; reddish brown with brown and black; slightly moist; soft. (Fill)			
					0.0	2.5
	5.0		ML - ELASTIC SILT; brown			5.0
	7.0		ML - ELASTIC SILT; gray mottled with Fe staining; moist; soft			
					0.0	7.5
	13.0		ML - ELASTIC SILT; brown			
					0.0	12.5
	15.0		Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

# BORING LOG

BORING NO.: SB-6

SHEET 1 of 1

DATE: 8-9-2012

## WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PID (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		CL - SILTY CLAY; brownish red with dark brown to black; dry; soft. (Fill)			
					0.0	2.5
	4.0		ML - ELASTIC SILT; brown; moist			
						5.0
					0.0	7.5
	9.0		ML - ELASTIC SILT; gray			
						10.0
	12.0		ML - ELASTIC SILT; grayish brown; slightly moist			
						12.5
	15.0		Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure





PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

**BORING LOG**

BORING NO.: SB-7

SHEET 1 of 1

DATE: 8-9-2012

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	DEPTH (feet)
	0.0		Concrete		0.0
	0.5		CL - LEAN CLAY; clay; brown; cinders and brick. (Fill)		
	2.0		ML - ELASTIC SILT; light brownish gray mottled with Fe staining		2.5
	5.0		ML - ELASTIC SILT; gray		5.0
	10.5		ML - ELASTIC SILT; brown mottled with Fe staining and gray; slightly moist		7.5
	15.0		Boring Terminated at: 15.0 ft		10.0
					12.5
					15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

**BORING LOG**

LOCATION: Omaha, Nebraska

BORING NO.: SB-8

JOB NO.: 00120137.00

SHEET 1 of 1

RIG / METHOD: Geoprobe / Geoprobe

DATE: 8-9-2012

CREW: Tom Payton & Brian Fettin

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	DEPTH (feet)
	0.0		Concrete		0.0
	0.5		CL - LEAN CLAY; dark brown to black. (Fill)		
	3.0		ML - ELASTIC SILT; brown mottled with Fe staining and gray; soft		2.5
	5.0		ML - ELASTIC SILT; gray		5.0
	13.0		ML - ELASTIC SILT; brownish gray		7.5
	15.0		Boring Terminated at: 15.0 ft		10.0
					12.5
					15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure



PROJECT: Omaha MAPA  
Brownfields Business Printing

LOCATION: Omaha, Nebraska

JOB NO.: 00120137.00

RIG / METHOD: Geoprobe / Geoprobe

CREW: Tom Payton & Brian Fettin

**BORING LOG**

BORING NO.: SB-9

SHEET 1 of 1

DATE: 8-9-2012

WATER LEVELS

ELEV (Project)	DEPTH (feet)	LOG	LITHOLOGY DESCRIPTION	SAMPLE	PI D (ppm)	DEPTH (feet)
	0.0		Concrete			0.0
	0.5		CL - LEAN CLAY; clay, brick, rock, and rubble, green discolored soils with slight odor, cinders from 2 feet to 3 feet. (Fill)		0.1	2.5
	4.0		ML - ELASTIC SILT; grayish brown mottled with Fe staining		0.0	7.5
					0.0	12.5
	15.0		Boring Terminated at: 15.0 ft			15.0

ENVR WELL LOG OMAHA MAPA BROWNSFIELDS BUSINESS PRINTING.GPJ HWS MAR06.GDT 10/15/12

Figure