HRGreen

MEMO

To: Noel Anderson and Chris Western, City of Waterloo

From: Robin Husman, HR Green, Inc.

Subject: February 8, 2013 Air and Soil Sampling

Date: 3/20/13

HR Green along with representatives of the City of Waterloo, DNR, Terracon, and Veith Construction met at the Chamberlain site on February 8, 2013 to review the areas where Veith had encountered soils that were generating "chemical odors". Chemical odors were noted driving past the site on 4th Street and odors became very strong near Area 6-1.

The two areas where the site concrete removal contractor, Veith Construction, noted the odors are being called Area 5-12 and Area 6-1 in reference to the closest numbered area of concern (AOC) from the May 2004 Phase I Environmental Site Assessment report. These areas are noted on the attached site map. HR Green conducted air screening with a photoionization detector (PID) with an 11.7 eV lamp in the two areas to check for organic vapors. All PID readings were less than 1 meter unit.

Two soil samples were collected in Area 6-1 and one soil sample was collected from Area 5-12. The samples were collect from approximately 2 feet below ground surface. The approximate sampling locations are shown on the attached site map. Metal cuttings and some oily, black discolored soils were noted in the samples at Area 6-1. These samples were therefore analyzed for RCRA metals and total petroleum hydrocarbons in addition to volatile organic compounds (VOCs). Per the concrete removal contractor, more discolored and wet/oily soils were encountered deeper during the footing wall removal. Deeper sampling was not performed because of potential exposure to people on-site.

Soil Sample Results - (mg/kg)

Parameter	Statewide Standards	6-1/10S	6-1/50N	5-12
Total Extractable Hydrocarbons (TEHs)				
Diesel	Not established	1240	1860	NS
Waste Oil	Not established	1060	2070	NS
Volatile Organic Compounds (VOCs)				
Acetone	68,000	<0.417	<0.530	0.140
Naphthalene	1,100	0.938	0.197	<0.015
2-Butanone(MEK) – Methyl Ethyl Ketone	46,000	<0.834	<0.265	0.0414
sec-Butylbenzene	Not established	<0.834	0.168	<0.003
1,2,4-Trimethybenzene	3,800	<0.834	0.168	<0.003
Metals				
Barium	15,000	35.4	48	NS
Cadmium	70	<0.909	1.74	NS
Chromium	97,000	9.76	6.52	NS
Lead	400	<4.54	19.3	NS

Following soil sample collection, the two areas were covered with plastic and soil was used to cover the overlap of the plastic sheets and anchor the plastic. The cover was placed to limit vapor release to the atmosphere.

View looking north across Area 5-12 with plastic cover. Red flags mark east and south sides Area 5-12.

View looking northwest across Area 6-1 with plastic cover. Plastic covered mounds on southern

Summa canisters were setup at six locations for collection of 24 hour air samples. Locations are noted on the attached Site Map. Canisters were set adjacent to the Areas 5-12 and 6-1, at the fence line and at 2427 E. 4th Street and 511 Boston Street. The two addresses are for residences of homeowners that called the City, Iowa DNR and/or EPA to report chemical odors. The 511 Boston Street property is located approximately 1000 feet northwest of Area 6-1.

Following the 24 hour collection period, the canisters were submitted to Braun Intertec for analyses of volatile organic compounds. Compounds detected above the laboratory reporting limits included acetone, MEK, chloromethane, dichlorodifluoromethane, ethanol, methylene chloride, propylene and an unknown analyte. Of the identified compounds, the sample results were below any exposure limits. The lab did not have a comparable chromatographic standard for the unknown chemical. A copy of the lab report is attached.

All canister air sampling was conducted after the plastic was placed over the Areas 5-12 and 6-1.

Based on our conversations, I am summarizing four primary concerns associated with the chemical odor and the observations at area 6-1.

Concerns:

1. Based on the soil and air sampling data, the contaminant/cause of the “chemical odor” is inconclusive.

2. The areas are generating chemical odors that were noted at 1000 feet away on a February winter day. What will summer temperatures bring?

3. The presence of metal cuttings and oily discolored soils noted during sampling and by the site contractor at Area 6-1 appear to be from metal machining activities. These metal machining wastes were under the concrete floor of the former building. This would suggest that materials were buried prior to building construction or that a former machine pit was filed in and capped with concrete. The extent of the oily metal cutting waste is unknown.

4. Are there additional areas of buried waste and/or contamination on the site that has not been identified or completely evaluated in prior site assessments? Example: anomalies were detected during a geophysical survey on the northern area of the site. The survey was completed due to a comment of buried cyanide drums. Cyanide was not detected in subsequent sampling. Could the anomalies be a source of the TCE contamination found on the northern end of the site?

The City would like Chamberlain/Duchisoiss activities listed below to address the above concerns.

1. Air samples be collected from beneath the plastic covers to further assess and identify the chemicals of concern generating the chemical odor(s).

2. Delineate and remove the materials generating the chemical odors. Until materials are removed, an additional soil cap needs to be placed over the current cover of plastic.

3. Assess and delineate the extent of the oily metal cuttings and associated soil contamination. Remove and dispose of the buried metal cutting wastes and address any soil remediation needs under the cleanup/remediation plan.

4. Complete test trenches and sample to evaluate what buried structures or waste are creating the anomalies noted in the geophysical survey. The area of the geophysical survey is shown on the attached map. Copies of the anomaly maps are attached for reference.

Former Chamberlain Manufacturing: February Sampling

HRGreen

AOC	Source
1-1	Aluminum machining
1-2	Secondary containment
1-3	Parts washing
1-4	Steel cutting
1-5	Stored/drained oily cuttings
1-6	Container storage area
1-7	90-day hazardous waste storage
1-8	Machine/grinding shop
1-9	Aluminum machining
1-10	Solvent storage tank
1-11	Heating oil /waste oil ASTs
1-12	Pump island
1-13	Fiberglass Tank
1-14	Cooling tower/pump house
1-15	Disturbed ground/possible buried drums
1-16	Foundry sand fill
1-17	Well #3
1-18	North outfall (#001)
1-19	Hazardous waste storage
1-20	Parts washing
1-21	Parts washing
1-22	10,000-gal waste oil UST
1-23	Degreasing
1-24	Degreasing
1-25	Paint drying area
1-26	Paint booth
1-27	Paint booth
1-28	4,000-gal gasoline UST
1-29	Disturbed ground

Subsurface Geophysical Investigation Results and Anomalies

AOC	Source
6-1	Heat-treating furnaces
6-2	Former press pits
6-3	DU painting room
6-4	Metal finishing lines
6-5	DU storage
6-6	Sludge drying oven
6-7	Leaking hydraulic oil drums
6-8	Filled trench drains
6-9	Furnace w/ potential asbestos
6-10	Floor tile/mastic
6-11	Sump
6-12	Oil storage/recycling
6-13	Sludge drying beds
6-14	Drum storage
6-15	Equipment cleaning
6-16	Filled trench drain
6-17	Paint booth
6-18	Hazardous waste staging
6-19	Parts washing
6-20	Parts washing
6-21	Zinc electroplating
6-22	Pit sludge treatment
6-23	Annealing furnaces
6-24	Well #2
6-25	Paint booth
6-26	Grated sump

AOC	Source
2-1	Phosphate conversion/preparation
2-2	Paint booth
2-3	Tile/mastic/carpet/mastic/ceiling tile
2-4	Hazardous material storage
2-5	Acid rinsing
2-6	Industrial x-ray
2-7	R&D warhead assembly
2-8	Stored/drained oily cuttings
2-9	PCB storage
2-10	Paint booth

AOC	Source
5-1	DU shell assembly
5-2	Open floor drains
5-3	Transite siding
5-4	Sulfuric acid release
5-5	Substation
5-6	Rail spur
5-7	Hydraulic oil tanks
5-8	Secondary containment-sulfuric acid
5-9	Outfall 002
5-10	Solvent recovery
5-11	Outfall 003
5-12	Metal scrap storage
5-13	Bitumen tank

AOC	Source
3-1	Solvent vault
3-2	Paint storage
3-3	Chlorinated solvent vapor degreaser
3-4	R &D assembly
3-5	Photo developing
3-6	Tile/mastic/carpet/mastic/ceiling tile
3-7	R & D area
3-8	Parts washing
3-9	Alkaline paint stripping
3-10	Patriot missile assembly
3-11	Grease trap
3-12	Gage lab w/vent hood
3-13	Cement wall board
3-14	Metallurgy lab w/vent hood, countertops
3-15	Disturbed ground

Items Found During Concrete Removal	
A-1	Pit 1
A-2	Pit 2
A-3	Pit 3
A-4	Buried Tank Cars (4)
A-5	Pit 4
A-6 to A-8	February Soil Sample Locations
C-1 & C-2	Concrete Sample Locations

AOC	Source	AOC	Source
4-1	Floor drains	4-16	Waste oil piping manifold
4-2	Vent hood	4-17	Waste oil storage/recycling
4-3	Former equipment location	4-18	Parts washing
4-4	Welding	4-19	Parts washing
4-5	Transformers	4-20	Parts washing
4-6	French drain	4-21	Parts washing
4-7	Floor drains (concreted in)	4-22	Sludge drying oven
4-9	Floor drains (filled w/sediment)	4-23	Sanborn Unit
4-10	Laboratory	4-24	10,000-gal UST (filled in place)
4-11	Floor tile/mastic/ceiling tile	4-25	Well #1
4-12	Wastewater treatment	4-26	Forklift repair
4-13	Hard-coat anodizing	4-27	Chrome plating
4-14	Buried tank cars (4)	4-28	Machining
4-15	Sewer line break/repair	4-29	Paint/solvent/chemical storage

Legend

- Air Sample Locations
- Covered_Areas

0 100 200 Feet

1 inch = 100 feet

Map Published: February 13, 2013

US EPA ARCHIVE DOCUMENT

Login Sample Receipt Checklist

Client: HR Green, Inc

Job Number: 310-1530-1

Login Number: 1530

List Source: TestAmerica Cedar Falls

List Number: 1

Creator: Facciani, Melene K.

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-2266-1
TestAmerica Sample Delivery Group: 10110021
Client Project/Site: Chamberlain-Waterloo, IA

For:
HR Green, Inc
PO BOX 9009
Cedar Rapids, Iowa 52409

Attn: Robin Husman

Authorized for release by:
2/25/2013 1:19:09 PM

Shawn Hayes
Project Manager I
shawn.hayes@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.

Table of Contents

Job ID: 310-2266-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-2266-1

Comments
No additional comments.

Receipt
The samples were received on 2/8/2013 4:28 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1° C.

GC/MS VOA
Method(s) 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for batch 5148 exceeded control limits for the following analytes: cis-1,3-Dichloropropene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C: The laboratory control sample (LCS) for batch 5148 recovered outside acceptance limits for 2-Butanone and Acetone. There was insufficient sample to perform a re-extraction or re-analysis; therefore, the data have been reported.

Method(s) 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for batch 4880 exceeded control limits for the following analytes: cis-1,3-Dichloropropene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No other analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Metals
Method(s) 6010C: Due to the high concentration of iron, the matrix spike / matrix spike duplicate (MS/MSD) for batch 4889 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.6-1/10S (310-2266-1)

Method(s) 6020A: 33951 - soil. A-batch - 35193 - Uranium

The following samples were diluted due to the nature of the sample matrix. The samples were high in salts, which causes internal standard and QC failures when the samples are run at a lesser dilution: 6-1/10S (310-2266-1), 6-1/50N (310-2266-2). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

Sample Summary

Client: HR Green, Inc
Project/Site: Chamberlain-Waterloo, IA

TestAmerica Job ID: 310-2266-1
SDG: 10110021

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-2266-1	6-1/10S	Soil	02/08/13 12:30	02/08/13 16:28
310-2266-2	6-1/50N	Soil	02/08/13 12:32	02/08/13 16:28
310-2266-3	5-12	Soil	02/08/13 14:05	02/08/13 16:28

Detection Summary

Client: HR Green, Inc
Project/Site: Chamberlain-Waterloo, IA

TestAmerica Job ID: 310-2266-1
SDG: 10110021

Client Sample ID: 6-1/10S — Lab Sample ID: 310-2266-1

Analyte	Result	Qualifier	NONE	NONE	Unit	Dil Fac	D	Method	Prep Type
Total Extractable Hydrocarbons	2390		17.7		mg/Kg	1		OA-2	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	93.8		83.4		ug/Kg	1	☼	8260C	Total/NA
Gasoline	85.8	Z	17.7		mg/Kg	1		OA-2	Total/NA
Diesel	1240		17.7		mg/Kg	1		OA-2	Total/NA
Waste Oil	1060		17.7		mg/Kg	1		OA-2	Total/NA
Barium	35.4		0.454		mg/Kg	1	☼	6010C	Total/NA
Chromium	9.76		0.909		mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: 6-1/50N — Lab Sample ID: 310-2266-2

Analyte	Result	Qualifier	NONE	NONE	Unit	Dil Fac	D	Method	Prep Type
Total Extractable Hydrocarbons	4220		16.9		mg/Kg	1		OA-2	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
sec-Butylbenzene	168		106		ug/Kg	1	☼	8260C	Total/NA
Naphthalene	197		106		ug/Kg	1	☼	8260C	Total/NA
1,2,4-Trimethylbenzene	168		106		ug/Kg	1	☼	8260C	Total/NA
Gasoline	290		16.9		mg/Kg	1		OA-2	Total/NA
Diesel	1860		16.9		mg/Kg	1		OA-2	Total/NA
Waste Oil	2070		16.9		mg/Kg	1		OA-2	Total/NA
Barium	48.0		0.422		mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.74		0.844		mg/Kg	1	☼	6010C	Total/NA
Chromium	6.52		0.844		mg/Kg	1	☼	6010C	Total/NA
Lead	19.3		4.22		mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: 5-12 — Lab Sample ID: 310-2266-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	140	*	30.0		ug/Kg	1	☼	8260C	Total/NA
2-Butanone (MEK)	41.4	*	30.0		ug/Kg	1	☼	8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 6-1/10S
Date Collected: 02/08/13 12:30
Date Received: 02/08/13 16:28

Lab Sample ID: 310-2266-1
Matrix: Soil
Percent Solids: 88.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<417		417		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Benzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Bromobenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Bromochloromethane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Bromodichloromethane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Bromoform	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Bromomethane	<417		417		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
2-Butanone (MEK)	<208		208		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
n-Butylbenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
sec-Butylbenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
tert-Butylbenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Carbon disulfide	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Carbon tetrachloride	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Chlorobenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Chlorodibromomethane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Chloroethane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Chloroform	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Chloromethane	<208		208		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
2-Chlorotoluene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
4-Chlorotoluene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,2-Dibromo-3-Chloropropane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,2-Dibromoethane (EDB)	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Dibromomethane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,2-Dichlorobenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,3-Dichlorobenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,4-Dichlorobenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Dichlorodifluoromethane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,1-Dichloroethane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,2-Dichloroethane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,1-Dichloroethene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
cis-1,2-Dichloroethene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
trans-1,2-Dichloroethene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,2-Dichloropropane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,3-Dichloropropane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
2,2-Dichloropropane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,1-Dichloropropene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
cis-1,3-Dichloropropene	<83.4	*	83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
trans-1,3-Dichloropropene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Ethylbenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Hexachlorobutadiene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Hexane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Isopropylbenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
p-Isopropyltoluene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Methylene Chloride	<208		208		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Methyl tert-butyl ether	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Naphthalene	**93.8**		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
N-Propylbenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Styrene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,1,1,2-Tetrachloroethane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1

Client Sample ID: 6-1/10S
Date Collected: 02/08/13 12:30
Date Received: 02/08/13 16:28

Lab Sample ID: 310-2266-1
Matrix: Soil
Percent Solids: 88.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Tetrachloroethene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Toluene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,2,3-Trichlorobenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,2,4-Trichlorobenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,1,1-Trichloroethane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,1,2-Trichloroethane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Trichloroethene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Trichlorofluoromethane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,2,3-Trichloropropane	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,2,4-Trimethylbenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
1,3,5-Trimethylbenzene	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Vinyl chloride	<83.4		83.4		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1
Xylenes, Total	<125		125		ug/Kg	☼	02/14/13 08:07	02/14/13 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*	*02/14/13 08:07*	*02/14/13 17:49*	*1*
Dibromofluoromethane (Surr)	*75*		*75 - 125*	*02/14/13 08:07*	*02/14/13 17:49*	*1*
Toluene-d8 (Surr)	*90*		*80 - 120*	*02/14/13 08:07*	*02/14/13 17:49*	*1*

Method: OA-2 - Iowa - Extractable Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Total Extractable Hydrocarbons	**2390**		17.7		mg/Kg			02/12/13 11:44	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**85.8**	**Z**	17.7		mg/Kg		02/12/13 16:58	02/13/13 19:24	1
Diesel	**1240**		17.7		mg/Kg		02/12/13 16:58	02/13/13 19:24	1
Waste Oil	**1060**		17.7		mg/Kg		02/12/13 16:58	02/13/13 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*87*		*60 - 150*	*02/12/13 16:58*	*02/13/13 19:24*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<3.63		3.63		mg/Kg	☼	02/14/13 09:12	02/15/13 13:58	1
Barium	**35.4**		0.454		mg/Kg	☼	02/14/13 09:12	02/15/13 13:58	1
Cadmium	<0.909		0.909		mg/Kg	☼	02/14/13 09:12	02/15/13 13:58	1
Chromium	**9.76**		0.909		mg/Kg	☼	02/14/13 09:12	02/15/13 13:58	1
Lead	<4.54		4.54		mg/Kg	☼	02/14/13 09:12	02/15/13 13:58	1
Selenium	<6.82		6.82		mg/Kg	☼	02/14/13 09:12	02/15/13 13:58	1
Silver	<0.909		0.909		mg/Kg	☼	02/14/13 09:12	02/15/13 13:58	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.575		0.575		mg/Kg	☼	02/14/13 10:01	02/20/13 03:35	10

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0198		0.0198		mg/Kg	☼	02/14/13 18:12	02/15/13 14:13	1

Client: HR Green, Inc
Project/Site: Chamberlain-Waterloo, IA

TestAmerica Job ID: 310-2266-1
SDG: 10110021

Client Sample ID: 6-1/50N
Date Collected: 02/08/13 12:32
Date Received: 02/08/13 16:28

Lab Sample ID: 310-2266-2
Matrix: Soil
Percent Solids: 90.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<530		530		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Benzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Bromobenzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Bromochloromethane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Bromodichloromethane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Bromoform	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Bromomethane	<530		530		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
2-Butanone (MEK)	<265		265		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
n-Butylbenzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
sec-Butylbenzene	**168**		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
tert-Butylbenzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Carbon disulfide	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Carbon tetrachloride	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Chlorobenzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Chlorodibromomethane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Chloroethane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Chloroform	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Chloromethane	<265		265		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
2-Chlorotoluene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
4-Chlorotoluene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,2-Dibromo-3-Chloropropane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,2-Dibromoethane (EDB)	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Dibromomethane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,2-Dichlorobenzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,3-Dichlorobenzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,4-Dichlorobenzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Dichlorodifluoromethane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,1-Dichloroethane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,2-Dichloroethane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,1-Dichloroethene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
cis-1,2-Dichloroethene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
trans-1,2-Dichloroethene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,2-Dichloropropane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,3-Dichloropropane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
2,2-Dichloropropane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,1-Dichloropropene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
cis-1,3-Dichloropropene	<106	*	106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
trans-1,3-Dichloropropene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Ethylbenzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Hexachlorobutadiene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Hexane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Isopropylbenzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
p-Isopropyltoluene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Methylene Chloride	<265		265		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Methyl tert-butyl ether	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Naphthalene	**197**		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
N-Propylbenzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Styrene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,1,1,2-Tetrachloroethane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1

Client Sample ID: 6-1/50N
Date Collected: 02/08/13 12:32
Date Received: 02/08/13 16:28

Lab Sample ID: 310-2266-2
Matrix: Soil
Percent Solids: 90.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Tetrachloroethene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Toluene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,2,3-Trichlorobenzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,2,4-Trichlorobenzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,1,1-Trichloroethane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,1,2-Trichloroethane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Trichloroethene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Trichlorofluoromethane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,2,3-Trichloropropane	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,2,4-Trimethylbenzene	**168**		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
1,3,5-Trimethylbenzene	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Vinyl chloride	<106		106		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1
Xylenes, Total	<159		159		ug/Kg	☼	02/14/13 08:07	02/14/13 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*	*02/14/13 08:07*	*02/14/13 18:20*	*1*
Dibromofluoromethane (Surr)	*75*		*75 - 125*	*02/14/13 08:07*	*02/14/13 18:20*	*1*
Toluene-d8 (Surr)	*89*		*80 - 120*	*02/14/13 08:07*	*02/14/13 18:20*	*1*

Method: OA-2 - Iowa - Extractable Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Total Extractable Hydrocarbons	**4220**		16.9		mg/Kg			02/12/13 11:44	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**290**		16.9		mg/Kg		02/12/13 16:58	02/13/13 20:47	1
Diesel	**1860**		16.9		mg/Kg		02/12/13 16:58	02/13/13 20:47	1
Waste Oil	**2070**		16.9		mg/Kg		02/12/13 16:58	02/13/13 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*60*		*60 - 150*	*02/12/13 16:58*	*02/13/13 20:47*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<3.37		3.37		mg/Kg	☼	02/14/13 09:12	02/15/13 14:05	1
Barium	**48.0**		0.422		mg/Kg	☼	02/14/13 09:12	02/15/13 14:05	1
Cadmium	**1.74**		0.844		mg/Kg	☼	02/14/13 09:12	02/15/13 14:05	1
Chromium	**6.52**		0.844		mg/Kg	☼	02/14/13 09:12	02/15/13 14:05	1
Lead	**19.3**		4.22		mg/Kg	☼	02/14/13 09:12	02/15/13 14:05	1
Selenium	<6.33		6.33		mg/Kg	☼	02/14/13 09:12	02/15/13 14:05	1
Silver	<0.844		0.844		mg/Kg	☼	02/14/13 09:12	02/15/13 14:05	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.575		0.575		mg/Kg	☼	02/14/13 10:01	02/20/13 04:01	10

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0198		0.0198		mg/Kg	☼	02/14/13 18:12	02/15/13 14:15	1

Client Sample ID: 5-12
Date Collected: 02/08/13 14:05
Date Received: 02/08/13 16:28

Lab Sample ID: 310-2266-3
Matrix: Soil
Percent Solids: 96.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**140**	*	30.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Benzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Bromobenzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Bromochloromethane	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Bromodichloromethane	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Bromoform	<5.99		5.99		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Bromomethane	<12.0		12.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
2-Butanone (MEK)	**41.4**	*	30.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
n-Butylbenzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
sec-Butylbenzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
tert-Butylbenzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Carbon disulfide	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Carbon tetrachloride	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Chlorobenzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Chlorodibromomethane	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Chloroethane	<12.0		12.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Chloroform	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Chloromethane	<12.0		12.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
2-Chlorotoluene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
4-Chlorotoluene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,2-Dibromo-3-Chloropropane	<30.0		30.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,2-Dibromoethane (EDB)	<30.0		30.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Dibromomethane	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,2-Dichlorobenzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,3-Dichlorobenzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,4-Dichlorobenzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Dichlorodifluoromethane	<8.99		8.99		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,1-Dichloroethane	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,2-Dichloroethane	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,1-Dichloroethene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
cis-1,2-Dichloroethene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
trans-1,2-Dichloroethene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,2-Dichloropropane	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,3-Dichloropropane	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
2,2-Dichloropropane	<12.0		12.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,1-Dichloropropene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
cis-1,3-Dichloropropene	<3.00	*	3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
trans-1,3-Dichloropropene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Ethylbenzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Hexachlorobutadiene	<15.0		15.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Hexane	<15.0		15.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Isopropylbenzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
p-Isopropyltoluene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Methylene Chloride	<30.0		30.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Methyl tert-butyl ether	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Naphthalene	<15.0		15.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
N-Propylbenzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Styrene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,1,1,2-Tetrachloroethane	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1

Client: HR Green, Inc
Project/Site: Chamberlain-Waterloo, IA

TestAmerica Job ID: 310-2266-1
SDG: 10110021

Client Sample ID: 5-12
Date Collected: 02/08/13 14:05
Date Received: 02/08/13 16:28

Lab Sample ID: 310-2266-3
Matrix: Soil
Percent Solids: 96.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Tetrachloroethene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Toluene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,2,3-Trichlorobenzene	<15.0		15.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,2,4-Trichlorobenzene	<15.0		15.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,1,1-Trichloroethane	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,1,2-Trichloroethane	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Trichloroethene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Trichlorofluoromethane	<12.0		12.0		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,2,3-Trichloropropane	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,2,4-Trimethylbenzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
1,3,5-Trimethylbenzene	<3.00		3.00		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Vinyl chloride	<8.99		8.99		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1
Xylenes, Total	<8.99		8.99		ug/Kg	☼	02/18/13 08:42	02/18/13 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*02/18/13 08:42*	*02/18/13 15:06*	*1*
Dibromofluoromethane (Surr)	*107*		*75 - 125*	*02/18/13 08:42*	*02/18/13 15:06*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*02/18/13 08:42*	*02/18/13 15:06*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits

GC Semi VOA

Qualifier	Qualifier Description
Z	The chromatographic response does not resemble a typical fuel pattern.

Metals

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits
F	RPD of the MS and MSD exceeds the control limits

Glossary

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

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

Matrix: Soil **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(75-125)	(80-120)
310-2266-1	6-1/10S	105	75	90
310-2266-2	6-1/50N	105	75	89
310-2266-3	5-12	101	107	98

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(75-125)	(80-120)
LCS 310-4874/2-A	Lab Control Sample	108	81	89
LCS 310-5131/2-A	Lab Control Sample	102	104	99
LCSD 310-4874/3-A	Lab Control Sample Dup	108	82	91
MB 310-4874/1-A	Method Blank	109	76	87
MB 310-5131/1-A	Method Blank	101	104	98

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: OA-2 - Iowa - Extractable Petroleum Hydrocarbons (GC)

Matrix: Soil **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		OTC
Lab Sample ID	Client Sample ID	(60-150)
310-2266-1	6-1/10S	87
310-2266-2	6-1/50N	60

Surrogate Legend

OTC = n-Octacosane

Method: OA-2 - Iowa - Extractable Petroleum Hydrocarbons (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		OTC
Lab Sample ID	Client Sample ID	(60-150)
LCS 310-4729/2-A	Lab Control Sample	89
MB 310-4729/1-A	Method Blank	84

Surrogate Legend

OTC = n-Octacosane

Client: HR Green, Inc
Project/Site: Chamberlain-Waterloo, IA

TestAmerica Job ID: 310-2266-1
SDG: 10110021

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

Lab Sample ID: MB 310-4874/1-A
Matrix: Solid
Analysis Batch: 4880

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4874

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<485		485		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Benzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Bromobenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Bromochloromethane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Bromodichloromethane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Bromoform	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Bromomethane	<485		485		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
2-Butanone (MEK)	<243		243		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
n-Butylbenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
sec-Butylbenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
tert-Butylbenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Carbon disulfide	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Carbon tetrachloride	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Chlorobenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Chlorodibromomethane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Chloroethane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Chloroform	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Chloromethane	<243		243		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
2-Chlorotoluene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
4-Chlorotoluene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,2-Dibromo-3-Chloropropane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,2-Dibromoethane (EDB)	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Dibromomethane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,2-Dichlorobenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,3-Dichlorobenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,4-Dichlorobenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Dichlorodifluoromethane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,1-Dichloroethane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,2-Dichloroethane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,1-Dichloroethene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
cis-1,2-Dichloroethene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
trans-1,2-Dichloroethene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,2-Dichloropropane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,3-Dichloropropane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
2,2-Dichloropropane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,1-Dichloropropene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
cis-1,3-Dichloropropene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
trans-1,3-Dichloropropene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Ethylbenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Hexachlorobutadiene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Hexane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Isopropylbenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
p-Isopropyltoluene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Methylene Chloride	<243		243		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Methyl tert-butyl ether	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Naphthalene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
N-Propylbenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Styrene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1

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

Lab Sample ID: MB 310-4874/1-A
Matrix: Solid
Analysis Batch: 4880

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4874

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,1,2,2-Tetrachloroethane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Tetrachloroethene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Toluene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,2,3-Trichlorobenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,2,4-Trichlorobenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,1,1-Trichloroethane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,1,2-Trichloroethane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Trichloroethene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Trichlorofluoromethane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,2,3-Trichloropropane	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,2,4-Trimethylbenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
1,3,5-Trimethylbenzene	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Vinyl chloride	<97.1		97.1		ug/Kg		02/14/13 08:07	02/14/13 10:40	1
Xylenes, Total	<146		146		ug/Kg		02/14/13 08:07	02/14/13 10:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*	*02/14/13 08:07*	*02/14/13 10:40*	*1*
Dibromofluoromethane (Surr)	*76*		*75 - 125*	*02/14/13 08:07*	*02/14/13 10:40*	*1*
Toluene-d8 (Surr)	*87*		*80 - 120*	*02/14/13 08:07*	*02/14/13 10:40*	*1*

Lab Sample ID: LCS 310-4874/2-A
Matrix: Solid
Analysis Batch: 4880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4874

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	984	1453		ug/Kg		148	65 - 150
Benzene	979	928.0		ug/Kg		95	55 - 135
Bromobenzene	979	1090		ug/Kg		111	65 - 125
Bromochloromethane	979	1062		ug/Kg		108	65 - 130
Bromodichloromethane	979	1186		ug/Kg		121	65 - 130
Bromoform	979	842.9		ug/Kg		86	50 - 135
Bromomethane	979	914.5		ug/Kg		93	45 - 135
2-Butanone (MEK)	984	917.0		ug/Kg		93	50 - 145
n-Butylbenzene	979	988.7		ug/Kg		101	55 - 130
sec-Butylbenzene	979	1003		ug/Kg		102	60 - 125
tert-Butylbenzene	979	1013		ug/Kg		103	55 - 125
Carbon disulfide	979	778.8		ug/Kg		80	40 - 135
Carbon tetrachloride	979	989.3		ug/Kg		101	55 - 130
Chlorobenzene	979	1090		ug/Kg		111	60 - 120
Chlorodibromomethane	979	1002		ug/Kg		102	55 - 130
Chloroethane	979	885.5		ug/Kg		90	50 - 145
Chloroform	979	1023		ug/Kg		105	65 - 130
Chloromethane	979	680.1		ug/Kg		69	40 - 135
2-Chlorotoluene	979	1003		ug/Kg		102	60 - 125
4-Chlorotoluene	979	994.2		ug/Kg		102	60 - 125
1,2-Dibromo-3-Chloropropane	979	800.2		ug/Kg		82	50 - 140
1,2-Dibromoethane (EDB)	979	1112		ug/Kg		114	55 - 140

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

Lab Sample ID: LCS 310-4874/2-A
Matrix: Solid
Analysis Batch: 4880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4874

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromomethane	979	1097		ug/Kg		112	65 - 135
1,2-Dichlorobenzene	979	949.7		ug/Kg		97	65 - 120
1,3-Dichlorobenzene	979	958.0		ug/Kg		98	60 - 125
1,4-Dichlorobenzene	979	971.2		ug/Kg		99	60 - 125
Dichlorodifluoromethane	979	540.6		ug/Kg		55	40 - 135
1,1-Dichloroethane	979	902.1		ug/Kg		92	55 - 135
1,2-Dichloroethane	979	1265		ug/Kg		129	60 - 140
1,1-Dichloroethene	979	806.5		ug/Kg		82	50 - 145
cis-1,2-Dichloroethene	979	959.1		ug/Kg		98	60 - 135
trans-1,2-Dichloroethene	979	905.2		ug/Kg		92	55 - 135
1,2-Dichloropropane	979	1115		ug/Kg		114	55 - 130
1,3-Dichloropropane	979	1064		ug/Kg		109	55 - 140
2,2-Dichloropropane	979	979.0		ug/Kg		100	40 - 135
1,1-Dichloropropene	979	1017		ug/Kg		104	55 - 130
cis-1,3-Dichloropropene	979	1279	*	ug/Kg		131	50 - 115
trans-1,3-Dichloropropene	979	1074		ug/Kg		110	55 - 130
Ethylbenzene	979	1076		ug/Kg		110	60 - 125
Hexachlorobutadiene	979	877.2		ug/Kg		90	40 - 135
Hexane	979	884.3		ug/Kg		90	45 - 140
Isopropylbenzene	979	1103		ug/Kg		113	60 - 125
p-Isopropyltoluene	979	959.9		ug/Kg		98	60 - 120
Methylene Chloride	979	796.0		ug/Kg		81	55 - 145
Methyl tert-butyl ether	979	957.0		ug/Kg		98	55 - 130
Naphthalene	979	1061		ug/Kg		108	50 - 130
N-Propylbenzene	979	1098		ug/Kg		112	50 - 125
Styrene	979	1087		ug/Kg		111	60 - 125
1,1,1,2-Tetrachloroethane	979	1115		ug/Kg		114	65 - 125
1,1,2,2-Tetrachloroethane	979	1031		ug/Kg		105	60 - 125
Tetrachloroethene	979	1012		ug/Kg		103	55 - 125
Toluene	979	1063		ug/Kg		109	60 - 130
1,2,3-Trichlorobenzene	979	995.2		ug/Kg		102	50 - 130
1,2,4-Trichlorobenzene	979	935.4		ug/Kg		96	45 - 135
1,1,1-Trichloroethane	979	973.7		ug/Kg		99	60 - 125
1,1,2-Trichloroethane	979	1037		ug/Kg		106	55 - 135
Trichloroethene	979	1178		ug/Kg		120	60 - 130
Trichlorofluoromethane	979	962.2		ug/Kg		98	50 - 145
1,2,3-Trichloropropane	979	1077		ug/Kg		110	50 - 145
1,2,4-Trimethylbenzene	979	1003		ug/Kg		102	55 - 125
1,3,5-Trimethylbenzene	979	1014		ug/Kg		104	50 - 130
Vinyl chloride	979	729.1		ug/Kg		74	45 - 140
Xylenes, Total	2940	3290		ug/Kg		112	50 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*
Dibromofluoromethane (Surr)	*81*		*75 - 125*
Toluene-d8 (Surr)	*89*		*80 - 120*

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

Lab Sample ID: LCSD 310-4874/3-A
Matrix: Solid
Analysis Batch: 4880

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 4874

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	961	1082		ug/Kg		113	65 - 150	29	40
Benzene	956	823.5		ug/Kg		86	55 - 135	12	25
Bromobenzene	956	1005		ug/Kg		105	65 - 125	8	35
Bromochloromethane	956	929.8		ug/Kg		97	65 - 130	13	35
Bromodichloromethane	956	1039		ug/Kg		109	65 - 130	13	30
Bromoform	956	744.8		ug/Kg		78	50 - 135	12	40
Bromomethane	956	812.7		ug/Kg		85	45 - 135	12	40
2-Butanone (MEK)	961	746.8		ug/Kg		78	50 - 145	20	40
n-Butylbenzene	956	905.3		ug/Kg		95	55 - 130	9	30
sec-Butylbenzene	956	897.4		ug/Kg		94	60 - 125	11	30
tert-Butylbenzene	956	931.4		ug/Kg		97	55 - 125	8	25
Carbon disulfide	956	711.0		ug/Kg		74	40 - 135	9	40
Carbon tetrachloride	956	814.1		ug/Kg		85	55 - 130	19	30
Chlorobenzene	956	952.2		ug/Kg		100	60 - 120	13	30
Chlorodibromomethane	956	855.4		ug/Kg		89	55 - 130	16	40
Chloroethane	956	738.4		ug/Kg		77	50 - 145	18	40
Chloroform	956	925.8		ug/Kg		97	65 - 130	10	30
Chloromethane	956	577.9		ug/Kg		60	40 - 135	16	40
2-Chlorotoluene	956	890.2		ug/Kg		93	60 - 125	12	35
4-Chlorotoluene	956	895.9		ug/Kg		94	60 - 125	10	35
1,2-Dibromo-3-Chloropropane	956	682.0		ug/Kg		71	50 - 140	16	35
1,2-Dibromoethane (EDB)	956	972.4		ug/Kg		102	55 - 140	13	30
Dibromomethane	956	923.2		ug/Kg		97	65 - 135	17	30
1,2-Dichlorobenzene	956	868.4		ug/Kg		91	65 - 120	9	30
1,3-Dichlorobenzene	956	860.9		ug/Kg		90	60 - 125	11	30
1,4-Dichlorobenzene	956	883.8		ug/Kg		92	60 - 125	9	30
Dichlorodifluoromethane	956	434.5		ug/Kg		45	40 - 135	22	35
1,1-Dichloroethane	956	789.1		ug/Kg		83	55 - 135	13	40
1,2-Dichloroethane	956	1050		ug/Kg		110	60 - 140	19	30
1,1-Dichloroethene	956	732.6		ug/Kg		77	50 - 145	10	40
cis-1,2-Dichloroethene	956	895.9		ug/Kg		94	60 - 135	7	40
trans-1,2-Dichloroethene	956	781.0		ug/Kg		82	55 - 135	15	40
1,2-Dichloropropane	956	934.9		ug/Kg		98	55 - 130	18	30
1,3-Dichloropropane	956	950.4		ug/Kg		99	55 - 140	11	30
2,2-Dichloropropane	956	884.4		ug/Kg		92	40 - 135	10	45
1,1-Dichloropropene	956	889.6		ug/Kg		93	55 - 130	13	30
cis-1,3-Dichloropropene	956	1110	*	ug/Kg		116	50 - 115	14	35
trans-1,3-Dichloropropene	956	949.2		ug/Kg		99	55 - 130	12	30
Ethylbenzene	956	966.7		ug/Kg		101	60 - 125	11	30
Hexachlorobutadiene	956	819.7		ug/Kg		86	40 - 135	7	35
Hexane	956	755.1		ug/Kg		79	45 - 140	16	35
Isopropylbenzene	956	999.6		ug/Kg		105	60 - 125	10	35
p-Isopropyltoluene	956	894.3		ug/Kg		94	60 - 120	7	30
Methylene Chloride	956	706.3		ug/Kg		74	55 - 145	12	40
Methyl tert-butyl ether	956	820.6		ug/Kg		86	55 - 130	15	30
Naphthalene	956	896.1		ug/Kg		94	50 - 130	17	30
N-Propylbenzene	956	994.8		ug/Kg		104	50 - 125	10	35
Styrene	956	986.6		ug/Kg		103	60 - 125	10	35

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

Lab Sample ID: LCSD 310-4874/3-A
Matrix: Solid
Analysis Batch: 4880

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 4874

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			956	1020		ug/Kg		107	65 - 125	9	30
1,1,2,2-Tetrachloroethane			956	905.2		ug/Kg		95	60 - 125	13	35
Tetrachloroethene			956	982.5		ug/Kg		103	55 - 125	3	40
Toluene			956	968.5		ug/Kg		101	60 - 130	9	35
1,2,3-Trichlorobenzene			956	829.5		ug/Kg		87	50 - 130	18	35
1,2,4-Trichlorobenzene			956	853.5		ug/Kg		89	45 - 135	9	35
1,1,1-Trichloroethane			956	876.5		ug/Kg		92	60 - 125	11	30
1,1,2-Trichloroethane			956	915.8		ug/Kg		96	55 - 135	12	30
Trichloroethene			956	995.2		ug/Kg		104	60 - 130	17	30
Trichlorofluoromethane			956	864.8		ug/Kg		90	50 - 145	11	40
1,2,3-Trichloropropane			956	927.6		ug/Kg		97	50 - 145	15	35
1,2,4-Trimethylbenzene			956	897.4		ug/Kg		94	55 - 125	11	35
1,3,5-Trimethylbenzene			956	894.3		ug/Kg		94	50 - 130	13	35
Vinyl chloride			956	650.5		ug/Kg		68	45 - 140	11	40
Xylenes, Total			2870	3007		ug/Kg		105	50 - 130	9	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*
Dibromofluoromethane (Surr)	*82*		*75 - 125*
Toluene-d8 (Surr)	*91*		*80 - 120*

Lab Sample ID: MB 310-5131/1-A
Matrix: Solid
Analysis Batch: 5148

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5131

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<94.8		94.8		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Benzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Bromobenzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Bromochloromethane	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Bromodichloromethane	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Bromoform	<19.0		19.0		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Bromomethane	<37.9		37.9		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
2-Butanone (MEK)	<94.8		94.8		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
n-Butylbenzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
sec-Butylbenzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
tert-Butylbenzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Carbon disulfide	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Carbon tetrachloride	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Chlorobenzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Chlorodibromomethane	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Chloroethane	<37.9		37.9		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Chloroform	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Chloromethane	<37.9		37.9		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
2-Chlorotoluene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
4-Chlorotoluene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,2-Dibromo-3-Chloropropane	<94.8		94.8		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,2-Dibromoethane (EDB)	<94.8		94.8		ug/Kg		02/18/13 08:42	02/18/13 12:01	1

Client: HR Green, Inc
Project/Site: Chamberlain-Waterloo, IA

TestAmerica Job ID: 310-2266-1
SDG: 10110021

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

Lab Sample ID: MB 310-5131/1-A
Matrix: Solid
Analysis Batch: 5148

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5131

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,2-Dichlorobenzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,3-Dichlorobenzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,4-Dichlorobenzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Dichlorodifluoromethane	<28.5		28.5		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,1-Dichloroethane	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,2-Dichloroethane	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,1-Dichloroethene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
cis-1,2-Dichloroethene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
trans-1,2-Dichloroethene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,2-Dichloropropane	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,3-Dichloropropane	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
2,2-Dichloropropane	<37.9		37.9		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,1-Dichloropropene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
cis-1,3-Dichloropropene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
trans-1,3-Dichloropropene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Ethylbenzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Hexachlorobutadiene	<47.4		47.4		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Hexane	<47.4		47.4		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Isopropylbenzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
p-Isopropyltoluene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Methylene Chloride	<94.8		94.8		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Methyl tert-butyl ether	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Naphthalene	<47.4		47.4		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
N-Propylbenzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Styrene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,1,1,2-Tetrachloroethane	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,1,2,2-Tetrachloroethane	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Tetrachloroethene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Toluene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,2,3-Trichlorobenzene	<47.4		47.4		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,2,4-Trichlorobenzene	<47.4		47.4		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,1,1-Trichloroethane	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,1,2-Trichloroethane	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Trichloroethene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Trichlorofluoromethane	<37.9		37.9		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,2,3-Trichloropropane	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,2,4-Trimethylbenzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
1,3,5-Trimethylbenzene	<9.48		9.48		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Vinyl chloride	<28.5		28.5		ug/Kg		02/18/13 08:42	02/18/13 12:01	1
Xylenes, Total	<28.5		28.5		ug/Kg		02/18/13 08:42	02/18/13 12:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*02/18/13 08:42*	*02/18/13 12:01*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 125*	*02/18/13 08:42*	*02/18/13 12:01*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*02/18/13 08:42*	*02/18/13 12:01*	*1*

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

Lab Sample ID: LCS 310-5131/2-A
Matrix: Solid
Analysis Batch: 5148

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5131

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	43.8	<109	*	ug/Kg		161	65 - 150
Benzene	43.6	49.05		ug/Kg		113	55 - 135
Bromobenzene	43.6	47.18		ug/Kg		108	65 - 125
Bromochloromethane	43.6	49.70		ug/Kg		114	65 - 130
Bromodichloromethane	43.6	47.12		ug/Kg		108	65 - 130
Bromoform	43.6	43.44		ug/Kg		100	50 - 135
Bromomethane	43.6	<43.6		ug/Kg		95	45 - 135
2-Butanone (MEK)	43.8	<109	*	ug/Kg		160	50 - 145
n-Butylbenzene	43.6	41.93		ug/Kg		96	55 - 130
sec-Butylbenzene	43.6	44.91		ug/Kg		103	60 - 125
tert-Butylbenzene	43.6	45.90		ug/Kg		105	55 - 125
Carbon disulfide	43.6	45.30		ug/Kg		104	40 - 135
Carbon tetrachloride	43.6	45.92		ug/Kg		105	55 - 130
Chlorobenzene	43.6	46.52		ug/Kg		107	60 - 120
Chlorodibromomethane	43.6	46.31		ug/Kg		106	55 - 130
Chloroethane	43.6	47.43		ug/Kg		109	50 - 145
Chloroform	43.6	47.48		ug/Kg		109	65 - 130
Chloromethane	43.6	46.35		ug/Kg		106	40 - 135
2-Chlorotoluene	43.6	46.12		ug/Kg		106	60 - 125
4-Chlorotoluene	43.6	44.83		ug/Kg		103	60 - 125
1,2-Dibromo-3-Chloropropane	43.6	<109		ug/Kg		106	50 - 140
1,2-Dibromoethane (EDB)	43.6	<109		ug/Kg		110	55 - 140
Dibromomethane	43.6	48.31		ug/Kg		111	65 - 135
1,2-Dichlorobenzene	43.6	46.44		ug/Kg		107	65 - 120
1,3-Dichlorobenzene	43.6	44.02		ug/Kg		101	60 - 125
1,4-Dichlorobenzene	43.6	44.28		ug/Kg		102	60 - 125
Dichlorodifluoromethane	43.6	35.97		ug/Kg		83	40 - 135
1,1-Dichloroethane	43.6	46.62		ug/Kg		107	55 - 135
1,2-Dichloroethane	43.6	49.31		ug/Kg		113	60 - 140
1,1-Dichloroethene	43.6	41.03		ug/Kg		94	50 - 145
cis-1,2-Dichloroethene	43.6	49.84		ug/Kg		114	60 - 135
trans-1,2-Dichloroethene	43.6	46.17		ug/Kg		106	55 - 135
1,2-Dichloropropane	43.6	46.98		ug/Kg		108	55 - 130
1,3-Dichloropropane	43.6	48.65		ug/Kg		112	55 - 140
2,2-Dichloropropane	43.6	47.71		ug/Kg		109	40 - 135
1,1-Dichloropropene	43.6	52.95		ug/Kg		121	55 - 130
cis-1,3-Dichloropropene	43.6	51.58	*	ug/Kg		118	50 - 115
trans-1,3-Dichloropropene	43.6	46.39		ug/Kg		106	55 - 130
Ethylbenzene	43.6	45.61		ug/Kg		105	60 - 125
Hexachlorobutadiene	43.6	<54.5		ug/Kg		100	40 - 135
Hexane	43.6	<54.5		ug/Kg		87	45 - 140
Isopropylbenzene	43.6	45.98		ug/Kg		105	60 - 125
p-Isopropyltoluene	43.6	43.27		ug/Kg		99	60 - 120
Methylene Chloride	43.6	<109		ug/Kg		124	55 - 145
Methyl tert-butyl ether	43.6	51.75		ug/Kg		119	55 - 130
Naphthalene	43.6	<54.5		ug/Kg		114	50 - 130
N-Propylbenzene	43.6	43.64		ug/Kg		100	50 - 125
Styrene	43.6	47.83		ug/Kg		110	60 - 125

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

Lab Sample ID: LCS 310-5131/2-A
Matrix: Solid
Analysis Batch: 5148

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5131

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	43.6	48.40		ug/Kg		111	65 - 125
1,1,2,2-Tetrachloroethane	43.6	49.19		ug/Kg		113	60 - 125
Tetrachloroethene	43.6	43.54		ug/Kg		100	55 - 125
Toluene	43.6	45.58		ug/Kg		105	60 - 130
1,2,3-Trichlorobenzene	43.6	<54.5		ug/Kg		109	50 - 130
1,2,4-Trichlorobenzene	43.6	<54.5		ug/Kg		102	45 - 135
1,1,1-Trichloroethane	43.6	47.40		ug/Kg		109	60 - 125
1,1,2-Trichloroethane	43.6	47.94		ug/Kg		110	55 - 135
Trichloroethene	43.6	45.12		ug/Kg		104	60 - 130
Trichlorofluoromethane	43.6	50.46		ug/Kg		116	50 - 145
1,2,3-Trichloropropane	43.6	48.62		ug/Kg		112	50 - 145
1,2,4-Trimethylbenzene	43.6	45.44		ug/Kg		104	55 - 125
1,3,5-Trimethylbenzene	43.6	45.32		ug/Kg		104	50 - 130
Vinyl chloride	43.6	43.80		ug/Kg		100	45 - 140
Xylenes, Total	131	138.7		ug/Kg		106	50 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*75 - 125*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: OA-2 - Iowa - Extractable Petroleum Hydrocarbons (GC)

Lab Sample ID: MB 310-4729/1-A
Matrix: Solid
Analysis Batch: 4801

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4729

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	<12.0		12.0		mg/Kg		02/12/13 16:58	02/13/13 15:13	1
Diesel	<12.0		12.0		mg/Kg		02/12/13 16:58	02/13/13 15:13	1
Waste Oil	<12.0		12.0		mg/Kg		02/12/13 16:58	02/13/13 15:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*84*		*60 - 150*	*02/12/13 16:58*	*02/13/13 15:13*	*1*

Lab Sample ID: LCS 310-4729/2-A
Matrix: Solid
Analysis Batch: 4801

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4729

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel	133	94.21		mg/Kg		71	45 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane	*89*		*60 - 150*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 310-4889/1-A
Matrix: Solid
Analysis Batch: 5061

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4889

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<3.80		3.80		mg/Kg		02/14/13 09:12	02/15/13 13:52	1
Barium	<0.475		0.475		mg/Kg		02/14/13 09:12	02/15/13 13:52	1
Cadmium	<0.951		0.951		mg/Kg		02/14/13 09:12	02/15/13 13:52	1
Chromium	<0.951		0.951		mg/Kg		02/14/13 09:12	02/15/13 13:52	1
Lead	<4.75		4.75		mg/Kg		02/14/13 09:12	02/15/13 13:52	1
Selenium	<7.13		7.13		mg/Kg		02/14/13 09:12	02/15/13 13:52	1
Silver	<0.951		0.951		mg/Kg		02/14/13 09:12	02/15/13 13:52	1

Lab Sample ID: LCS 310-4889/2-A
Matrix: Solid
Analysis Batch: 5061

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4889

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	94.9	93.37		mg/Kg		98	80 - 115
Barium	47.4	45.65		mg/Kg		96	80 - 110
Cadmium	47.4	46.55		mg/Kg		98	80 - 115
Chromium	47.4	46.67		mg/Kg		98	85 - 110
Lead	94.9	92.21		mg/Kg		97	80 - 115
Selenium	190	187.9		mg/Kg		99	85 - 110
Silver	47.4	44.99		mg/Kg		95	80 - 120

Lab Sample ID: 310-2266-1 MS
Matrix: Soil
Analysis Batch: 5061

Client Sample ID: 6-1/10S
Prep Type: Total/NA
Prep Batch: 4889

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	<3.63		195	190.3		mg/Kg	☼	97	75 - 125
Barium	35.4		97.6	122.6		mg/Kg	☼	89	75 - 125
Cadmium	<0.909		97.6	99.25		mg/Kg	☼	101	75 - 125
Chromium	9.76		97.6	98.60		mg/Kg	☼	91	75 - 120
Lead	<4.54		195	192.2		mg/Kg	☼	97	75 - 125
Selenium	<6.82		390	386.0		mg/Kg	☼	99	75 - 115
Silver	<0.909		97.6	87.00		mg/Kg	☼	89	75 - 110

Lab Sample ID: 310-2266-1 MSD
Matrix: Soil
Analysis Batch: 5061

Client Sample ID: 6-1/10S
Prep Type: Total/NA
Prep Batch: 4889

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	<3.63		178	52.09	F	mg/Kg	☼	28	75 - 125	114	20
Barium	35.4		88.9	35.77	F	mg/Kg	☼	0.4	75 - 125	110	20
Cadmium	<0.909		88.9	26.69	F	mg/Kg	☼	29	75 - 125	115	20
Chromium	9.76		88.9	44.40	F	mg/Kg	☼	39	75 - 120	76	20
Lead	<4.54		178	52.09	F	mg/Kg	☼	27	75 - 125	115	20
Selenium	<6.82		356	99.76	F	mg/Kg	☼	28	75 - 115	118	20
Silver	<0.909		88.9	20.47	F	mg/Kg	☼	23	75 - 110	124	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 160-33951/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 35193 — **Prep Batch: 33951**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0980		0.0980		mg/Kg		02/14/13 10:01	02/20/13 03:21	2

Lab Sample ID: LCS 160-33951/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 35193 — **Prep Batch: 33951**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Uranium	98.0	94.75		mg/Kg		97	80 - 120

Lab Sample ID: 310-2266-1 MS — **Client Sample ID: 6-1/10S**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 35193 — **Prep Batch: 33951**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Uranium	<0.575		119	144.6		mg/Kg	☼	121	75 - 125

Lab Sample ID: 310-2266-1 MSD — **Client Sample ID: 6-1/10S**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 35193 — **Prep Batch: 33951**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Uranium	<0.575		114	127.9		mg/Kg	☼	112	75 - 125	12	30

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Lab Sample ID: MB 310-4977/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5072 — **Prep Batch: 4977**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0192		0.0192		mg/Kg		02/14/13 18:12	02/15/13 13:36	1

Lab Sample ID: LCS 310-4977/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5072 — **Prep Batch: 4977**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.160	0.1578		mg/Kg		98	80 - 120

GC/MS VOA

Prep Batch: 4874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-2266-1	6-1/10S	Total/NA	Soil	5035	
310-2266-2	6-1/50N	Total/NA	Soil	5035	
LCS 310-4874/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 310-4874/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	
MB 310-4874/1-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 4880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-2266-1	6-1/10S	Total/NA	Soil	8260C	4874
310-2266-2	6-1/50N	Total/NA	Soil	8260C	4874
LCS 310-4874/2-A	Lab Control Sample	Total/NA	Solid	8260C	4874
LCSD 310-4874/3-A	Lab Control Sample Dup	Total/NA	Solid	8260C	4874
MB 310-4874/1-A	Method Blank	Total/NA	Solid	8260C	4874

Prep Batch: 5131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-2266-3	5-12	Total/NA	Soil	5035	
LCS 310-5131/2-A	Lab Control Sample	Total/NA	Solid	5035	
MB 310-5131/1-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 5148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-2266-3	5-12	Total/NA	Soil	8260C	5131
LCS 310-5131/2-A	Lab Control Sample	Total/NA	Solid	8260C	5131
MB 310-5131/1-A	Method Blank	Total/NA	Solid	8260C	5131

GC Semi VOA

Analysis Batch: 4681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-2266-1	6-1/10S	Total/NA	Soil	OA-2	
310-2266-2	6-1/50N	Total/NA	Soil	OA-2	

Prep Batch: 4729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-2266-1	6-1/10S	Total/NA	Soil	3546	
310-2266-2	6-1/50N	Total/NA	Soil	3546	
LCS 310-4729/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 310-4729/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 4801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-2266-1	6-1/10S	Total/NA	Soil	OA-2	4729
310-2266-2	6-1/50N	Total/NA	Soil	OA-2	4729
LCS 310-4729/2-A	Lab Control Sample	Total/NA	Solid	OA-2	4729
MB 310-4729/1-A	Method Blank	Total/NA	Solid	OA-2	4729

Metals

Prep Batch: 4889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-2266-1	6-1/10S	Total/NA	Soil	3050B	
310-2266-1 MS	6-1/10S	Total/NA	Soil	3050B	
310-2266-1 MSD	6-1/10S	Total/NA	Soil	3050B	
310-2266-2	6-1/50N	Total/NA	Soil	3050B	
LCS 310-4889/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 310-4889/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 4977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-2266-1	6-1/10S	Total/NA	Soil	7471B	
310-2266-2	6-1/50N	Total/NA	Soil	7471B	
LCS 310-4977/2-A	Lab Control Sample	Total/NA	Solid	7471B	
MB 310-4977/1-A	Method Blank	Total/NA	Solid	7471B	

Analysis Batch: 5061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-2266-1	6-1/10S	Total/NA	Soil	6010C	4889
310-2266-1 MS	6-1/10S	Total/NA	Soil	6010C	4889
310-2266-1 MSD	6-1/10S	Total/NA	Soil	6010C	4889
310-2266-2	6-1/50N	Total/NA	Soil	6010C	4889
LCS 310-4889/2-A	Lab Control Sample	Total/NA	Solid	6010C	4889
MB 310-4889/1-A	Method Blank	Total/NA	Solid	6010C	4889

Analysis Batch: 5072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-2266-1	6-1/10S	Total/NA	Soil	7471B	4977
310-2266-2	6-1/50N	Total/NA	Soil	7471B	4977
LCS 310-4977/2-A	Lab Control Sample	Total/NA	Solid	7471B	4977
MB 310-4977/1-A	Method Blank	Total/NA	Solid	7471B	4977

Prep Batch: 33951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-2266-1	6-1/10S	Total/NA	Soil	3050B	
310-2266-1 MS	6-1/10S	Total/NA	Soil	3050B	
310-2266-1 MSD	6-1/10S	Total/NA	Soil	3050B	
310-2266-2	6-1/50N	Total/NA	Soil	3050B	
LCS 160-33951/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 160-33951/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 35193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-2266-1	6-1/10S	Total/NA	Soil	6020A	33951
310-2266-1 MS	6-1/10S	Total/NA	Soil	6020A	33951
310-2266-1 MSD	6-1/10S	Total/NA	Soil	6020A	33951
310-2266-2	6-1/50N	Total/NA	Soil	6020A	33951
LCS 160-33951/2-A	Lab Control Sample	Total/NA	Solid	6020A	33951
MB 160-33951/1-A	Method Blank	Total/NA	Solid	6020A	33951

Client Sample ID: 6-1/10S

Lab Sample ID: 310-2266-1

Date Collected: 02/08/13 12:30
Matrix: Soil
Date Received: 02/08/13 16:28
Percent Solids: 88.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4874	02/14/13 08:07	TCH	TAL CF
Total/NA	Analysis	8260C		1	4880	02/14/13 17:49	TCH	TAL CF
Total/NA	Analysis	OA-2		1	4681	02/12/13 11:44	EEE	TAL CF
Total/NA	Prep	3546			4729	02/12/13 16:58	ELS	TAL CF
Total/NA	Analysis	OA-2		1	4801	02/13/13 19:24	BKT	TAL CF
Total/NA	Prep	3050B			33951	02/14/13 10:01	RW	TAL SL
Total/NA	Analysis	6020A		10	35193	02/20/13 03:35	CB	TAL SL
Total/NA	Prep	3050B			4889	02/14/13 09:12	SAV	TAL CF
Total/NA	Analysis	6010C		1	5061	02/15/13 13:58	MRH	TAL CF
Total/NA	Prep	7471B			4977	02/14/13 18:12	SAV	TAL CF
Total/NA	Analysis	7471B		1	5072	02/15/13 14:13	OAD	TAL CF

Client Sample ID: 6-1/50N

Lab Sample ID: 310-2266-2

Date Collected: 02/08/13 12:32
Matrix: Soil
Date Received: 02/08/13 16:28
Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4874	02/14/13 08:07	TCH	TAL CF
Total/NA	Analysis	8260C		1	4880	02/14/13 18:20	TCH	TAL CF
Total/NA	Analysis	OA-2		1	4681	02/12/13 11:44	EEE	TAL CF
Total/NA	Prep	3546			4729	02/12/13 16:58	ELS	TAL CF
Total/NA	Analysis	OA-2		1	4801	02/13/13 20:47	BKT	TAL CF
Total/NA	Prep	3050B			33951	02/14/13 10:01	RW	TAL SL
Total/NA	Analysis	6020A		10	35193	02/20/13 04:01	CB	TAL SL
Total/NA	Prep	3050B			4889	02/14/13 09:12	SAV	TAL CF
Total/NA	Analysis	6010C		1	5061	02/15/13 14:05	MRH	TAL CF
Total/NA	Prep	7471B			4977	02/14/13 18:12	SAV	TAL CF
Total/NA	Analysis	7471B		1	5072	02/15/13 14:15	OAD	TAL CF

Client Sample ID: 5-12

Lab Sample ID: 310-2266-3

Date Collected: 02/08/13 14:05
Matrix: Soil
Date Received: 02/08/13 16:28
Percent Solids: 96.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5131	02/18/13 08:42	TCH	TAL CF
Total/NA	Analysis	8260C		1	5148	02/18/13 15:06	TCH	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Certification Summary

Client: HR Green, Inc
Project/Site: Chamberlain-Waterloo, IA

TestAmerica Job ID: 310-2266-1
SDG: 10110021

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	NELAP	5	200024	11-29-13
Iowa	State Program	7	7	12-01-13
Kansas	NELAP	7	E-10341	01-31-14
Minnesota	NELAP	5	019-999-319	12-31-13
North Dakota	State Program	8	R-186	09-29-13
Oregon	NELAP	10	IA100001	09-29-13
Wisconsin	State Program	5	999917270	08-31-13

Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-13
California	NELAP	9	2542	03-31-13
Connecticut	State Program	1	PH-0241	03-31-13
Florida	NELAP	4	E87689	06-30-13
Illinois	NELAP	5	200023	11-30-13
Iowa	State Program	7	373	12-01-14
Kansas	NELAP	7	E-10236	10-31-13
Kentucky	State Program	4	90125	12-31-13
L-A-B	DoD ELAP		L2305	03-10-13
Louisiana	NELAP	6	106151	06-30-13
Louisiana	NELAP	6	LA070016	12-31-13
Maryland	State Program	3	310	09-30-13
Missouri	State Program	7	780	06-30-12
Nevada	State Program	9	MO000542013-1	07-31-13
New Jersey	NELAP	2	MO002	06-30-13
New York	NELAP	2	11616	04-01-13
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-13
Pennsylvania	NELAP	3	68-00540	02-28-13
South Carolina	State Program	4	85002	06-30-13
Texas	NELAP	6	T104704193	07-31-13
USDA	Federal		P330-07-00122	01-03-14
USEPA Reg V SDWA	Federal	1	N/A	08-30-14
Utah	NELAP	8	MO000542012-4	06-30-13
Virginia	NELAP	3	460230	06-14-13
Washington	State Program	10	C1310	08-31-13
West Virginia DEP	State Program	3	381	08-30-13

Method Summary

Client: HR Green, Inc
Project/Site: Chamberlain-Waterloo, IA

TestAmerica Job ID: 310-2266-1
SDG: 10110021

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CF
OA-2	Iowa - Extractable Petroleum Hydrocarbons (GC)	Iowa DNR	TAL CF
6010C	Metals (ICP)	SW846	TAL CF
6020A	Metals (ICP/MS)	SW846	TAL SL
7471B	Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	SW846	TAL CF

Protocol References:

Iowa DNR = Iowa Department of Natural Resources

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

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

TestAmerica
704 Enterprise Drive • Cedar Falls, IA 50613
Tel 319-277-2401 • Fax 319-277-2425

TestAmerica Sample Receipt and Ter
Cedar Falls Facility

310-2266 Chain of Custody

Client: HR Green Project: Chamberlain

City: _____ State: _____

Date: 2-8-13 Receiver's Initials: CH Time (Delivered): 16:28

Temperature Record:

Cooler ID# (If Applicable): AF 3

Uncorrected Temp: 1.3 °C

Corrected Temp: 1.1 °C

Thermometer:

- [ ] IR - 111531565 "D"
- [x] IR - 111531506 "E"
- [ ] IR - 61854108 "Front"
- [ ] 101681126

Courier:

- [ ] UPS
- [ ] FedEx
- [ ] FedEx Ground
- [ ] US Postal Service
- [ ] Spee-Dee
- [ ] TA Courier
- [ ] TA Field Services
- [x] Client
- [ ] Other: _____

- [x] Temperature blank
- [ ] Temperature out of compliance

Coolant Record:

- [x] Received on ice
  - [x] Wet ice
  - [ ] Blue ice
  - [ ] Dry ice
  - [ ] Other: _____
- [ ] NONE

Exceptions Noted:

- [ ] Sample(s) not received in cooler
- [ ] Sample(s) received same day of sampling
  - [ ] Evidence of chilling process
- [ ] No temp blank. Inside temp of cooler taken
- [ ] Temperature not taken: _____
- [ ] Non-Conformance Report Started

Custody Seals:

Cooler Custody Seals Present? [ ] Yes [x] No

Cooler Custody Seals Intact? [ ] Yes [ ] No [x] N/A

Sample Custody Seals Present? [ ] Yes [x] No

Sample Custody Seals Intact? [ ] Yes [ ] No [x] N/A

Revision: 18
Effective Date: 1/7/2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613

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

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

Client Name: HR Green | Client #: _____
Address: 8710 Earhart SW
City/State/Zip Code: Cedar Rapids, IA 52404
Project Manager: RHusman
Email Address: rhusman@fmtcs.com
Telephone Number: 319/841-4000 | Fax: _____
Sampler Name: (Print Name) RHusman / M Gealer
Sampler Signature: RHusman

Project Name: Chamberlain
Project #: 10110021
Site/Location ID: Waterloo | State: IA
Report To: RHusman
Invoice To: RHusman
Quote #: _____ | PO#: _____

TAT
___ Standard
___ Rush (surcharges may apply)
Date Needed: _____
Fax Results: Y N
Email Results: (Y) N

QC Deliverables
___ None
___ Level 2 (Batch QC)
___ Level 3
___ Level 4
Other: _____

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify, Other)	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: VOCs	TEH	RCRA Metals	Uranium	REMARKS
6-1 /10S	2/8/13	12:30	C	N	S						5	3	✓	✓	✓	✓	
6-1/50N	↓	12:32	C	↓	S						4	3	✓	✓	✓	✓	
5-12	↓	1:45	C	↓	S						1	3	✓				

Special Instructions:

LABORATORY COMMENTS:

	Date	Time		Date	Time
Relinquished By: RHusman	2/8/13	1628	Received By: Jamie Johnson	2/8/13	1628
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAL-0033 (0708)

Page _____ of _____

Login Sample Receipt Checklist

Client: HR Green, Inc

Job Number: 310-2266-1
SDG Number: 10110021

Login Number: 2266
List Number: 1
Creator: Wilson, Cheryl L.

List Source: TestAmerica Cedar Falls

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

Login Sample Receipt Checklist

Client: HR Green, Inc

Job Number: 310-2266-1
SDG Number: 10110021

Login Number: 2266
List Number: 1
Creator: McNairy, Jason

List Source: TestAmerica St. Louis
List Creation: 02/12/13 11:22 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

BRAUN INTERTEC

Braun Intertec Corporation
11001 Hampshire Avenue S.
Minneapolis, MN 55438

Phone: 952.995.2000
Fax: 952.995.2020
Web: braunintertec.com

Mr. Mike Goalen
HR Green
2550 University Ave. W., Suite 400N
St. Paul, MN 55114

February 21, 2013

Report #: 1300666

RE: Chamberlain
1011004

Dear Mike Goalen:

Braun Intertec Corporation received samples for the project identified above on February 13, 2013. Analytical results are summarized in the following report.

All routine quality assurance procedures were followed, unless otherwise noted.

We appreciate your decision to use Braun Intertec Corporation for this project. We are committed to being your vendor of choice to meet your analytical chemistry needs.

If you have any questions please contact me at the above phone number.

Sincerely,

Steven J. Albrecht

Steven J. Albrecht

Project Manager

BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Qualifiers and Abbreviations

tu	The reported value for the unknown analyte is based on a molecular weight of 100 because the actual molecular weight is not known.
tt	Concentrations are estimated values calculated relative to the closest eluting internal standard using peak areas from the total ion chromatogram and a relative response factor of one.
tic	Compounds were tentatively identified by comparison to the NIST (NBS) database of mass spectra. These identifications represent the best fit obtained from the database search, subject to the interpretation of the analyst.
sd	See case narrative section for further information.
go	The laboratory control sample recovery is outside of laboratory control limits.
A1	The canister was sampled to less than atmospheric pressure and additional surrogate was added to pressurize the canister for analysis. Consequently surrogate concentrations are over the calibration range resulting in surrogate failures.
COC	Chain of Custody
MRL	Method Reporting Limit
NA	Not Applicable
ND	Analyte NOT DETECTED
NR	Not Reported
%Rec	Percent Recovery
RPD	Relative Percent Difference
VOC	Volatile Organic Compound

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Case Narrative

In the analysis of air by EPA Method TO-15, sample 1300666-02 was received with about 15% of the air that would be expected based on collection of a 24-hour integrated sample. The flow controller was examined and shown to be operating correctly. The pressure gauge on the canister was also in agreement with the laboratory equipment used to measure the initial pressure of the sample. This also agreed with the chain of custody.
In order to complete the analysis, additional nitrogen containing surrogate compounds was added. This resulted in elevated reporting limits as the sample that was collected is diluted by this addition. In addition, surrogate compounds may be unavailable, over the calibration range and/or failing due to the modifications to the analysis that were required.

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St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Sample Summary

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
2427 E. 4th St.	1300666-01	Air	02/09/13 13:50	02/13/13 09:40
511 Boston St.	1300666-02	Air	02/09/13 14:00	02/13/13 09:40
Area 6-1	1300666-03	Air	02/09/13 14:11	02/13/13 09:40
Area 5-12	1300666-04	Air	02/09/13 14:21	02/13/13 09:40
Fence-15W	1300666-05	Air	02/09/13 14:29	02/13/13 09:40
Fence-2NW	1300666-06	Air	02/09/13 14:35	02/13/13 09:40

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St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Conditions Upon Receipt

COC Included: Yes	**Hand Delivered by Client:** No	**Custody Seals Used:** Yes
COC Complete: Yes	**Sufficient Sample Provided:** Yes	**Custody Seals Intact:** Yes
COC & Labels Agree: Yes		

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St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

2427 E. 4th St.

1300666-01 (Air)
2/9/13 13:50

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1-Trichloroethane (71-55-6)	< 2.36	2.36	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,1,2,2-Tetrachloroethane (79-34-5)	< 3.09	3.09	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,1,2-Trichloroethane (79-00-5)	< 2.36	2.36	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,1,2-Trichlorotrifluoroethane (76-13-1)	< 3.45	3.45	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,1-Dichloroethane (75-34-3)	< 1.75	1.75	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,1-Dichloroethene (75-35-4)	< 1.78	1.78	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,2,4-Trichlorobenzene (120-82-1)	< 3.21	3.21	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,2,4-Trimethylbenzene (95-63-6)	< 4.26	4.26	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,2-Dibromoethane (106-93-4)	< 3.33	3.33	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,2-Dichlorobenzene (95-50-1)	< 2.50	2.50	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,2-Dichloroethane (107-06-2)	< 1.82	1.82	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,2-Dichloropropane (78-87-5)	< 2.00	2.00	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,2-Dichlorotetrafluoroethane (76-14-2)	< 3.14	3.14	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,3,5-Trimethylbenzene (108-67-8)	< 2.13	2.13	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,3-Butadiene (106-99-0)	< 0.995	0.995	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,3-Dichlorobenzene (541-73-1)	< 2.50	2.50	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,4-Dichlorobenzene (106-46-7)	< 2.60	2.60	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
1,4-Dioxane (123-91-1)	< 1.56	1.56	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
2-Butanone (MEK) (78-93-3)	**1.70**	1.33	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
2-Hexanone (591-78-6)	< 1.84	1.84	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
2-Propanol (67-63-0)	< 1.11	1.11	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
4-Ethyltoluene (622-96-8)	< 2.13	2.13	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
4-Methyl-2-pentanone (108-10-1)	< 1.77	1.77	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Acetone (67-64-1)	< 4.12	4.12	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Benzene (71-43-2)	< 2.87	2.87	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Benzyl chloride (100-44-7)	< 2.16	2.16	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Bromodichloromethane (75-27-4)	< 2.90	2.90	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Bromoform (75-25-2)	< 17.0	17.0	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Bromomethane (74-83-9)	< 1.75	1.75	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Carbon disulfide (75-15-0)	< 1.35	1.35	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Carbon Tetrachloride (56-23-5)	< 2.73	2.73	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Chlorobenzene (108-90-7)	< 2.07	2.07	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Chloroethane (75-00-3)	< 2.37	2.37	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Chloroform (67-66-3)	< 2.11	2.11	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Chloromethane (74-87-3)	**1.33**	0.929	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
cis-1,2-Dichloroethene (156-59-2)	< 1.78	1.78	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
cis-1,3-Dichloropropene (10061-01-5)	< 2.04	2.04	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Cyclohexane (110-82-7)	< 1.49	1.49	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	

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2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

2427 E. 4th St.

1300666-01 (Air)
2/9/13 13:50

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dibromochloromethane (124-48-1)	< 3.69	3.69	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Dichlorodifluoromethane (75-71-8)	**2.64**	2.22	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Ethanol (64-17-5)	**3.48**	3.26	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Ethyl Acetate (141-78-6)	< 1.56	1.56	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Ethylbenzene (100-41-4)	< 1.95	1.95	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Hexachloro-1,3-butadiene (87-68-3)	< 4.62	4.62	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
m,p-Xylenes (179601-23-1)	< 3.83	3.83	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Methylene chloride (75-09-2)	**9.04**	1.56	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Methyl-t-butyl ether (1634-04-4)	< 1.56	1.56	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Naphthalene (91-20-3)	< 4.54	4.54	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
n-Heptane (142-82-5)	< 1.78	1.78	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
n-Hexane (110-54-3)	< 1.53	1.53	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
o-Xylene (95-47-6)	< 1.95	1.95	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Propylene (115-07-1)	**1.67**	0.746	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Styrene (100-42-5)	< 1.85	1.85	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Tetrachloroethene (127-18-4)	< 2.94	2.94	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Tetrahydrofuran (109-99-9)	< 1.28	1.28	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Toluene (108-88-3)	< 1.70	1.70	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
trans-1,2-Dichloroethene (156-60-5)	< 1.72	1.72	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	go
trans-1,3-Dichloropropene (10061-02-6)	< 2.12	2.12	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Trichloroethene (79-01-6)	< 2.33	2.33	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Trichlorofluoromethane (75-69-4)	< 2.62	2.62	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Vinyl acetate (108-05-4)	< 1.53	1.53	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Vinyl chloride (75-01-4)	< 1.15	1.15	ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	
Surrogate: 1,2-Dichloroethane-d4	*121 %*	*Limits: 70-150%*			*B3B0228*	*2/13/13*	*2/14/13 18:35*	*EPA TO-15*	
Surrogate: 4-Bromofluorobenzene	*86.5 %*	*Limits: 70-115%*			*B3B0228*	*2/13/13*	*2/14/13 18:35*	*EPA TO-15*	
Surrogate: Toluene-d8	*97.6 %*	*Limits: 70-110%*			*B3B0228*	*2/13/13*	*2/14/13 18:35*	*EPA TO-15*	

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St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

2427 E. 4th St.

1300666-01 (Air)
2/9/13 13:50

Tentatively Identified Compounds - Volatile Compounds

tic, tt

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Unknown analyte (NA)	**53**		ug/m³	1.67	B3B0228	2/13/13	2/14/13 18:35	EPA TO-15	tu

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St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

511 Boston St.

1300666-02 (Air)
2/9/13 14:00

Volatile Organic Compounds

sd

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1-Trichloroethane (71-55-6)	< 12.6	12.6	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,1,2,2-Tetrachloroethane (79-34-5)	< 16.5	16.5	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,1,2-Trichloroethane (79-00-5)	< 12.6	12.6	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,1,2-Trichlorotrifluoroethane (76-13-1)	< 18.4	18.4	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,1-Dichloroethane (75-34-3)	< 9.35	9.35	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,1-Dichloroethene (75-35-4)	< 9.51	9.51	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,2,4-Trichlorobenzene (120-82-1)	< 17.1	17.1	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,2,4-Trimethylbenzene (95-63-6)	< 22.7	22.7	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,2-Dibromoethane (106-93-4)	< 17.7	17.7	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,2-Dichlorobenzene (95-50-1)	< 13.3	13.3	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,2-Dichloroethane (107-06-2)	< 9.71	9.71	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,2-Dichloropropane (78-87-5)	< 10.7	10.7	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,2-Dichlorotetrafluoroethane (76-14-2)	< 16.8	16.8	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,3,5-Trimethylbenzene (108-67-8)	< 11.4	11.4	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,3-Butadiene (106-99-0)	< 5.30	5.30	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,3-Dichlorobenzene (541-73-1)	< 13.3	13.3	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,4-Dichlorobenzene (106-46-7)	< 13.9	13.9	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
1,4-Dioxane (123-91-1)	< 8.32	8.32	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
2-Butanone (MEK) (78-93-3)	< 7.07	7.07	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
2-Hexanone (591-78-6)	< 9.82	9.82	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
2-Propanol (67-63-0)	< 5.89	5.89	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
4-Ethyltoluene (622-96-8)	< 11.4	11.4	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
4-Methyl-2-pentanone (108-10-1)	< 9.46	9.46	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Acetone (67-64-1)	< 21.9	21.9	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Benzene (71-43-2)	< 15.3	15.3	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Benzyl chloride (100-44-7)	< 11.5	11.5	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Bromodichloromethane (75-27-4)	< 15.5	15.5	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Bromoform (75-25-2)	< 90.9	90.9	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Bromomethane (74-83-9)	< 9.31	9.31	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Carbon disulfide (75-15-0)	< 7.19	7.19	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Carbon Tetrachloride (56-23-5)	< 14.5	14.5	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Chlorobenzene (108-90-7)	< 11.0	11.0	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Chloroethane (75-00-3)	< 12.7	12.7	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Chloroform (67-66-3)	< 11.3	11.3	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Chloromethane (74-87-3)	< 4.95	4.95	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
cis-1,2-Dichloroethene (156-59-2)	< 9.51	9.51	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
cis-1,3-Dichloropropene (10061-01-5)	< 10.9	10.9	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Cyclohexane (110-82-7)	< 7.95	7.95	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	

BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

511 Boston St.

1300666-02 (Air)
2/9/13 14:00

Volatile Organic Compounds

sd

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dibromochloromethane (124-48-1)	< 19.7	19.7	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Dichlorodifluoromethane (75-71-8)	< 11.9	11.9	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Ethanol (64-17-5)	< 17.4	17.4	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Ethyl Acetate (141-78-6)	< 8.32	8.32	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Ethylbenzene (100-41-4)	< 10.4	10.4	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Hexachloro-1,3-butadiene (87-68-3)	< 24.6	24.6	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
m,p-Xylenes (179601-23-1)	< 20.4	20.4	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Methylene chloride (75-09-2)	**13.2**	8.33	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Methyl-t-butyl ether (1634-04-4)	< 8.33	8.33	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Naphthalene (91-20-3)	< 24.2	24.2	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
n-Heptane (142-82-5)	< 9.46	9.46	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
n-Hexane (110-54-3)	< 8.14	8.14	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
o-Xylene (95-47-6)	< 10.4	10.4	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Propylene (115-07-1)	< 3.97	3.97	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Styrene (100-42-5)	< 9.84	9.84	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Tetrachloroethene (127-18-4)	< 15.7	15.7	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Tetrahydrofuran (109-99-9)	< 6.81	6.81	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Toluene (108-88-3)	< 9.04	9.04	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
trans-1,2-Dichloroethene (156-60-5)	< 9.16	9.16	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	go
trans-1,3-Dichloropropene (10061-02-6)	< 11.3	11.3	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Trichloroethene (79-01-6)	< 12.4	12.4	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Trichlorofluoromethane (75-69-4)	< 14.0	14.0	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Vinyl acetate (108-05-4)	< 8.13	8.13	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Vinyl chloride (75-01-4)	< 6.13	6.13	ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	
Surrogate: 1,2-Dichloroethane-d4	*%*	*Limits: 70-150%*			*B3B0228*	*2/13/13*	*2/14/13 20:47*	*EPA TO-15*	*A1*
Surrogate: 4-Bromofluorobenzene	*80.2 %*	*Limits: 70-115%*			*B3B0228*	*2/13/13*	*2/14/13 20:47*	*EPA TO-15*	
Surrogate: Toluene-d8	*94.8 %*	*Limits: 70-110%*			*B3B0228*	*2/13/13*	*2/14/13 20:47*	*EPA TO-15*	

BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

511 Boston St.

1300666-02 (Air)
2/9/13 14:00

Tentatively Identified Compounds - Volatile Compounds

tic, tt

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
+++ **TICs not detected** +++	**< 0.0**		ug/m³	8.89	B3B0228	2/13/13	2/14/13 20:47	EPA TO-15	

BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Area 6-1

1300666-03 (Air)
2/9/13 14:11

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1-Trichloroethane (71-55-6)	< 2.22	2.22	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,1,2,2-Tetrachloroethane (79-34-5)	< 2.90	2.90	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,1,2-Trichloroethane (79-00-5)	< 2.22	2.22	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,1,2-Trichlorotrifluoroethane (76-13-1)	< 3.23	3.23	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,1-Dichloroethane (75-34-3)	< 1.64	1.64	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,1-Dichloroethene (75-35-4)	< 1.67	1.67	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,2,4-Trichlorobenzene (120-82-1)	< 3.02	3.02	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,2,4-Trimethylbenzene (95-63-6)	< 4.00	4.00	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,2-Dibromoethane (106-93-4)	< 3.12	3.12	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,2-Dichlorobenzene (95-50-1)	< 2.35	2.35	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,2-Dichloroethane (107-06-2)	< 1.71	1.71	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,2-Dichloropropane (78-87-5)	< 1.88	1.88	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,2-Dichlorotetrafluoroethane (76-14-2)	< 2.95	2.95	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,3,5-Trimethylbenzene (108-67-8)	< 2.00	2.00	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,3-Butadiene (106-99-0)	< 0.934	0.934	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,3-Dichlorobenzene (541-73-1)	< 2.35	2.35	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,4-Dichlorobenzene (106-46-7)	< 2.44	2.44	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
1,4-Dioxane (123-91-1)	< 1.46	1.46	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
2-Butanone (MEK) (78-93-3)	< 1.24	1.24	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
2-Hexanone (591-78-6)	< 1.73	1.73	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
2-Propanol (67-63-0)	< 1.04	1.04	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
4-Ethyltoluene (622-96-8)	< 2.00	2.00	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
4-Methyl-2-pentanone (108-10-1)	< 1.66	1.66	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Acetone (67-64-1)	**4.64**	3.86	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Benzene (71-43-2)	< 2.70	2.70	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Benzyl chloride (100-44-7)	< 2.02	2.02	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Bromodichloromethane (75-27-4)	< 2.72	2.72	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Bromoform (75-25-2)	< 16.0	16.0	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Bromomethane (74-83-9)	< 1.64	1.64	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Carbon disulfide (75-15-0)	< 1.27	1.27	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Carbon Tetrachloride (56-23-5)	< 2.56	2.56	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Chlorobenzene (108-90-7)	< 1.94	1.94	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Chloroethane (75-00-3)	< 2.23	2.23	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Chloroform (67-66-3)	< 1.98	1.98	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Chloromethane (74-87-3)	**1.34**	0.871	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
cis-1,2-Dichloroethene (156-59-2)	< 1.67	1.67	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
cis-1,3-Dichloropropene (10061-01-5)	< 1.92	1.92	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Cyclohexane (110-82-7)	< 1.40	1.40	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	

BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Area 6-1

1300666-03 (Air)
2/9/13 14:11

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dibromochloromethane (124-48-1)	< 3.46	3.46	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Dichlorodifluoromethane (75-71-8)	**2.52**	2.09	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Ethanol (64-17-5)	< 3.06	3.06	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Ethyl Acetate (141-78-6)	< 1.46	1.46	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Ethylbenzene (100-41-4)	< 1.83	1.83	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Hexachloro-1,3-butadiene (87-68-3)	< 4.33	4.33	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
m,p-Xylenes (179601-23-1)	< 3.60	3.60	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Methylene chloride (75-09-2)	**1.68**	1.47	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Methyl-t-butyl ether (1634-04-4)	< 1.47	1.47	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Naphthalene (91-20-3)	< 4.26	4.26	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
n-Heptane (142-82-5)	< 1.67	1.67	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
n-Hexane (110-54-3)	< 1.43	1.43	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
o-Xylene (95-47-6)	< 1.83	1.83	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Propylene (115-07-1)	**1.34**	0.699	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Styrene (100-42-5)	< 1.73	1.73	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Tetrachloroethene (127-18-4)	< 2.76	2.76	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Tetrahydrofuran (109-99-9)	< 1.20	1.20	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Toluene (108-88-3)	< 1.59	1.59	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
trans-1,2-Dichloroethene (156-60-5)	< 1.61	1.61	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	go
trans-1,3-Dichloropropene (10061-02-6)	< 1.99	1.99	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Trichloroethene (79-01-6)	< 2.18	2.18	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Trichlorofluoromethane (75-69-4)	< 2.46	2.46	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Vinyl acetate (108-05-4)	< 1.43	1.43	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Vinyl chloride (75-01-4)	< 1.08	1.08	ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	
Surrogate: 1,2-Dichloroethane-d4	*118 %*	*Limits: 70-150%*			*B3B0228*	*2/13/13*	*2/14/13 21:54*	*EPA TO-15*	
Surrogate: 4-Bromofluorobenzene	*86.8 %*	*Limits: 70-115%*			*B3B0228*	*2/13/13*	*2/14/13 21:54*	*EPA TO-15*	
Surrogate: Toluene-d8	*98.6 %*	*Limits: 70-110%*			*B3B0228*	*2/13/13*	*2/14/13 21:54*	*EPA TO-15*	

BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Area 6-1

1300666-03 (Air)
2/9/13 14:11

Tentatively Identified Compounds - Volatile Compounds

tic, tt

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Unknown analyte (NA)	**53**		ug/m³	1.56	B3B0228	2/13/13	2/14/13 21:54	EPA TO-15	tu

BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Area 5-12

1300666-04 (Air)
2/9/13 14:21

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1-Trichloroethane (71-55-6)	< 2.36	2.36	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,1,2,2-Tetrachloroethane (79-34-5)	< 3.08	3.08	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,1,2-Trichloroethane (79-00-5)	< 2.36	2.36	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,1,2-Trichlorotrifluoroethane (76-13-1)	< 3.44	3.44	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,1-Dichloroethane (75-34-3)	< 1.75	1.75	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,1-Dichloroethene (75-35-4)	< 1.78	1.78	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,2,4-Trichlorobenzene (120-82-1)	< 3.21	3.21	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,2,4-Trimethylbenzene (95-63-6)	< 4.25	4.25	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,2-Dibromoethane (106-93-4)	< 3.32	3.32	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,2-Dichlorobenzene (95-50-1)	< 2.50	2.50	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,2-Dichloroethane (107-06-2)	< 1.82	1.82	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,2-Dichloropropane (78-87-5)	< 2.00	2.00	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,2-Dichlorotetrafluoroethane (76-14-2)	< 3.14	3.14	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,3,5-Trimethylbenzene (108-67-8)	< 2.12	2.12	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,3-Butadiene (106-99-0)	< 0.992	0.992	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,3-Dichlorobenzene (541-73-1)	< 2.50	2.50	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,4-Dichlorobenzene (106-46-7)	< 2.60	2.60	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
1,4-Dioxane (123-91-1)	< 1.56	1.56	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
2-Butanone (MEK) (78-93-3)	< 1.32	1.32	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
2-Hexanone (591-78-6)	< 1.84	1.84	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
2-Propanol (67-63-0)	< 1.10	1.10	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
4-Ethyltoluene (622-96-8)	< 2.12	2.12	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
4-Methyl-2-pentanone (108-10-1)	< 1.77	1.77	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Acetone (67-64-1)	**4.25**	4.10	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Benzene (71-43-2)	< 2.87	2.87	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Benzyl chloride (100-44-7)	< 2.15	2.15	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Bromodichloromethane (75-27-4)	< 2.89	2.89	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Bromoform (75-25-2)	< 17.0	17.0	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Bromomethane (74-83-9)	< 1.74	1.74	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Carbon disulfide (75-15-0)	< 1.34	1.34	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Carbon Tetrachloride (56-23-5)	< 2.72	2.72	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Chlorobenzene (108-90-7)	< 2.06	2.06	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Chloroethane (75-00-3)	< 2.37	2.37	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Chloroform (67-66-3)	< 2.11	2.11	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Chloromethane (74-87-3)	**1.31**	0.926	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
cis-1,2-Dichloroethene (156-59-2)	< 1.78	1.78	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
cis-1,3-Dichloropropene (10061-01-5)	< 2.04	2.04	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Cyclohexane (110-82-7)	< 1.49	1.49	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	

BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
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HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Area 5-12

1300666-04 (Air)
2/9/13 14:21

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dibromochloromethane (124-48-1)	< 3.68	3.68	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Dichlorodifluoromethane (75-71-8)	**2.52**	2.22	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Ethanol (64-17-5)	< 3.26	3.26	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Ethyl Acetate (141-78-6)	< 1.56	1.56	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Ethylbenzene (100-41-4)	< 1.95	1.95	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Hexachloro-1,3-butadiene (87-68-3)	< 4.61	4.61	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
m,p-Xylenes (179601-23-1)	< 3.82	3.82	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Methylene chloride (75-09-2)	< 1.56	1.56	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Methyl-t-butyl ether (1634-04-4)	< 1.56	1.56	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Naphthalene (91-20-3)	< 4.53	4.53	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
n-Heptane (142-82-5)	< 1.77	1.77	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
n-Hexane (110-54-3)	< 1.52	1.52	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
o-Xylene (95-47-6)	< 1.95	1.95	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Propylene (115-07-1)	**1.34**	0.743	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Styrene (100-42-5)	< 1.84	1.84	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Tetrachloroethene (127-18-4)	< 2.93	2.93	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Tetrahydrofuran (109-99-9)	< 1.27	1.27	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Toluene (108-88-3)	< 1.69	1.69	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
trans-1,2-Dichloroethene (156-60-5)	< 1.71	1.71	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	go
trans-1,3-Dichloropropene (10061-02-6)	< 2.11	2.11	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Trichloroethene (79-01-6)	< 2.32	2.32	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Trichlorofluoromethane (75-69-4)	< 2.61	2.61	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Vinyl acetate (108-05-4)	< 1.52	1.52	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Vinyl chloride (75-01-4)	< 1.15	1.15	ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	
Surrogate: 1,2-Dichloroethane-d4	*125 %*	*Limits: 70-150%*			*B3B0228*	*2/13/13*	*2/14/13 23:00*	*EPA TO-15*	
Surrogate: 4-Bromofluorobenzene	*85.7 %*	*Limits: 70-115%*			*B3B0228*	*2/13/13*	*2/14/13 23:00*	*EPA TO-15*	
Surrogate: Toluene-d8	*98.2 %*	*Limits: 70-110%*			*B3B0228*	*2/13/13*	*2/14/13 23:00*	*EPA TO-15*	

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11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Area 5-12

1300666-04 (Air)
2/9/13 14:21

Tentatively Identified Compounds - Volatile Compounds

tic, tt

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Unknown analyte (NA)	**89**		ug/m³	1.66	B3B0228	2/13/13	2/14/13 23:00	EPA TO-15	tu

BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Fence-15W

1300666-05 (Air)
2/9/13 14:29

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1-Trichloroethane (71-55-6)	< 2.47	2.47	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,1,2,2-Tetrachloroethane (79-34-5)	< 3.23	3.23	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,1,2-Trichloroethane (79-00-5)	< 2.47	2.47	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,1,2-Trichlorotrifluoroethane (76-13-1)	< 3.60	3.60	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,1-Dichloroethane (75-34-3)	< 1.83	1.83	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,1-Dichloroethene (75-35-4)	< 1.86	1.86	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,2,4-Trichlorobenzene (120-82-1)	< 3.36	3.36	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,2,4-Trimethylbenzene (95-63-6)	< 4.45	4.45	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,2-Dibromoethane (106-93-4)	< 3.48	3.48	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,2-Dichlorobenzene (95-50-1)	< 2.62	2.62	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,2-Dichloroethane (107-06-2)	< 1.90	1.90	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,2-Dichloropropane (78-87-5)	< 2.09	2.09	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,2-Dichlorotetrafluoroethane (76-14-2)	< 3.28	3.28	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,3,5-Trimethylbenzene (108-67-8)	< 2.22	2.22	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,3-Butadiene (106-99-0)	< 1.04	1.04	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,3-Dichlorobenzene (541-73-1)	< 2.62	2.62	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,4-Dichlorobenzene (106-46-7)	< 2.72	2.72	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
1,4-Dioxane (123-91-1)	< 1.63	1.63	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
2-Butanone (MEK) (78-93-3)	< 1.39	1.39	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
2-Hexanone (591-78-6)	< 1.92	1.92	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
2-Propanol (67-63-0)	< 1.15	1.15	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
4-Ethyltoluene (622-96-8)	< 2.22	2.22	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
4-Methyl-2-pentanone (108-10-1)	< 1.85	1.85	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Acetone (67-64-1)	< 4.30	4.30	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Benzene (71-43-2)	< 3.00	3.00	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Benzyl chloride (100-44-7)	< 2.25	2.25	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Bromodichloromethane (75-27-4)	< 3.03	3.03	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Bromoform (75-25-2)	< 17.8	17.8	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Bromomethane (74-83-9)	< 1.82	1.82	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Carbon disulfide (75-15-0)	< 1.41	1.41	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Carbon Tetrachloride (56-23-5)	< 2.85	2.85	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Chlorobenzene (108-90-7)	< 2.16	2.16	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Chloroethane (75-00-3)	< 2.48	2.48	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Chloroform (67-66-3)	< 2.21	2.21	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Chloromethane (74-87-3)	**1.36**	0.970	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
cis-1,2-Dichloroethene (156-59-2)	< 1.86	1.86	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
cis-1,3-Dichloropropene (10061-01-5)	< 2.13	2.13	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Cyclohexane (110-82-7)	< 1.56	1.56	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	

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11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Fence-15W

1300666-05 (Air)
2/9/13 14:29

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dibromochloromethane (124-48-1)	< 3.85	3.85	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Dichlorodifluoromethane (75-71-8)	**2.56**	2.32	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Ethanol (64-17-5)	< 3.41	3.41	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Ethyl Acetate (141-78-6)	< 1.63	1.63	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Ethylbenzene (100-41-4)	< 2.04	2.04	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Hexachloro-1,3-butadiene (87-68-3)	< 4.83	4.83	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
m,p-Xylenes (179601-23-1)	< 4.00	4.00	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Methylene chloride (75-09-2)	**1.79**	1.63	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Methyl-t-butyl ether (1634-04-4)	< 1.63	1.63	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Naphthalene (91-20-3)	< 4.74	4.74	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
n-Heptane (142-82-5)	< 1.85	1.85	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
n-Hexane (110-54-3)	< 1.59	1.59	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
o-Xylene (95-47-6)	< 2.04	2.04	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Propylene (115-07-1)	**1.45**	0.779	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Styrene (100-42-5)	< 1.93	1.93	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Tetrachloroethene (127-18-4)	< 3.07	3.07	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Tetrahydrofuran (109-99-9)	< 1.33	1.33	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Toluene (108-88-3)	< 1.77	1.77	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
trans-1,2-Dichloroethene (156-60-5)	< 1.79	1.79	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	go
trans-1,3-Dichloropropene (10061-02-6)	< 2.21	2.21	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Trichloroethene (79-01-6)	< 2.43	2.43	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Trichlorofluoromethane (75-69-4)	< 2.74	2.74	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Vinyl acetate (108-05-4)	< 1.59	1.59	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Vinyl chloride (75-01-4)	< 1.20	1.20	ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	
Surrogate: 1,2-Dichloroethane-d4	*125 %*	*Limits: 70-150%*			*B3B0228*	*2/13/13*	*2/15/13 0:07*	*EPA TO-15*	
Surrogate: 4-Bromofluorobenzene	*88.5 %*	*Limits: 70-115%*			*B3B0228*	*2/13/13*	*2/15/13 0:07*	*EPA TO-15*	
Surrogate: Toluene-d8	*97.8 %*	*Limits: 70-110%*			*B3B0228*	*2/13/13*	*2/15/13 0:07*	*EPA TO-15*	

BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Fence-15W

1300666-05 (Air)
2/9/13 14:29

Tentatively Identified Compounds - Volatile Compounds

tic, tt

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Unknown analyte (NA)	**65**		ug/m³	1.74	B3B0228	2/13/13	2/15/13 0:07	EPA TO-15	tu

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HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Fence-2NW

1300666-06 (Air)
2/9/13 14:35

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1-Trichloroethane (71-55-6)	< 2.31	2.31	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,1,2,2-Tetrachloroethane (79-34-5)	< 3.02	3.02	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,1,2-Trichloroethane (79-00-5)	< 2.31	2.31	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,1,2-Trichlorotrifluoroethane (76-13-1)	< 3.37	3.37	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,1-Dichloroethane (75-34-3)	< 1.72	1.72	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,1-Dichloroethene (75-35-4)	< 1.75	1.75	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,2,4-Trichlorobenzene (120-82-1)	< 3.15	3.15	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,2,4-Trimethylbenzene (95-63-6)	< 4.17	4.17	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,2-Dibromoethane (106-93-4)	< 3.26	3.26	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,2-Dichlorobenzene (95-50-1)	< 2.45	2.45	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,2-Dichloroethane (107-06-2)	< 1.78	1.78	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,2-Dichloropropane (78-87-5)	< 1.96	1.96	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,2-Dichlorotetrafluoroethane (76-14-2)	< 3.08	3.08	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,3,5-Trimethylbenzene (108-67-8)	< 2.08	2.08	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,3-Butadiene (106-99-0)	< 0.974	0.974	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,3-Dichlorobenzene (541-73-1)	< 2.45	2.45	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,4-Dichlorobenzene (106-46-7)	< 2.55	2.55	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
1,4-Dioxane (123-91-1)	< 1.53	1.53	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
2-Butanone (MEK) (78-93-3)	< 1.30	1.30	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
2-Hexanone (591-78-6)	< 1.80	1.80	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
2-Propanol (67-63-0)	< 1.08	1.08	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
4-Ethyltoluene (622-96-8)	< 2.08	2.08	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
4-Methyl-2-pentanone (108-10-1)	< 1.74	1.74	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Acetone (67-64-1)	< 4.03	4.03	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Benzene (71-43-2)	< 2.81	2.81	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Benzyl chloride (100-44-7)	< 2.11	2.11	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Bromodichloromethane (75-27-4)	< 2.84	2.84	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Bromoform (75-25-2)	< 16.7	16.7	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Bromomethane (74-83-9)	< 1.71	1.71	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Carbon disulfide (75-15-0)	< 1.32	1.32	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Carbon Tetrachloride (56-23-5)	< 2.67	2.67	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Chlorobenzene (108-90-7)	< 2.03	2.03	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Chloroethane (75-00-3)	< 2.32	2.32	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Chloroform (67-66-3)	< 2.07	2.07	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Chloromethane (74-87-3)	**1.35**	0.909	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
cis-1,2-Dichloroethene (156-59-2)	< 1.75	1.75	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
cis-1,3-Dichloropropene (10061-01-5)	< 2.00	2.00	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Cyclohexane (110-82-7)	< 1.46	1.46	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	

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St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Fence-2NW

1300666-06 (Air)
2/9/13 14:35

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dibromochloromethane (124-48-1)	< 3.61	3.61	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Dichlorodifluoromethane (75-71-8)	**2.61**	2.18	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Ethanol (64-17-5)	< 3.20	3.20	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Ethyl Acetate (141-78-6)	< 1.53	1.53	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Ethylbenzene (100-41-4)	< 1.91	1.91	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Hexachloro-1,3-butadiene (87-68-3)	< 4.52	4.52	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
m,p-Xylenes (179601-23-1)	< 3.75	3.75	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Methylene chloride (75-09-2)	**2.01**	1.53	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Methyl-t-butyl ether (1634-04-4)	< 1.53	1.53	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Naphthalene (91-20-3)	< 4.45	4.45	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
n-Heptane (142-82-5)	< 1.74	1.74	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
n-Hexane (110-54-3)	< 1.49	1.49	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
o-Xylene (95-47-6)	< 1.91	1.91	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Propylene (115-07-1)	**1.43**	0.730	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Styrene (100-42-5)	< 1.81	1.81	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Tetrachloroethene (127-18-4)	< 2.88	2.88	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Tetrahydrofuran (109-99-9)	< 1.25	1.25	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Toluene (108-88-3)	< 1.66	1.66	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
trans-1,2-Dichloroethene (156-60-5)	< 1.68	1.68	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	go
trans-1,3-Dichloropropene (10061-02-6)	< 2.07	2.07	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Trichloroethene (79-01-6)	< 2.28	2.28	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Trichlorofluoromethane (75-69-4)	< 2.57	2.57	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Vinyl acetate (108-05-4)	< 1.49	1.49	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Vinyl chloride (75-01-4)	< 1.13	1.13	ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	
Surrogate: 1,2-Dichloroethane-d4	*123 %*	*Limits: 70-150%*			*B3B0228*	*2/13/13*	*2/15/13 1:13*	*EPA TO-15*	
Surrogate: 4-Bromofluorobenzene	*86.0 %*	*Limits: 70-115%*			*B3B0228*	*2/13/13*	*2/15/13 1:13*	*EPA TO-15*	
Surrogate: Toluene-d8	*98.2 %*	*Limits: 70-110%*			*B3B0228*	*2/13/13*	*2/15/13 1:13*	*EPA TO-15*	

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St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Fence-2NW

1300666-06 (Air)
2/9/13 14:35

Tentatively Identified Compounds - Volatile Compounds

tic, tt

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Unknown analyte (NA)	**79**		ug/m³	1.63	B3B0228	2/13/13	2/15/13 1:13	EPA TO-15	tu

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St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Volatile Organic Compounds - Quality Control

Batch B3B0228 - TO-15

Method Blank (B3B0228-BLK1) Prepared: 02/13/13 Analyzed: 02/14/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	< 1.42	1.42	ug/m³	NA	NA	NA	NA	NA	NA	
1,1,2,2-Tetrachloroethane	< 1.85	1.85	ug/m³	NA	NA	NA	NA	NA	NA	
1,1,2-Trichloroethane	< 1.42	1.42	ug/m³	NA	NA	NA	NA	NA	NA	
1,1,2-Trichlorotrifluoroethane	< 2.07	2.07	ug/m³	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethane	< 1.05	1.05	ug/m³	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethene	< 1.07	1.07	ug/m³	NA	NA	NA	NA	NA	NA	
1,2,4-Trichlorobenzene	< 1.93	1.93	ug/m³	NA	NA	NA	NA	NA	NA	
1,2,4-Trimethylbenzene	< 2.55	2.55	ug/m³	NA	NA	NA	NA	NA	NA	
1,2-Dibromoethane	< 2.00	2.00	ug/m³	NA	NA	NA	NA	NA	NA	
1,2-Dichlorobenzene	< 1.50	1.50	ug/m³	NA	NA	NA	NA	NA	NA	
1,2-Dichloroethane	< 1.09	1.09	ug/m³	NA	NA	NA	NA	NA	NA	
1,2-Dichloropropane	< 1.20	1.20	ug/m³	NA	NA	NA	NA	NA	NA	
1,2-Dichlorotetrafluoroethane	< 1.89	1.89	ug/m³	NA	NA	NA	NA	NA	NA	
1,3,5-Trimethylbenzene	< 1.28	1.28	ug/m³	NA	NA	NA	NA	NA	NA	
1,3-Butadiene	< 0.597	0.597	ug/m³	NA	NA	NA	NA	NA	NA	
1,3-Dichlorobenzene	< 1.50	1.50	ug/m³	NA	NA	NA	NA	NA	NA	
1,4-Dichlorobenzene	< 1.56	1.56	ug/m³	NA	NA	NA	NA	NA	NA	
1,4-Dioxane	< 0.936	0.936	ug/m³	NA	NA	NA	NA	NA	NA	
2-Butanone (MEK)	< 0.796	0.796	ug/m³	NA	NA	NA	NA	NA	NA	
2-Hexanone	< 1.11	1.11	ug/m³	NA	NA	NA	NA	NA	NA	
2-Propanol	< 0.663	0.663	ug/m³	NA	NA	NA	NA	NA	NA	
4-Ethyltoluene	< 1.28	1.28	ug/m³	NA	NA	NA	NA	NA	NA	
4-Methyl-2-pentanone	< 1.06	1.06	ug/m³	NA	NA	NA	NA	NA	NA	
Acetone	< 2.47	2.47	ug/m³	NA	NA	NA	NA	NA	NA	
Benzene	< 1.72	1.72	ug/m³	NA	NA	NA	NA	NA	NA	
Benzyl chloride	< 1.29	1.29	ug/m³	NA	NA	NA	NA	NA	NA	
Bromodichloromethane	< 1.74	1.74	ug/m³	NA	NA	NA	NA	NA	NA	
Bromoform	< 10.2	10.2	ug/m³	NA	NA	NA	NA	NA	NA	
Bromomethane	< 1.05	1.05	ug/m³	NA	NA	NA	NA	NA	NA	
Carbon disulfide	< 0.809	0.809	ug/m³	NA	NA	NA	NA	NA	NA	
Carbon Tetrachloride	< 1.63	1.63	ug/m³	NA	NA	NA	NA	NA	NA	
Chlorobenzene	< 1.24	1.24	ug/m³	NA	NA	NA	NA	NA	NA	
Chloroethane	< 1.42	1.42	ug/m³	NA	NA	NA	NA	NA	NA	
Chloroform	< 1.27	1.27	ug/m³	NA	NA	NA	NA	NA	NA	
Chloromethane	< 0.557	0.557	ug/m³	NA	NA	NA	NA	NA	NA	
cis-1,2-Dichloroethene	< 1.07	1.07	ug/m³	NA	NA	NA	NA	NA	NA	
cis-1,3-Dichloropropene	< 1.22	1.22	ug/m³	NA	NA	NA	NA	NA	NA	
Cyclohexane	< 0.894	0.894	ug/m³	NA	NA	NA	NA	NA	NA	

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St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Volatile Organic Compounds - Quality Control

Batch B3B0228 - TO-15

Method Blank (B3B0228-BLK1) Prepared: 02/13/13 Analyzed: 02/14/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dibromochloromethane	< 2.21	2.21	ug/m³	NA	NA	NA	NA	NA	NA	
Dichlorodifluoromethane	< 1.33	1.33	ug/m³	NA	NA	NA	NA	NA	NA	
Ethanol	< 1.96	1.96	ug/m³	NA	NA	NA	NA	NA	NA	
Ethyl Acetate	< 0.936	0.936	ug/m³	NA	NA	NA	NA	NA	NA	
Ethylbenzene	< 1.17	1.17	ug/m³	NA	NA	NA	NA	NA	NA	
Hexachloro-1,3-butadiene	< 2.77	2.77	ug/m³	NA	NA	NA	NA	NA	NA	
m,p-Xylenes	< 2.30	2.30	ug/m³	NA	NA	NA	NA	NA	NA	
Methylene chloride	< 0.937	0.937	ug/m³	NA	NA	NA	NA	NA	NA	
Methyl-t-butyl ether	< 0.937	0.937	ug/m³	NA	NA	NA	NA	NA	NA	
Naphthalene	< 2.72	2.72	ug/m³	NA	NA	NA	NA	NA	NA	
n-Heptane	< 1.06	1.06	ug/m³	NA	NA	NA	NA	NA	NA	
n-Hexane	< 0.916	0.916	ug/m³	NA	NA	NA	NA	NA	NA	
o-Xylene	< 1.17	1.17	ug/m³	NA	NA	NA	NA	NA	NA	
Propylene	< 0.447	0.447	ug/m³	NA	NA	NA	NA	NA	NA	
Styrene	< 1.11	1.11	ug/m³	NA	NA	NA	NA	NA	NA	
Tetrachloroethene	< 1.76	1.76	ug/m³	NA	NA	NA	NA	NA	NA	
Tetrahydrofuran	< 0.766	0.766	ug/m³	NA	NA	NA	NA	NA	NA	
Toluene	< 1.02	1.02	ug/m³	NA	NA	NA	NA	NA	NA	
trans-1,2-Dichloroethene	< 1.03	1.03	ug/m³	NA	NA	NA	NA	NA	NA	
trans-1,3-Dichloropropene	< 1.27	1.27	ug/m³	NA	NA	NA	NA	NA	NA	
Trichloroethene	< 1.40	1.40	ug/m³	NA	NA	NA	NA	NA	NA	
Trichlorofluoromethane	< 1.57	1.57	ug/m³	NA	NA	NA	NA	NA	NA	
Vinyl acetate	< 0.915	0.915	ug/m³	NA	NA	NA	NA	NA	NA	
Vinyl chloride	< 0.690	0.690	ug/m³	NA	NA	NA	NA	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*20.7*		ug/m³	*21.0*	*NA*	*98.6*	*70-150*			
Surrogate: 4-Bromofluorobenzene	*33.8*		ug/m³	*35.8*	*NA*	*94.6*	*70-115*			
Surrogate: Toluene-d8	*21.7*		ug/m³	*20.5*	*NA*	*106*	*70-110*			

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St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Volatile Organic Compounds - Quality Control

Batch B3B0228 - TO-15

Laboratory Control Sample (B3B0228-BS1) Prepared: 02/13/13 Analyzed: 02/14/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	61.4	1.42	ug/m³	57.3	NA	107	70-130	NA	NA	
1,1,2,2-Tetrachloroethane	71.1	1.85	ug/m³	72.7	NA	97.8	70-130	NA	NA	
1,1,2-Trichloroethane	55.2	1.42	ug/m³	56.7	NA	97.3	70-130	NA	NA	
1,1,2-Trichlorotrifluoroethane	85.1	2.07	ug/m³	81.2	NA	105	70-130	NA	NA	
1,1-Dichloroethane	47.1	1.05	ug/m³	42.5	NA	111	70-130	NA	NA	
1,1-Dichloroethene	48.0	1.07	ug/m³	43.2	NA	111	70-130	NA	NA	
1,2,4-Trichlorobenzene	81.6	1.93	ug/m³	77.9	NA	105	70-130	NA	NA	
1,2,4-Trimethylbenzene	49.0	2.55	ug/m³	50.6	NA	96.9	70-130	NA	NA	
1,2-Dibromoethane	79.3	2.00	ug/m³	80.6	NA	98.4	70-130	NA	NA	
1,2-Dichlorobenzene	59.7	1.50	ug/m³	60.7	NA	98.3	70-130	NA	NA	
1,2-Dichloroethane	42.4	1.09	ug/m³	42.9	NA	98.8	70-130	NA	NA	
1,2-Dichloropropane	47.4	1.20	ug/m³	48.5	NA	97.8	70-130	NA	NA	
1,2-Dichlorotetrafluoroethane	83.2	1.89	ug/m³	74.1	NA	112	70-130	NA	NA	
1,3,5-Trimethylbenzene	49.8	1.28	ug/m³	51.1	NA	97.4	70-130	NA	NA	
1,3-Butadiene	26.3	0.597	ug/m³	24.1	NA	109	70-130	NA	NA	
1,3-Dichlorobenzene	61.8	1.50	ug/m³	60.7	NA	102	70-130	NA	NA	
1,4-Dichlorobenzene	63.3	1.56	ug/m³	61.9	NA	102	70-130	NA	NA	
1,4-Dioxane	37.8	0.936	ug/m³	36.7	NA	103	70-130	NA	NA	
2-Butanone (MEK)	34.0	0.796	ug/m³	31.2	NA	109	70-130	NA	NA	
2-Hexanone	43.8	1.11	ug/m³	43.8	NA	100	70-130	NA	NA	
2-Propanol	26.4	0.663	ug/m³	26.8	NA	98.6	70-130	NA	NA	
4-Ethyltoluene	50.5	1.28	ug/m³	51.6	NA	97.8	70-130	NA	NA	
4-Methyl-2-pentanone	47.8	1.06	ug/m³	41.8	NA	115	70-130	NA	NA	
Acetone	24.2	2.47	ug/m³	24.7	NA	98.0	70-130	NA	NA	
Benzene	32.9	1.72	ug/m³	34.2	NA	96.3	70-130	NA	NA	
Benzyl chloride	49.8	1.29	ug/m³	52.3	NA	95.3	70-130	NA	NA	
Bromodichloromethane	68.5	1.74	ug/m³	68.3	NA	100	70-130	NA	NA	
Bromoform	398	10.2	ug/m³	410	NA	97.0	70-130	NA	NA	
Bromomethane	43.9	1.05	ug/m³	41.9	NA	105	70-130	NA	NA	
Carbon disulfide	33.6	0.809	ug/m³	32.4	NA	104	70-130	NA	NA	
Carbon Tetrachloride	71.2	1.63	ug/m³	65.4	NA	109	70-130	NA	NA	
Chlorobenzene	46.0	1.24	ug/m³	49.2	NA	93.5	70-130	NA	NA	
Chloroethane	31.9	1.42	ug/m³	27.9	NA	114	70-130	NA	NA	
Chloroform	55.9	1.27	ug/m³	51.2	NA	109	70-130	NA	NA	
Chloromethane	24.1	0.557	ug/m³	21.9	NA	110	70-130	NA	NA	
cis-1,2-Dichloroethene	46.5	1.07	ug/m³	42.0	NA	111	70-130	NA	NA	
cis-1,3-Dichloropropene	53.8	1.22	ug/m³	48.5	NA	111	70-130	NA	NA	
Cyclohexane	38.3	0.894	ug/m³	35.1	NA	109	70-130	NA	NA	
Dibromochloromethane	85.5	2.21	ug/m³	87.7	NA	97.5	70-130	NA	NA	
Dichlorodifluoromethane	59.6	1.33	ug/m³	52.4	NA	114	70-130	NA	NA	

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11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Volatile Organic Compounds - Quality Control

Batch B3B0228 - TO-15

Laboratory Control Sample (B3B0228-BS1) Prepared: 02/13/13 Analyzed: 02/14/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Ethanol	19.0	1.96	ug/m³	19.6	NA	96.8	70-130	NA	NA	
Ethyl Acetate	40.7	0.936	ug/m³	37.8	NA	108	70-130	NA	NA	
Ethylbenzene	46.5	1.17	ug/m³	46.4	NA	100	70-130	NA	NA	
Hexachloro-1,3-butadiene	106	2.77	ug/m³	112	NA	95.0	70-130	NA	NA	
m,p-Xylenes	88.5	2.30	ug/m³	92.0	NA	96.2	70-130	NA	NA	
Methylene chloride	34.8	0.937	ug/m³	37.5	NA	92.7	70-130	NA	NA	
Methyl-t-butyl ether	44.6	0.937	ug/m³	37.1	NA	120	70-130	NA	NA	
Naphthalene	55.2	2.72	ug/m³	55.0	NA	100	70-130	NA	NA	
n-Heptane	43.0	1.06	ug/m³	42.6	NA	101	70-130	NA	NA	
n-Hexane	41.4	0.916	ug/m³	36.6	NA	113	70-130	NA	NA	
o-Xylene	44.4	1.17	ug/m³	46.0	NA	96.6	70-130	NA	NA	
Propylene	19.6	0.447	ug/m³	17.9	NA	110	70-130	NA	NA	
Styrene	40.2	1.11	ug/m³	44.7	NA	90.0	70-130	NA	NA	
Tetrachloroethene	70.1	1.76	ug/m³	70.5	NA	99.4	70-130	NA	NA	
Tetrahydrofuran	34.6	0.766	ug/m³	30.9	NA	112	70-130	NA	NA	
Toluene	38.9	1.02	ug/m³	40.7	NA	95.6	70-130	NA	NA	
trans-1,2-Dichloroethene	52.2	1.03	ug/m³	40.8	NA	128	70-130	NA	NA	
trans-1,3-Dichloropropene	50.6	1.27	ug/m³	49.9	NA	101	70-130	NA	NA	
Trichloroethene	55.0	1.40	ug/m³	54.8	NA	100	70-130	NA	NA	
Trichlorofluoromethane	68.4	1.57	ug/m³	61.8	NA	111	70-130	NA	NA	
Vinyl acetate	40.5	0.915	ug/m³	36.9	NA	110	70-130	NA	NA	
Vinyl chloride	30.2	0.690	ug/m³	27.6	NA	110	70-130	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*18.4*		ug/m³	*18.9*	*NA*	*97.3*	*70-150*			
Surrogate: 4-Bromofluorobenzene	*32.2*		ug/m³	*32.2*	*NA*	*100*	*70-115*			
Surrogate: Toluene-d8	*20.0*		ug/m³	*18.4*	*NA*	*108*	*70-110*			

Laboratory Control Sample Duplicate (B3B0228-BSD1) Prepared: 02/13/13 Analyzed: 02/14/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	62.0	1.42	ug/m³	57.3	NA	108	70-130	0.866	25	
1,1,2,2-Tetrachloroethane	70.3	1.85	ug/m³	72.7	NA	96.7	70-130	1.14	25	
1,1,2-Trichloroethane	56.9	1.42	ug/m³	56.7	NA	100	70-130	3.03	25	
1,1,2-Trichlorotrifluoroethane	87.2	2.07	ug/m³	81.2	NA	107	70-130	2.47	25	
1,1-Dichloroethane	42.8	1.05	ug/m³	42.5	NA	101	70-130	9.58	25	
1,1-Dichloroethene	48.4	1.07	ug/m³	43.2	NA	112	70-130	0.666	25	
1,2,4-Trichlorobenzene	81.5	1.93	ug/m³	77.9	NA	105	70-130	0.146	25	
1,2,4-Trimethylbenzene	49.9	2.55	ug/m³	50.6	NA	98.6	70-130	1.68	25	
1,2-Dibromoethane	79.9	2.00	ug/m³	80.6	NA	99.1	70-130	0.714	25	
1,2-Dichlorobenzene	61.8	1.50	ug/m³	60.7	NA	102	70-130	3.52	25	
1,2-Dichloroethane	40.0	1.09	ug/m³	42.9	NA	93.4	70-130	5.67	25	

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Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

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St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Volatile Organic Compounds - Quality Control

Batch B3B0228 - TO-15

Laboratory Control Sample Duplicate (B3B0228-BSD1) Prepared: 02/13/13 Analyzed: 02/14/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloropropane	48.0	1.20	ug/m³	48.5	NA	98.9	70-130	1.16	25	
1,2-Dichlorotetrafluoroethane	85.6	1.89	ug/m³	74.1	NA	116	70-130	2.86	25	
1,3,5-Trimethylbenzene	51.2	1.28	ug/m³	51.1	NA	100	70-130	2.84	25	
1,3-Butadiene	26.2	0.597	ug/m³	24.1	NA	109	70-130	0.227	25	
1,3-Dichlorobenzene	63.1	1.50	ug/m³	60.7	NA	104	70-130	2.11	25	
1,4-Dichlorobenzene	62.6	1.56	ug/m³	61.9	NA	101	70-130	1.10	25	
1,4-Dioxane	37.5	0.936	ug/m³	36.7	NA	102	70-130	0.631	25	
2-Butanone (MEK)	33.5	0.796	ug/m³	31.2	NA	107	70-130	1.25	25	
2-Hexanone	43.8	1.11	ug/m³	43.8	NA	100	70-130	0.0934	25	
2-Propanol	25.6	0.663	ug/m³	26.8	NA	95.7	70-130	2.98	25	
4-Ethyltoluene	51.2	1.28	ug/m³	51.6	NA	99.4	70-130	1.55	25	
4-Methyl-2-pentanone	47.4	1.06	ug/m³	41.8	NA	114	70-130	0.842	25	
Acetone	24.1	2.47	ug/m³	24.7	NA	97.7	70-130	0.334	25	
Benzene	33.2	1.72	ug/m³	34.2	NA	97.0	70-130	0.754	25	
Benzyl chloride	50.0	1.29	ug/m³	52.3	NA	95.8	70-130	0.539	25	
Bromodichloromethane	68.3	1.74	ug/m³	68.3	NA	100	70-130	0.294	25	
Bromoform	401	10.2	ug/m³	410	NA	97.8	70-130	0.789	25	
Bromomethane	44.0	1.05	ug/m³	41.9	NA	105	70-130	0.168	25	
Carbon disulfide	34.2	0.809	ug/m³	32.4	NA	106	70-130	1.71	25	
Carbon Tetrachloride	72.6	1.63	ug/m³	65.4	NA	111	70-130	1.96	25	
Chlorobenzene	47.4	1.24	ug/m³	49.2	NA	96.2	70-130	2.86	25	
Chloroethane	30.3	1.42	ug/m³	27.9	NA	108	70-130	5.17	25	
Chloroform	56.5	1.27	ug/m³	51.2	NA	110	70-130	0.955	25	
Chloromethane	23.9	0.557	ug/m³	21.9	NA	109	70-130	0.533	25	
cis-1,2-Dichloroethene	45.1	1.07	ug/m³	42.0	NA	108	70-130	2.97	25	
cis-1,3-Dichloropropene	53.0	1.22	ug/m³	48.5	NA	109	70-130	1.45	25	
Cyclohexane	38.8	0.894	ug/m³	35.1	NA	110	70-130	1.30	25	
Dibromochloromethane	86.6	2.21	ug/m³	87.7	NA	98.8	70-130	1.34	25	
Dichlorodifluoromethane	62.1	1.33	ug/m³	52.4	NA	119	70-130	4.10	25	
Ethanol	18.5	1.96	ug/m³	19.6	NA	94.4	70-130	2.48	25	
Ethyl Acetate	38.5	0.936	ug/m³	37.8	NA	102	70-130	5.55	25	
Ethylbenzene	46.7	1.17	ug/m³	46.4	NA	101	70-130	0.465	25	
Hexachloro-1,3-butadiene	108	2.77	ug/m³	112	NA	96.4	70-130	1.54	25	
m,p-Xylenes	90.4	2.30	ug/m³	92.0	NA	98.2	70-130	2.11	25	
Methylene chloride	31.6	0.937	ug/m³	37.5	NA	84.2	70-130	9.65	25	
Methyl-t-butyl ether	45.8	0.937	ug/m³	37.1	NA	123	70-130	2.80	25	
Naphthalene	56.0	2.72	ug/m³	55.0	NA	102	70-130	1.29	25	
n-Heptane	43.4	1.06	ug/m³	42.6	NA	102	70-130	0.758	25	
n-Hexane	41.1	0.916	ug/m³	36.6	NA	112	70-130	0.709	25	
o-Xylene	45.2	1.17	ug/m³	46.0	NA	98.2	70-130	1.65	25	

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11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Volatile Organic Compounds - Quality Control

Batch B3B0228 - TO-15

Laboratory Control Sample Duplicate (B3B0228-BSD1) Prepared: 02/13/13 Analyzed: 02/14/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Propylene	20.2	0.447	ug/m³	17.9	NA	113	70-130	2.87	25	
Styrene	41.2	1.11	ug/m³	44.7	NA	92.1	70-130	2.27	25	
Tetrachloroethene	70.0	1.76	ug/m³	70.5	NA	99.3	70-130	0.0484	25	
Tetrahydrofuran	34.4	0.766	ug/m³	30.9	NA	111	70-130	0.606	25	
Toluene	39.8	1.02	ug/m³	40.7	NA	97.9	70-130	2.41	25	
trans-1,2-Dichloroethene	55.0	1.03	ug/m³	40.8	NA	135	70-130	5.25	25	
trans-1,3-Dichloropropene	50.2	1.27	ug/m³	49.9	NA	101	70-130	0.738	25	
Trichloroethene	55.7	1.40	ug/m³	54.8	NA	102	70-130	1.29	25	
Trichlorofluoromethane	71.6	1.57	ug/m³	61.8	NA	116	70-130	4.58	25	
Vinyl acetate	38.2	0.915	ug/m³	36.9	NA	104	70-130	5.84	25	
Vinyl chloride	27.9	0.690	ug/m³	27.6	NA	101	70-130	8.15	25	
Surrogate: 1,2-Dichloroethane-d4	*18.2*		ug/m³	*18.9*	*NA*	*95.8*	*70-150*			
Surrogate: 4-Bromofluorobenzene	*32.7*		ug/m³	*32.2*	*NA*	*102*	*70-115*			
Surrogate: Toluene-d8	*20.1*		ug/m³	*18.4*	*NA*	*109*	*70-110*			

Duplicate (B3B0228-DUP1) **Source: 1300666-01** Prepared: 02/13/13 Analyzed: 02/14/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	< 2.36	2.36	ug/m³	NA	ND	NA	NA	NA	25	
1,1,2,2-Tetrachloroethane	< 3.09	3.09	ug/m³	NA	ND	NA	NA	NA	25	
1,1,2-Trichloroethane	< 2.36	2.36	ug/m³	NA	ND	NA	NA	NA	25	
1,1,2-Trichlorotrifluoroethane	< 3.45	3.45	ug/m³	NA	ND	NA	NA	NA	25	
1,1-Dichloroethane	< 1.75	1.75	ug/m³	NA	ND	NA	NA	NA	25	
1,1-Dichloroethene	< 1.78	1.78	ug/m³	NA	ND	NA	NA	NA	25	
1,2,4-Trichlorobenzene	< 3.21	3.21	ug/m³	NA	ND	NA	NA	NA	25	
1,2,4-Trimethylbenzene	< 4.26	4.26	ug/m³	NA	1.41	NA	NA	2.30	25	
1,2-Dibromoethane	< 3.33	3.33	ug/m³	NA	ND	NA	NA	NA	25	
1,2-Dichlorobenzene	< 2.50	2.50	ug/m³	NA	ND	NA	NA	NA	25	
1,2-Dichloroethane	< 1.82	1.82	ug/m³	NA	ND	NA	NA	NA	25	
1,2-Dichloropropane	< 2.00	2.00	ug/m³	NA	ND	NA	NA	NA	25	
1,2-Dichlorotetrafluoroethane	< 3.14	3.14	ug/m³	NA	ND	NA	NA	NA	25	
1,3,5-Trimethylbenzene	< 2.13	2.13	ug/m³	NA	ND	NA	NA	NA	25	
1,3-Butadiene	< 0.995	0.995	ug/m³	NA	ND	NA	NA	NA	25	
1,3-Dichlorobenzene	< 2.50	2.50	ug/m³	NA	ND	NA	NA	NA	25	
1,4-Dichlorobenzene	< 2.60	2.60	ug/m³	NA	ND	NA	NA	NA	25	
1,4-Dioxane	< 1.56	1.56	ug/m³	NA	ND	NA	NA	NA	25	
2-Butanone (MEK)	1.63	1.33	ug/m³	NA	1.70	NA	NA	4.13	25	
2-Hexanone	< 1.84	1.84	ug/m³	NA	ND	NA	NA	NA	25	
2-Propanol	< 1.11	1.11	ug/m³	NA	ND	NA	NA	NA	25	
4-Ethyltoluene	< 2.13	2.13	ug/m³	NA	ND	NA	NA	NA	25	

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Volatile Organic Compounds - Quality Control

Batch B3B0228 - TO-15

Duplicate (B3B0228-DUP1) **Source: 1300666-01** Prepared: 02/13/13 Analyzed: 02/14/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
4-Methyl-2-pentanone	< 1.77	1.77	ug/m³	NA	ND	NA	NA	NA	25	
Acetone	< 4.12	4.12	ug/m³	NA	3.85	NA	NA	4.62	25	
Benzene	< 2.87	2.87	ug/m³	NA	ND	NA	NA	NA	25	
Benzyl chloride	< 2.16	2.16	ug/m³	NA	ND	NA	NA	NA	25	
Bromodichloromethane	< 2.90	2.90	ug/m³	NA	ND	NA	NA	NA	25	
Bromoform	< 17.0	17.0	ug/m³	NA	ND	NA	NA	NA	25	
Bromomethane	< 1.75	1.75	ug/m³	NA	ND	NA	NA	NA	25	
Carbon disulfide	< 1.35	1.35	ug/m³	NA	1.14	NA	NA	1.37	25	
Carbon Tetrachloride	< 2.73	2.73	ug/m³	NA	ND	NA	NA	NA	25	
Chlorobenzene	< 2.07	2.07	ug/m³	NA	ND	NA	NA	NA	25	
Chloroethane	< 2.37	2.37	ug/m³	NA	ND	NA	NA	NA	25	
Chloroform	< 2.11	2.11	ug/m³	NA	ND	NA	NA	NA	25	
Chloromethane	1.27	0.929	ug/m³	NA	1.33	NA	NA	5.02	25	
cis-1,2-Dichloroethene	< 1.78	1.78	ug/m³	NA	ND	NA	NA	NA	25	
cis-1,3-Dichloropropene	< 2.04	2.04	ug/m³	NA	ND	NA	NA	NA	25	
Cyclohexane	< 1.49	1.49	ug/m³	NA	ND	NA	NA	NA	25	
Dibromochloromethane	< 3.69	3.69	ug/m³	NA	ND	NA	NA	NA	25	
Dichlorodifluoromethane	2.56	2.22	ug/m³	NA	2.64	NA	NA	3.16	25	
Ethanol	3.34	3.26	ug/m³	NA	3.48	NA	NA	3.87	25	
Ethyl Acetate	< 1.56	1.56	ug/m³	NA	ND	NA	NA	NA	25	
Ethylbenzene	< 1.95	1.95	ug/m³	NA	ND	NA	NA	NA	25	
Hexachloro-1,3-butadiene	< 4.62	4.62	ug/m³	NA	ND	NA	NA	NA	25	
m,p-Xylenes	< 3.83	3.83	ug/m³	NA	ND	NA	NA	NA	25	
Methylene chloride	8.49	1.56	ug/m³	NA	9.04	NA	NA	6.27	25	
Methyl-t-butyl ether	< 1.56	1.56	ug/m³	NA	ND	NA	NA	NA	25	
Naphthalene	< 4.54	4.54	ug/m³	NA	ND	NA	NA	NA	25	
n-Heptane	< 1.78	1.78	ug/m³	NA	ND	NA	NA	NA	25	
n-Hexane	< 1.53	1.53	ug/m³	NA	ND	NA	NA	NA	25	
o-Xylene	< 1.95	1.95	ug/m³	NA	ND	NA	NA	NA	25	
Propylene	1.64	0.746	ug/m³	NA	1.67	NA	NA	2.08	25	
Styrene	< 1.85	1.85	ug/m³	NA	ND	NA	NA	NA	25	
Tetrachloroethene	< 2.94	2.94	ug/m³	NA	ND	NA	NA	NA	25	
Tetrahydrofuran	< 1.28	1.28	ug/m³	NA	ND	NA	NA	NA	25	
Toluene	< 1.70	1.70	ug/m³	NA	ND	NA	NA	NA	25	
trans-1,2-Dichloroethene	< 1.72	1.72	ug/m³	NA	ND	NA	NA	NA	25	
trans-1,3-Dichloropropene	< 2.12	2.12	ug/m³	NA	ND	NA	NA	NA	25	
Trichloroethene	< 2.33	2.33	ug/m³	NA	ND	NA	NA	NA	25	
Trichlorofluoromethane	< 2.62	2.62	ug/m³	NA	ND	NA	NA	NA	25	
Vinyl acetate	< 1.53	1.53	ug/m³	NA	ND	NA	NA	NA	25	
Vinyl chloride	< 1.15	1.15	ug/m³	NA	ND	NA	NA	NA	25	

BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Volatile Organic Compounds - Quality Control

Batch B3B0228 - TO-15

Duplicate (B3B0228-DUP1) **Source: 1300666-01** Prepared: 02/13/13 Analyzed: 02/14/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: 1,2-Dichloroethane-d4	*173*		ug/m³	*140*	*NA*	*123*	*70-150*			
Surrogate: 4-Bromofluorobenzene	*209*		ug/m³	*239*	*NA*	*87.7*	*70-115*			
Surrogate: Toluene-d8	*133*		ug/m³	*137*	*NA*	*97.7*	*70-110*			

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Minneapolis, MN 55438
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952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

Tentatively Identified Compounds - Volatile Compounds - Quality Control

Batch B3B0228 - TO-15

Method Blank (B3B0228-BLK1) Prepared: 02/13/13 Analyzed: 02/14/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
+++ TICs not detected +++	< 0.0		ug/m³	NA	NA	NA	NA	NA	NA	

BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

HR Green	Client Ref: Chamberlain	Report #: 1300666
2550 University Ave. W., Suite 400N	Client Contact: Mr. Mike Goalen	Project Mgr: Steven J. Albrecht
St. Paul, MN 55114	PO Number: 1011004	Account ID: H21344

BRAUN INTERTEC
Braun Intertec Corporation
11001 Hampshire Ave. S
Minneapolis, MN 55438

REQUEST FOR AIR CANISTER ANALYTICAL SERVICES

Canister orders and sampling inquiries:
labservices@braunintertec.com
Phone: 952-995-2600 Fax: 952-995-2601

For Braun Intertec Use Only
Laboratory Work Order No.
1300666

IMPORTANT
Date Results Requested: _____
Time _____
Rush Charges Authorized? ____ Yes ____ No
Rush / Quote # _____

Page _____ of _____

REPORT RESULTS TO
Contact Name R Huesman | Project ID/Name Chamberlain | P.O. #/Project # 1011003
Company HR Green, Inc.
Mailing Address
City, State, Zip
Telephone # | Fax #
E-mail

SEND INVOICE TO
Contact Name | Company
Address
City, State, Zip Same
Telephone # | Fax #

Special Instructions and/or Specific Regulatory Requirements:
(method, limit of detection, reporting units)

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request)
SAMPLE TYPES: A = Ambient Air, I = Indoor Air, L = Landfill Gas, S = Soil Gas

	CLIENT SAMPLE IDENTIFICATION	Canister ID Number	Flow Contr. ID Number	Max. PID (ppm)	Date(s) Sampled	Start Time (2/8/13)	Stop Time (2/9/13)	Temp Range (°F)	Canister Vacuum Start (In "Hg)	Canister Vacuum Stop (In "Hg)	SAMPLE TYPES	TO-15	FOR LAB USE ONLY
1	2427 E. 4th St.	1650 0036	7340887	0.0	2/8/13	13:25	13:50	30°	30	Ø	A	X	
2	511 Boston St.	1528 0031	7342575	0.0	2/8/13	13:45	~~13:00~~ 14:00	30°	30	25	A	X	
3	Area 6-1	1651 0017	7342511	0.0	2/8/13	14:05	14:11	30°	30	~~Ø~~ 3	A	X	
4	Area 5-12	1649 0004	7300143	0.0	2/8/13	14:25	14:21	30°	30	Ø	A	X	
5	Fence-1SW	1524 0007	7309669	0.0	2/8/13	14:35	14:29	30°	30	Ø	A	X	
6	Fence-2 NW	2611 0053	7342898	0.0	2/8/13	14:45	14:35	30°	30	Ø	A	X	
7													
8													
9													
10													

CHAIN OF CUSTODY
Collected by: (Print) Michael Goalen / Robin Huesman
Collector's Signature: R Huesman
Relinquished by: | Date/Time
Relinquished by: | Date/Time
Received by: | Date/Time
Received Contents Not Verified: | Date/Time
Received Contents Verified: | Date/Time 2/13/13 0940

Custody Seal Intact ☒ Yes ☐ No ☐ N/A
Sample Kit Equipment Returned ☒ Yes ☐ No ☐ N/A

Comments:

Form # CS10.01 F:\Groups\QA-QC\Forms\sample control\COC-CS10 Effective 11/15/06

US EPA ARCHIVE DOCUMENT

ARM Group Inc.

Earth Resource Engineers and Consultants

September 7, 2004

Ms. Cindy Quast
Howard R Green Company
8710 Earhart Lane SW
Cedar Rapids, IA 52404

Re: Geophysical Investigation Report
Waterloo, Iowa
ARM Project 04260

Dear Ms Quast:

ARM Group Inc. (ARM) is pleased to present this report to Howard R. Green (HRG) documenting the results of the subsurface geophysical investigation performed at the Vose Industrial Services facility located in Waterloo, Iowa. The purpose of the investigation was to locate and delineate possible buried drums. An ARM geophysicist was on-site during the week of August 16, 2004 to conduct the geophysical survey.

BACKGROUND

The former Chamberlain Manufacturing facility is located at 550 Esther Street in Waterloo, Iowa. Historically, the site was used as a manufacturing facility of projectiles. Currently the site is owned by Vose Industrial Services.

ARM performed the geophysical survey in the subject area outlined by HRG personnel to locate and delineate potential buried drums of cyanide. The survey area is approximately 150 x 300 feet. Previously gathered information indicated the possible presence of buried drums in the survey area.

FIELD EFFORT

ARM performed a two- phased geophysical survey to help HRG identify and map potential buried drums at the site. In the first phase, an electromagnetic (EM) survey was conducted using an EM-61 MKII metal detector manufactured by Geonics Limited. The EM survey was performed over the investigation area along traverses spaced 5 feet apart and oriented approximately east to west. At the conclusion of the EM survey, the endpoints of the survey traverses were located using a global positioning system (GPS). Coordinates were recorded in NAD83 Iowa North in US Survey Feet. The positions of the EM-61 data were then corrected using the GPS coordinates.

1129 West Governor Road • P.O. Box 797 • Hershey, PA 17033-0797
voice: (717) 533-8600 • fax: (717) 533-8605 • e-mail: info@armgroup.net

In the second phase, a ground-penetrating radar (GPR) survey was performed over areas showing EM anomalies. GPR data was collected in multiple orientations across the feature. GPR screening was conducted using a Model SIR-3000 GPR unit manufactured by Geophysical Survey Systems Inc. with a 400-megahertz antenna.

RESULTS

Figure 1 presents the EM-61 metal detection results. The EM survey indicated several EM anomalies that represent high metallic content in the subsurface. These anomalies are shown on Figure 1 and are located at coordinates listed in the table below.

Anomaly	Northing	Easting
1	3656102	5236474
2	3656092	5236470
3	3656083	5236465
4	3656082	5236474
5	3656088	5236488
6	3656098	5236492
7	3656092	5236511
8	3656070	5236527
9	3656079	5236533
10	3656088	5236538
11	3656108	5236548
12	3656092	5236572

Anomalies 1 through 6 appear to be small, separate anomalies in the EM dataset. These anomalies have dimensions of approximately 5 feet by 3feet with the exception of Anomaly 5 which appears to be elongated to have the dimensions of 10 feet by 5feet. Anomalies 8 through 11 indicate a linear feature trending northeast with dimensions of approximately 58 feet by 7 feet. Anomaly 7 is a separate elongated anomaly located approximately half way between the two groupings of anomalies. It is approximately 6 feet by 5 feet. Anomaly 12 indicates a circular feature at the edge of the survey grid approximately 5 to 8 feet in diameter. The complete dimension of the anomaly is not known because part of it lies outside of the survey grid.

Five of the anomalies were caused by surface features. They are listed in the table below with the coordinates and the surface feature causing the anomaly.

Anomaly	Northing	Easting	Feature
A	3656138	5232301	Guard shack
B	3656097	5236385	Metal fence post
C	3656018	5236383	Fence
D	3656007	5236510	Metal stairs w/ bollard
E	3656151	5236549	Bollards and sheet metal

Anomaly E is an underground pump system covered by a 3 feet by 3 feet piece of sheet metal surrounded by bollards. The pumping system had a 12-inch diameter pipe connected and had a southerly orientation.

The GPR survey was performed in areas where EM-61 anomalies were identified during the first phase. The GPR traverses were oriented north-south and east-west and spaced five feet apart. Figure 2 provides the locations of the selected GPR traverses that have been included with this report. All of the GPR files will be archived at the ARM office. These GPR traverses were selected for interpretation because of their location relative to the EM-61 anomalies present. The selected GPR traverses have been included on Figures 3, 4, and 5. Each selected GPR profile includes the anomaly location and location.

Figure 3 shows three GPR profiles traversing over anomalies 8, 9, and 10. Profile GPR 235N shows a strong reflection in the center of the profile at the location of Anomaly 8. Profile GPR 240S shows a strong reflection in the center of the profile at the location of Anomaly 9. Profile GPR 245N shows two reflections next to each other. Anomaly 10 is hyperbolic reflection just North of the larger reflection of Anomaly 9. Each of these anomalies, as shown on Figure 3, has a broad profile much like a large UST or pipe. There are smaller, multiple anomalies located around Anomalies 8 through 10 which may represent metal debris or possibly buried drums. Anomalies 8 through 10 may also represent the presence of buried drums. The top surfaces of anomalies 8 through 10 are located within the first 3 feet of the ground surface. These GPR profiles confirm the presence of the unknown anomalies in these locations.

Figure 4 shows three GPR profiles traversing over anomalies 8, 9, and 10. Profile GPR 250S shows Anomaly 10 North of the center of the profile (indicated by the thick flat white lines). Profile GPR 255N shows the location of Anomaly 10. GPR 65W shows Anomalies 8 and 9. Anomaly 9 is the small hyperbolic reflection in the center of the profile and Anomaly 8 are the reflections West of Anomaly 9. As previously shown on Figure 3, Anomalies 8 through 10 are large singular looking anomalies with multiple smaller anomalies located around the main anomalies.

Figure 5 shows GPR profiles traversing over anomalies 1, 4, 5, 6, 7 and 10. Profile GPR 75W shows the location of Anomaly 10 indicated by the white hyperbolic refection East of the center of the profile. Profile GPR 85W shows a profile traversing over Anomalies 7 and 10. Anomaly 10 is located in the center of the profile (white hyperbolic reflections). Anomaly 7 (weaker hyperbolic reflections) is located West of Anomaly 10. Profiles GPR 185N and GPR 200S where collected in the central portion of the survey area. Profile GPR 185N shows Anomalies 1 and 4. Anomaly 1 is located in the center of the profile while Anomaly 4 is at the southern edge of the profile. Profile GPR 200S shows Anomalies 5 and 6. The anomalies detected in the central portion of the property, Anomalies 1 through 6, are not as distinct. These anomalies are located deeper in the subsurface and do not have as intense reflection as do Anomalies 8 though 10. This is an indication of lesser metallic content or poorer metallic properties.

SURVEY LIMITATIONS

The investigation work scope included standard and/or routinely accepted practices of the geophysical industry. ARM utilized multiple methods in order to locate and delineate potential buried drums at the subject site. The multi-phased investigation was performed to reduce the risk of missing a subsurface feature due to the depth it is buried, the soil type and conditions, the materials, and other site-specific conditions that may interfere with the effectiveness of the geophysical equipment and mask the existence of an underground storage tank. Some site conditions can interfere with the effectiveness of the geophysical equipment. Concrete with metal reinforcement will impede the EM-61 and GPR effectiveness. In addition high- energy overhead power lines will interfere with the effectiveness of the metal detector.

However, by its nature, no subsurface survey can completely define subsurface conditions without further interpretation of the data by experienced geophysicists. Thus, ARM conducted this survey in accordance with industry standards and cannot accept responsibility for inherent technique limitations, survey limitations or unforeseen site-specific conditions.

SUMMARY

The geophysical survey identified twelve targets which are consistent with buried metal debris. These features are shown on Figure 1.

If you have any questions or need additional information, please do not hesitate to call the undersigned at 717-533-8600.

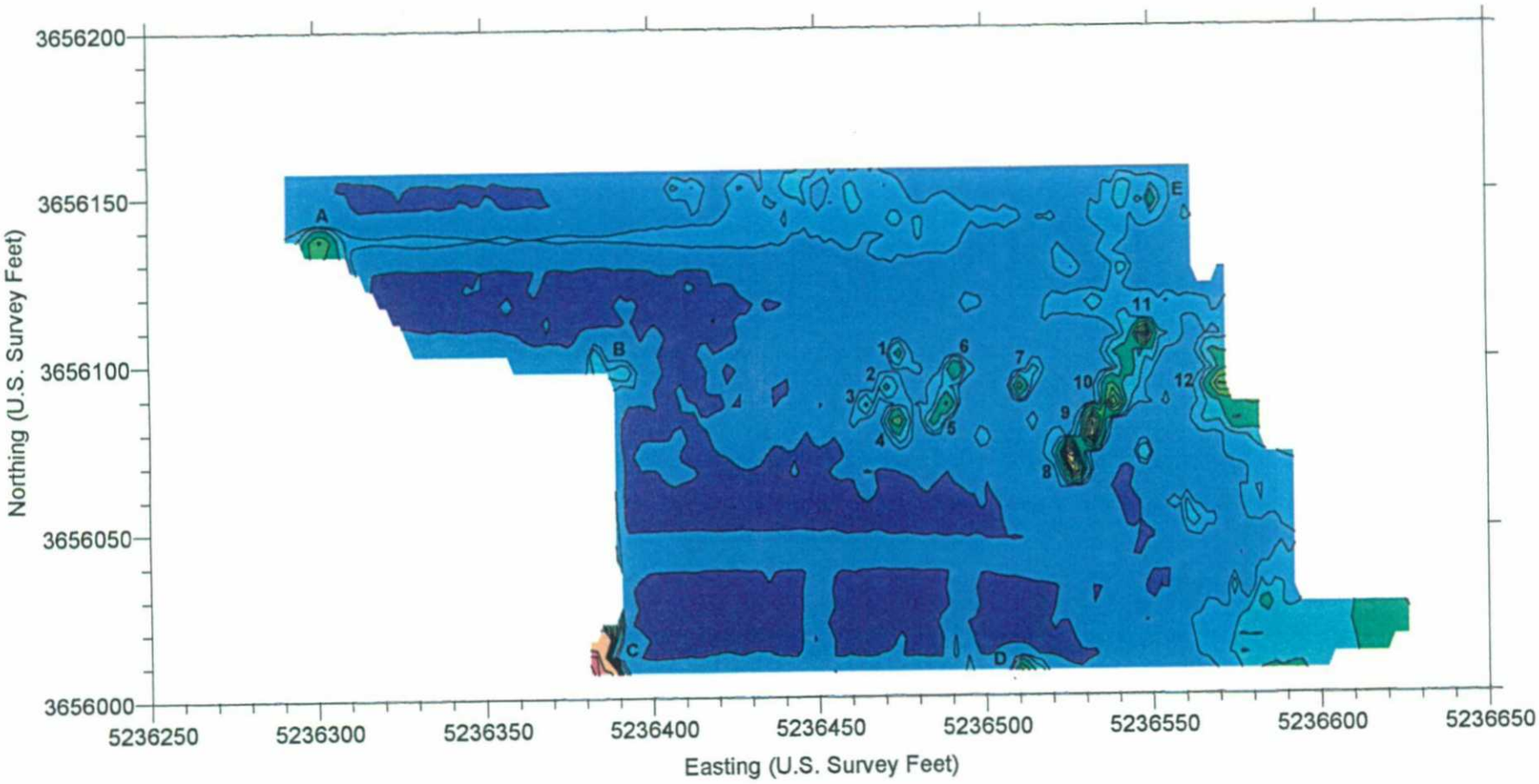
Respectfully submitted,
ARM Group, Inc.

Alexander Mussio
Staff Geophysicist

Beth A. Williams, P.G.
Senior Geophysicist

Attachments

FIGURE 1
EM-61 METAL DETECTOR DATA
VOSE INDUSTRIAL SERVICES
WATERLOO, IOWA
HOWARD R GREEN COMPANY



7 Anomaly Location with Identifier

Coordinates are presented in NAD83 Iowa North (U.S.Survey Feet)

Millivolts

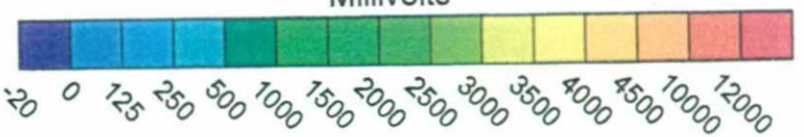
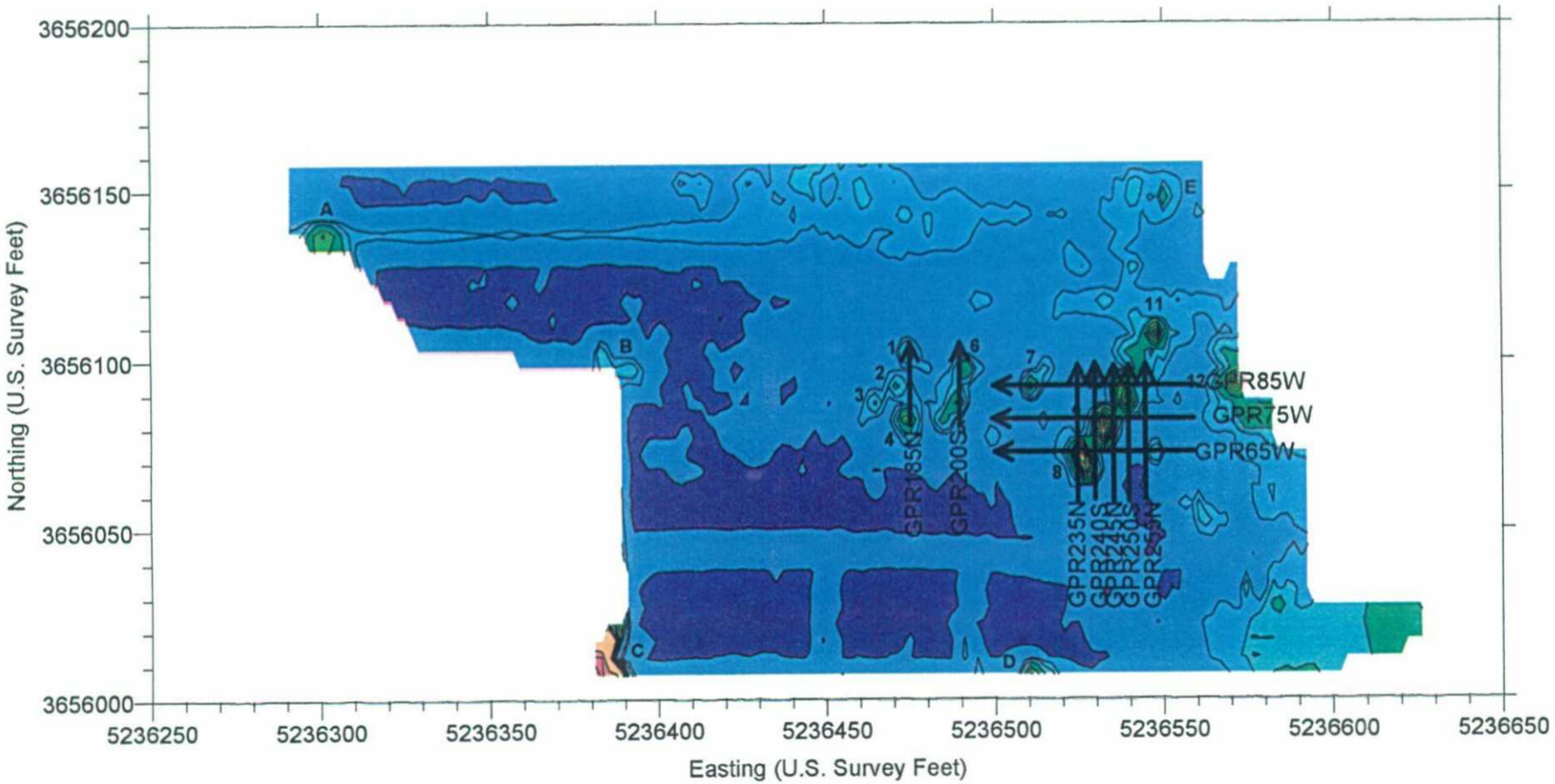


FIGURE 2
LOCATIONS OF SELECTED GPR TRAVERSES
VOSE INDUSTRIAL SERVICES
WATERLOO, IOWA
HOWARD R GREEN COMPANY



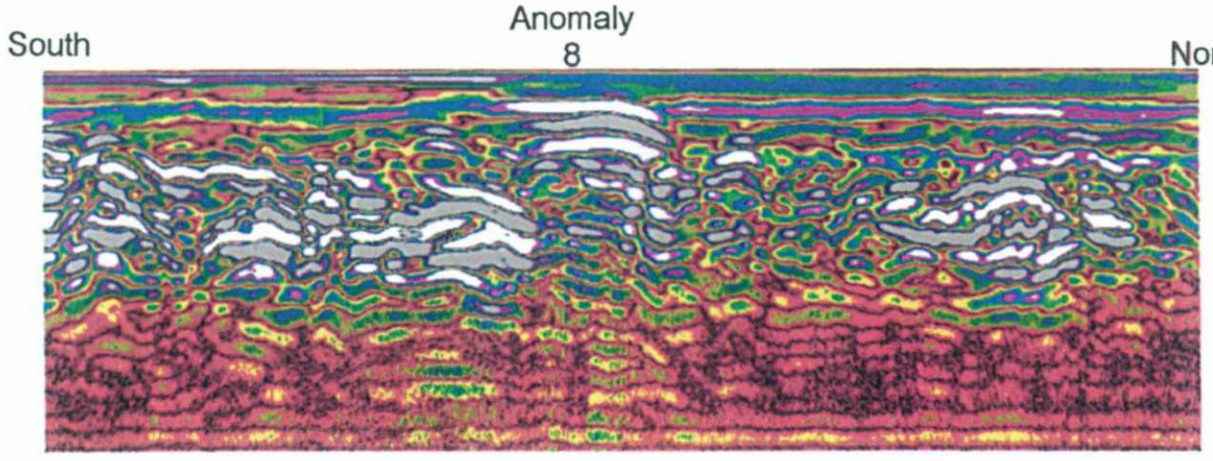
millivolts

-20 0 125 250 500 1000 1500 2000 2500 3000 3500 4000 4500 10000 12000

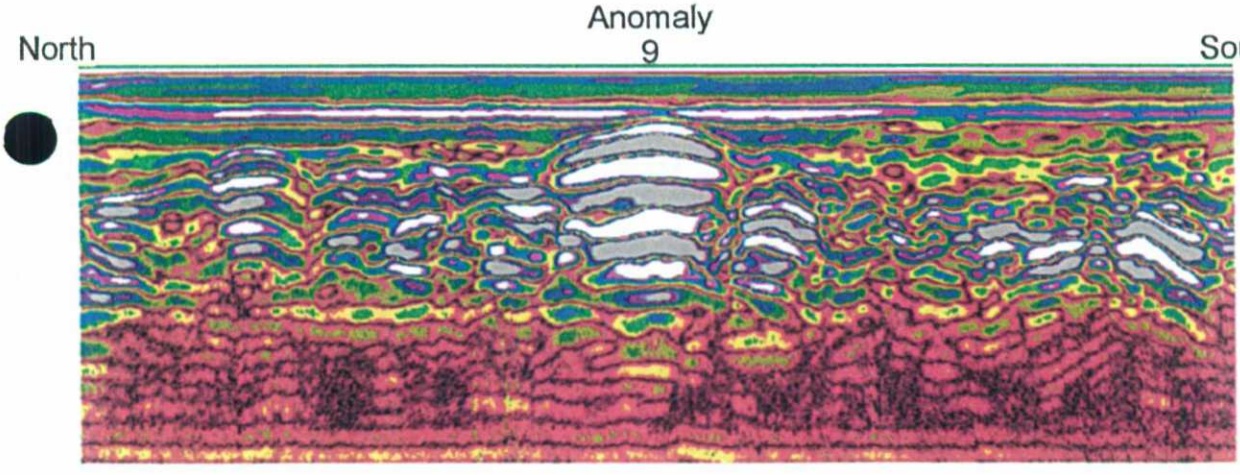
GPR85W Location of Selected GPR Traverses with Identifier

Coordinates are presented in NAD83 Iowa North (U.S. Survey Feet)

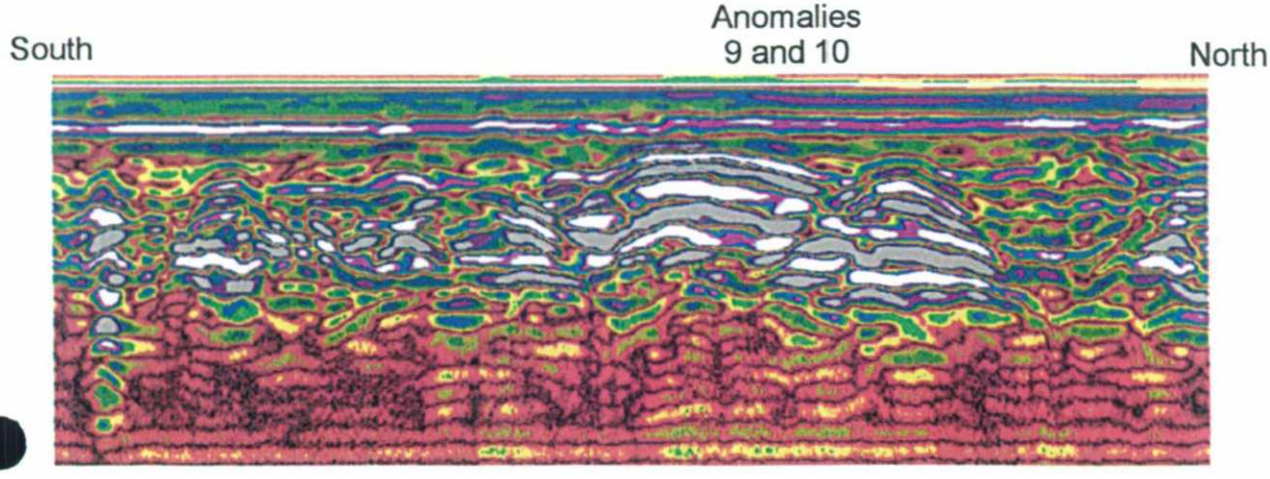
FIGURE 3
SELECTED GPR TRAVERSES
VOSE INDUSTRIAL SERVICES
WATERLOO, IOWA
HOWARD R GREEN COMPANY



GPR 235N



GPR 240S



GPR 245N

FIGURE 4
SELECTED GPR TRAVERSES
VOSE INDUSTRIAL SERVICES
WATERLOO, IOWA
HOWARD R GREEN COMPANY

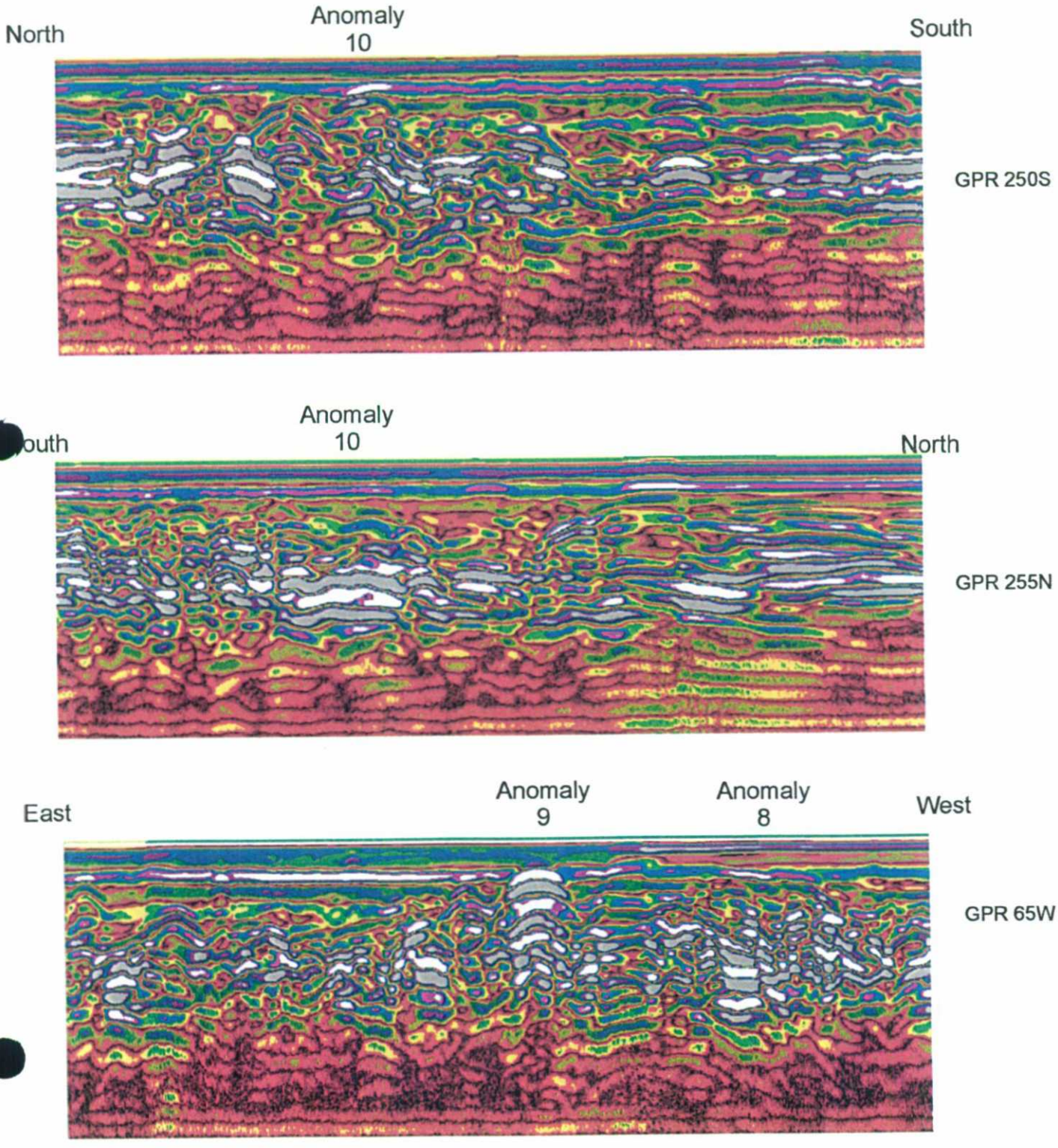


FIGURE 5
SELECTED GPR TRAVERSES
VOSE INDUSTRIAL SERVICES
WATERLOO, IOWA
HOWARD R GREEN COMPANY