



**CON 12-15  
Doc #29600**

**March 31, 2014**

**PN 143104B**

**PHASE II ENVIRONMENTAL SITE ASSESSMENT**

**CITY OF DES MOINES PARKING LOT  
505 EAST GRAND AVENUE  
DES MOINES, IOWA**

**PERFORMED FOR**

**CHRISTENSEN DEVELOPMENT  
506 3<sup>RD</sup> STREET, SUITE 300  
DES MOINES, IOWA 50309**

# ALLENDER BUTZKE ENGINEERS INC.

GEOTECHNICAL • ENVIRONMENTAL • CONSTRUCTION Q. C.



Christensen Development  
506 3<sup>rd</sup> Street, Suite 300  
Des Moines, Iowa 50309

March 31, 2014

Attn: Jake Christensen

**RE: Phase II Environmental Site Assessment  
City of Des Moines Parking Lot  
505 East Grand Avenue  
Des Moines, Iowa  
PN 143104B**

Dear Mr. Christensen:

The following Phase II Environmental Site Assessment report presents the results of three test borings and laboratory chemical analysis of soil and groundwater samples. The objective of the Phase II ESA was to investigate soil and groundwater quality on the subject property in response to recognized environmental conditions identified on the property during a Phase I ESA.

We appreciate the opportunity to provide our environmental services for this project. If you have any questions concerning this assessment or require further assistance, please contact our office at your convenience.

Respectfully,  
ALLENDER BUTZKE ENGINEERS INC.

Donald D. Edds  
Environmental Geologist

2 CC and 1 Email Above

## TABLE OF CONTENTS

	Page No.
EXECUTIVE SUMMARY .....	1
1.0 INTRODUCTION .....	2
2.0 BOREHOLE DRILLING, SOIL PROFILE AND SOIL SAMPLING .....	2
2.1 Borehole Drilling .....	2
2.2 Soil Profile .....	2
2.3 Soil Sampling .....	3
3.0 TEST WELL INSTALLATION AND GROUNDWATER SAMPLING .....	3
3.1 Test Well Installation .....	3
3.2 Groundwater Sampling .....	3
4.0 LABORATORY CHEMICAL ANALYSIS .....	3
5.0 RESULTS .....	4
6.0 GENERAL .....	4
Table Nos. 1 and 2 .....	5

APPENDIX - Site Map, Boring Logs and Laboratory Analytical Report

## **PHASE II ENVIRONMENTAL SITE ASSESSMENT**

**City of Des Moines Parking Lot  
505 East Grand Avenue  
Des Moines, Iowa**

### **EXECUTIVE SUMMARY**

A Phase II Environmental Site Assessment has been performed for the above-referenced property by Allender Butzke Engineers Inc. A brief summary of our findings is provided below.

- Three test borings were drilled on the subject property to depths ranging from 40 to 45 feet. No unusual odors, soil discoloration or elevated PID readings were indicated in the test borings. Soil samples were collected from the test borings and submitted to the laboratory for chemical analysis. The soil samples were analyzed for petroleum hydrocarbons and RCRA metals.
- Temporary test wells that consisted of a lower 10 feet of two-inch diameter PVC screen and an upper 30 to 35 feet of two-inch diameter PVC solid casing were installed in the test borings. Groundwater samples were collected from the test wells and submitted to the laboratory for chemical analysis. All groundwater samples were analyzed for petroleum hydrocarbons, volatile organic compounds and semi-volatile organic compounds. The temporary test wells were removed and the boreholes were backfilled with bentonite after the samples were collected.
- The Analytical Reports indicate that the RCRA metals arsenic, barium, cadmium, chromium, lead and selenium were detected in one or more of the soil samples. The arsenic concentration of 21 ppm in the soil sample collected from test boring TB-2 exceeds the Iowa Land Recycling Program statewide standard of 17 ppm. The other RCRA metals were detected at concentrations that were less than ILRP statewide standards. TEH as diesel fuel was detected at concentrations of 43 ppm in TB-2 and 32 ppm in TB-3. These concentrations are less than the IDNR action level of 3800 ppm.
- Bis(2-ethylhexyl) phthalate was detected in groundwater at concentrations of 27 ppb in TB-1 and 41 ppb in TB-2. These concentrations exceed the ILRP statewide standard of 6 ppb for bis(2-ethylhexyl) phthalate in groundwater. Chloroform was detected at concentrations of 2.7 ppb in TB-1 and 1.2 ppb in TB-3. These concentrations are less than the ILRP statewide standard of 80 ppb for chloroform in groundwater. It is important to recognize that both bis(2-ethylhexyl) phthalate and chloroform have been reported as possible laboratory contaminants. No other chemicals were detected in the groundwater samples.

## **1.0 INTRODUCTION**

The following report presents the results of a Phase II Environmental Site Assessment performed in accordance with our proposal and general conditions dated March 5, 2014 and authorized by Christensen Development. The Phase II ESA consisted of three test borings and laboratory chemical analysis of soil and groundwater samples. The objective of the Phase II ESA was to investigate soil and groundwater quality on the subject property in response to recognized environmental conditions identified during a Phase I ESA of the property (PN 143104 dated February 26, 2014).

Recognized environmental conditions identified during the Phase I ESA included a parking garage with two underground gasoline storage tanks located on the west side of the property in the 1920s and automotive repair shops located on the property from the 1930s through the 1950s. The gasoline USTs were located in the street right-of-way adjacent to the northwest corner of the property. In addition, several historical automotive repair shops and dry cleaners were located in the vicinity of the subject property.

It was proposed that the subject property be investigated with three test borings, along with laboratory analysis of soil and groundwater samples. A Site Map showing the test boring locations is enclosed in the Appendix. The following report includes information on borehole drilling, soil profile, soil sampling, test well installation, groundwater sampling and laboratory chemical analysis.

## **2.0 BOREHOLE DRILLING, SOIL PROFILE AND SOIL SAMPLING**

### **2.1 Borehole Drilling**

The three test borings were drilled at the project site on March 14, 2014 using truck-mounted drilling equipment. The test borings were drilled to depths ranging from 40 to 45 feet using four-inch diameter continuous flight augers. All drilling and sampling equipment were cleaned with a pressure washer prior to entering the site to prevent off-site contamination. Clean augers and sampling equipment were used for each test boring to prevent cross-contamination. Soils were examined in the field for the presence of discoloration and unusual odors. A photoionization detector (PID) was used to screen soil samples collected at 2.5-ft. intervals from each test boring.

### **2.2 Soil Profile**

Variable fill soils were encountered in the upper 7 to 10 feet of the test borings. The fill soils ranged from lean clay to sand and locally contained bricks, cinders and gravel. The fill soils were underlain by brown fine to coarse sand (Granular Alluvium) or gray-brown sandy lean clay (Cohesive Alluvium). The test borings terminated at depths of 40 to 45 feet in sand and gravel alluvium. Saturated sediment conditions were noted in the test borings at depths ranging from 33 to 35 feet. Detailed descriptions of the soils encountered during this Phase II Environmental Site Assessment are provided on the Boring Logs enclosed in the Appendix.

### **2.3 Soil Sampling**

No unusual odors, soil discoloration or elevated PID readings were indicated in the test borings. Soil samples for RCRA metals analysis were collected from the fill soils at depths ranging from 1 to 2 feet beneath the surface. Soil samples for petroleum hydrocarbon analysis were collected from depths ranging from 33 feet in TB-3 to 35 feet in TB-1 and TB-2. These depths corresponded to the top of the saturated zone as estimated during drilling. The soil samples were placed in laboratory-provided glass containers and shipped to the laboratory for chemical analysis.

## **3.0 TEST WELL INSTALLATION AND GROUNDWATER SAMPLING**

### **3.1 Test Well Installation**

Temporary test wells that consisted of an end well point, a lower 10 feet of factory-slotted two-inch diameter PVC screen and an upper 30 to 35 feet of two-inch diameter PVC solid casing were installed in the test borings for groundwater sampling purposes. Water levels were measured in the test wells shortly after they were installed. Water levels measured on March 14, 2014 ranged from 33 feet in TB-3 to 35 feet in TB-1 and TB-2.

### **3.2 Groundwater Sampling**

Groundwater samples for laboratory chemical analysis were collected from the temporary test wells on March 14, 2014. The samples were collected by lowering disposable plastic bailers into the test wells. Separate bailers were used for each test well to prevent cross-contamination. The groundwater samples were placed in laboratory-provided glass containers, packed in a cooler with ice and shipped along with the soil samples to the laboratory for chemical analysis. Upon completion of groundwater sampling, the PVC pipe and screen were removed from the ground and the open boreholes were backfilled with granular bentonite.

## **4.0 LABORATORY CHEMICAL ANALYSIS**

Chemical analysis of the soil and groundwater samples was performed by Keystone Laboratories, Inc. All soil samples were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) by Iowa Method OA-1, total extractable hydrocarbons (TEH) by Iowa Method OA-2 and RCRA metals by EPA Methods 6010B and 7471A. All groundwater samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260B, TEH by Iowa Method OA-2 and semi-volatile organic compounds by EPA Method 8270C.

Test results are shown on the Analytical Report enclosed in the Appendix. Detectable petroleum hydrocarbons and RCRA metals in soil are shown in Table No. 1 and detectable VOCs and Semi-VOCs in groundwater are shown in Table No. 2.

## **5.0 RESULTS**

The Analytical Reports indicate that the RCRA metals arsenic, barium, cadmium, chromium, lead and selenium were detected in one or more of the soil samples. The arsenic concentration of 21 ppm in the soil sample collected from test boring TB-2 exceeds the Iowa Land Recycling Program statewide standard of 17 ppm. The other RCRA metals were detected at concentrations that were less than ILRP statewide standards. TEH as diesel fuel was detected at concentrations of 43 ppm in TB-2 and 32 ppm in TB-3. These concentrations are less than the IDNR action level of 3800 ppm.

Bis(2-ethylhexyl) phthalate was detected in groundwater at concentrations of 27 ppb in test boring TB-1 and 41 ppb in TB-2. These concentrations exceed the ILRP statewide standard of 6 ppb for bis(2-ethylhexyl) phthalate in groundwater. Chloroform was detected at concentrations of 2.7 ppb in TB-1 and 1.2 ppb in TB-3. These concentrations are less than the ILRP statewide standard of 80 ppb for chloroform in groundwater. It is important to recognize that both bis(2-ethylhexyl) phthalate and chloroform have been reported as possible laboratory contaminants. No other chemicals were detected in the groundwater samples.

The source of the arsenic detected in soil from TB-2 and bis(2-ethylhexyl) phthalate detected in groundwater from TB-1 and TB-2 are not known. Arsenic and other RCRA metals occur naturally in soils in Iowa. Bis(2-ethylhexyl) phthalate is commonly used as a plasticizing agent for PVC, but it has other uses. This chemical has also been reported as a possible laboratory contaminant.

Regulations concerning soil and groundwater contamination are contained in the Iowa Administrative Code and are administered by the Iowa DNR. It is recommended that the property owner consult with representatives of the Iowa DNR with regard to the results of this investigation and any additional action that may be required.

## **6.0 GENERAL**

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted environmental assessment practices. Reliance by any other party is prohibited without the written authorization of the client or Allender Butzke Engineers Inc. This investigation is based upon the best information available to us at this time, including visual/olfactory observations, portable vapor detection equipment, and limited laboratory chemical analysis which are assumed to be representative of this site. Evaluation of analytical test results is based on current Iowa Department of Natural Resources and Iowa Land Recycling Program guidelines regarding acceptable concentrations and methods.

Failure to discover hazardous substances or conditions at the time of this report, within the scope of this investigation, does not guarantee unacceptable levels of hazardous materials might not exist at the site. We make no warranty, expressed or implied, for this property nor make certification of the

suitability of the future use of the property based on the results of this assessment, except that our services were performed with the level of care and skill ordinarily practiced by members of the profession in this area at this time under similar budget and time restraints.

**Table No. 1**  
**Detectable RCRA Metals and Petroleum Hydrocarbons in Soil**

Sample No.	Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	TEH as Diesel Fuel
EGP-1	7.6	114	1.5	8.5	7.6	8.3	<5
EGP-2	<b>21.0</b>	182	2.8	15.0	22.4	<4.9	43
EGP-3	12.2	71.3	1.6	11.0	10.5	<2.7	32
<b>Statewide Standard</b>	<b>17</b>	<b>15000</b>	<b>70</b>	<b>210</b>	<b>400</b>	<b>390</b>	<b>3800</b>

Concentrations are reported in mg/kg or parts per million (ppm)

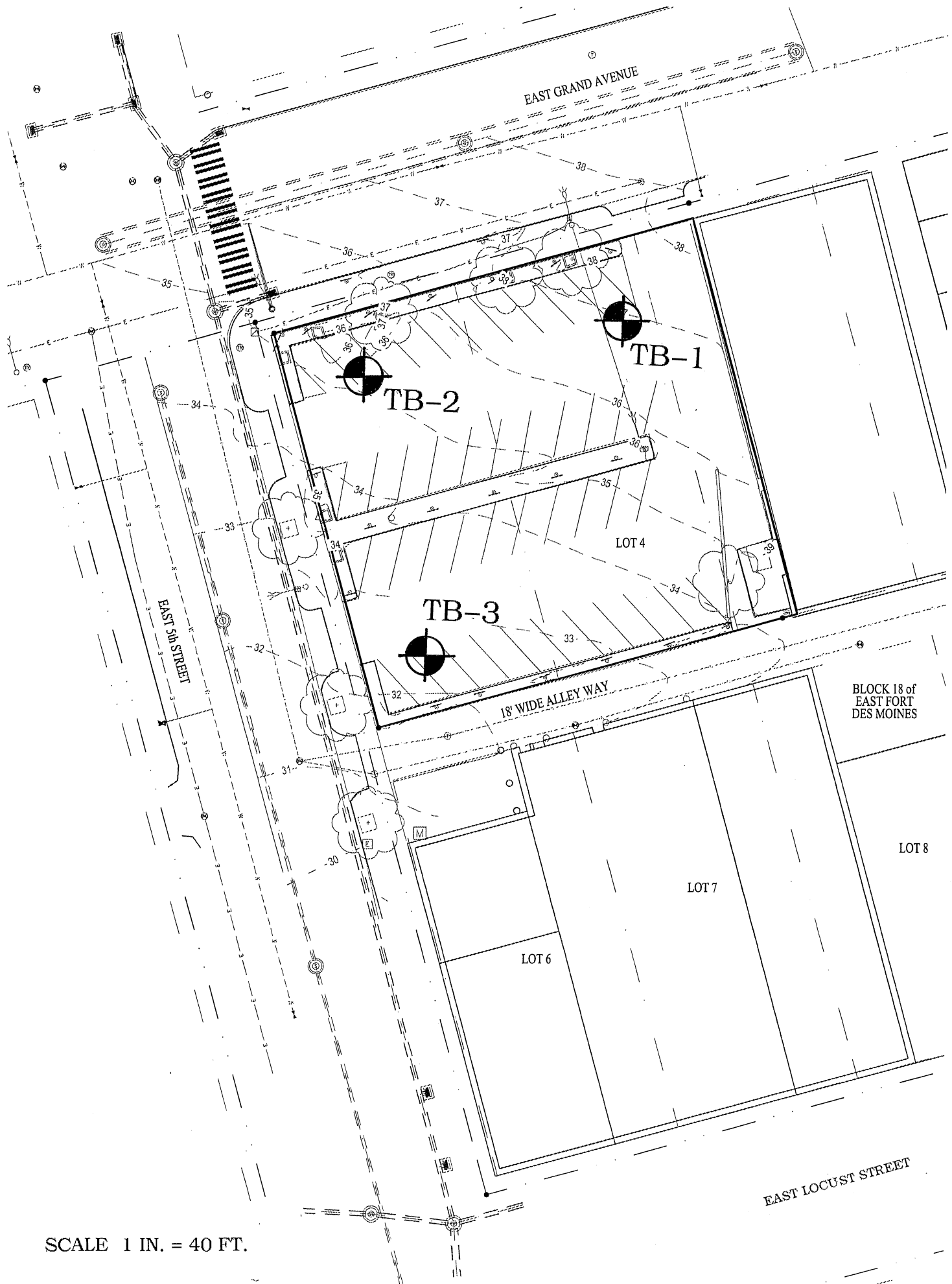
**Table No. 2**  
**Detectable VOCs and Semi-VOCs in Groundwater**

Sample No.	Chloroform	Bis(2-ethylhexyl) phthalate
EGP-1W	2.7	<b>27</b>
EGP-2W	<1.0	<b>41</b>
EGP-3W	1.2	<18
<b>Statewide Standard</b>	<b>80</b>	<b>6</b>

Concentrations are reported in mg/L or parts per billion (ppb)

## **APPENDIX**

# SITE MAP



SCALE 1 IN. = 40 FT.

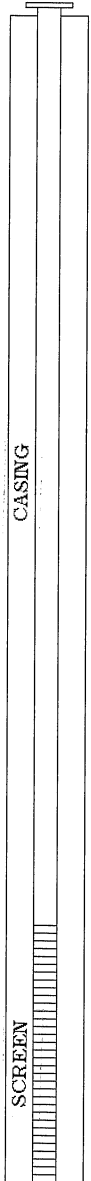
**BORING LOG NO. TB-1**Project No.: **143104B**

Project: **City of Des Moines Parking Lot**  
**505 East Grand Avenue**  
**Des Moines, Iowa**

Client: **Christensen Development**  
**506 3rd Street, Suite 300**  
**Des Moines, Iowa 50309**

Surface Elevation: **N/A**Date Drilled: **March 14, 2014**Drilling Method **4-inch CFA**Datum: **N/A**Drilling Depth: **45**Page **1** of **1**

Elevation ft.	Depth ft.	Sample No.	Type	PID (PPM)	Odor	Material Description*	Graphic Log	USCS	Water Level	Well Detail
0		EGP-1	SS	0		5" Asphalt Over 7" Crushed Rock PAVEMENT				
				0		Dark brown sandy lean clay, trace gravel, moist Brick and cinders from 1.5 feet to 3.5 feet Brown lean clay after 3.5 feet FILL		CL		
				0		Brown silty fine sand, moist		SM		
				0		GRANULAR ALLUVIUM Coarse sand and gravel after 12.5'		SW		
15				0		Gray-brown sandy lean clay, trace gravel, moist COHESIVE ALLUVIUM		CL		
				0		Dark brown silty fine to coarse sand and gravel, moist		SW		
				0						
				0						
				0						
30				0		GRANULAR ALLUVIUM				
		EGP-1	SS	0		Wet after 35 feet				
				0						
				0						
				0						
45				0		End of Boring				



\*The stratification lines represent the approximate boundary lines between material types: in-situ, the transition may be gradual.

**Water Level Observation**

Time: at completion \_\_\_\_\_ hrs. \_\_\_\_\_ days

Depth to water: **35** ft. \_\_\_\_\_ ft. \_\_\_\_\_ ft. **ALLENDER BUTZKE ENGINEERS, INC.**

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**BORING LOG NO. TB-2**Project No.: **143104B**

Project: **City of Des Moines Parking Lot**  
**505 East Grand Avenue**  
**Des Moines, Iowa**

Client: **Christensen Development**  
**506 3rd Street, Suite 300**  
**Des Moines, Iowa 50309**

Surface Elevation: **N/A**Date Drilled: **March 14, 2014**Drilling Method **4-inch CFA**Datum: **N/A**Drilling Depth: **45**Page **1** of **1**

Elevation ft.	Depth ft.	Sample No.	Type	PID (PPM)	Odor	Material Description *	Graphic Log	USCS	Water Level	Well Detail
0		EGP-2	SS	0		6" Asphalt Over 6" Crushed Rock PAVEMENT		CL		
				0		Dark brown sandy lean clay, trace gravel brick and cinders, moist				
				0		Heavy brick content after 4.5 feet FILL				
				0						
				0		Brown silty fine to coarse sand with gravel, moist GRANULAR ALLUVIUM		SW		
				0		Brown-gray sandy lean clay, trace gravel, moist		CL		
15				0		COHESIVE ALLUVIUM				
				0		Very sandy from 17.5 to 18.5 feet				
				0						
				0		Brown silty fine to coarse sand and gravel, moist		SW		
				0						
				0		Very moist after 27.5 feet				
				0						
30				0		GRANULAR ALLUVIUM				
				0						
		EGP-2	SS	0		Wet after 35 feet				
				0						
				0						
				0						
45				0		End of Boring				



\*The stratification lines represent the approximate boundary lines between material types: in-situ, the transition may be gradual.

**Water Level Observation**

Time: at completion \_\_\_\_\_ hrs. \_\_\_\_\_ days

Depth to water: **35** ft. \_\_\_\_\_ ft. \_\_\_\_\_ ft. **ALLENDER BUTZKE ENGINEERS, INC.**

Geotechnical - Environmental - Construction Q.C.

# BORING LOG NO. TB-3

Project No.: **143104B**

Project: **City of Des Moines Parking Lot**  
**505 East Grand Avenue**  
**Des Moines, Iowa**

Client: **Christensen Development**  
**506 3rd Street, Suite 300**  
**Des Moines, Iowa 50309**



Surface Elevation: N/A  
Datum: N/A

Date Drilled: **March 14, 2014**  
Drilling Depth: 40

Drilling Method **4-inch CFA**  
Page 1 of 1

Elevation ft.	Depth ft.	Sample No.	Type	PID (PPM)	Odor	Material Description *	Graphic Log	USCS	Water Level	Well Detail
	0	EGP-3	SS	0		6" Asphalt Over 6" Crushed Rock PAVEMENT		CL		
				0		Dark gray and brown sandy lean clay, trace gravel, damp		CL		
				0		Heavy brick and cinders after 2 feet FILL				
				0		Brown-gray sandy lean clay, trace gravel, moist		CL		
		EGP-3	SS	0		COHESIVE ALLUVIUM				
				0						
				0		Brown silty fine to medium sand, moist		SW		
				0		Coarse sand and gravel after 20 feet				
				0						
				0						
				0		GRANULAR ALLUVIUM				
				0						
				0						
				0		Wet after 33 feet				
				0		End of Boring				
	45									

\*The stratification lines represent the approximate boundary lines between material types: in-situ, the transition may be gradual.

## Water Level Observation

Time: at completion \_\_\_\_\_ hrs. \_\_\_\_\_ days

Depth to water: 33 ft. \_\_\_\_\_ ft. \_\_\_\_\_ ft.

**ALLENDER BUTZKE ENGINEERS, INC.**

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## ANALYTICAL REPORT

March 28, 2014

Work Order: 1C40887

Page 1 of 38

Report To
Don Edds Allender Butzke Engineers, Inc. 3660 109th Street Urbandale, IA 50322

Work Order Information
Date Received: 03/17/2014 11:45AM Collector: Edds, Don Phone: (515) 252-1885 PO Number:

Project : UST

Project Number: E Grand Parking

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
<b>1C40887-01</b>	EGP-1			Matrix:Soil		Collected: 03/14/14 09:08	
Benzene	<0.20 mg/kg	0.20	1XC0576	Iowa OA-1	TKD	03/18/14 14:41	
Toluene	<0.20 mg/kg	0.20	1XC0576	Iowa OA-1	TKD	03/18/14 14:41	
Ethylbenzene	<0.20 mg/kg	0.20	1XC0576	Iowa OA-1	TKD	03/18/14 14:41	
Xylenes, total	<0.40 mg/kg	0.40	1XC0576	Iowa OA-1	TKD	03/18/14 14:41	
Surrogate: Chlorobenzene	97.4 %			60-134	TKD	03/18/14 14:41	
TEH, as gasoline	<5 mg/kg	5	1XC0511	Iowa OA-2	EPP	03/19/14 18:06	
TEH, as #2 diesel fuel	<5 mg/kg	5	1XC0511	Iowa OA-2	EPP	03/19/14 18:06	
TEH, as waste oil	<5 mg/kg	5	1XC0511	Iowa OA-2	EPP	03/19/14 18:06	
Total Extractable Hydrocarbons	<5 mg/kg	5	1XC0511	Iowa OA-2	EPP	03/19/14 18:06	
Surrogate: Pentacosane	58.8 %			35-148	EPP	03/19/14 18:06	
<b>% Solids</b>	<b>87.4 %</b>	<b>0.1</b>	1XC0486	SM 2540 G	SLK	03/17/14 16:41	
Silver, total	<0.4 mg/kg dry	0.4	1XC0613	EPA 6010B	DRB	03/20/14 21:49	
Mercury, total	<0.11 mg/kg dry	0.11	1XC0484	EPA 7471A	RVV	03/18/14 12:48	
<b>1C40887-01RE1</b>	EGP-1			Matrix:Soil		Collected: 03/14/14 09:08	
<b>Arsenic, total</b>	<b>7.6 mg/kg dry</b>	<b>4.4</b>	1XC0613	EPA 6010B	DRB	03/21/14 10:12	
<b>Barium, total</b>	<b>114 mg/kg dry</b>	<b>0.88</b>	1XC0613	EPA 6010B	DRB	03/21/14 10:12	
<b>Cadmium, total</b>	<b>1.5 mg/kg dry</b>	<b>0.9</b>	1XC0613	EPA 6010B	DRB	03/21/14 10:12	
<b>Chromium, total</b>	<b>8.5 mg/kg dry</b>	<b>2.6</b>	1XC0613	EPA 6010B	DRB	03/21/14 10:12	
<b>Lead, total</b>	<b>7.6 mg/kg dry</b>	<b>4.4</b>	1XC0613	EPA 6010B	DRB	03/21/14 10:12	
<b>Selenium, total</b>	<b>8.3 mg/kg dry</b>	<b>2.6</b>	1XC0613	EPA 6010B	DRB	03/21/14 10:12	

<b>1C40887-02</b>	EGP-2			Matrix:Soil		Collected: 03/14/14 10:16	
Benzene	<0.20 mg/kg	0.20	1XC0576	Iowa OA-1	TKD	03/18/14 14:00	
Toluene	<0.20 mg/kg	0.20	1XC0576	Iowa OA-1	TKD	03/18/14 14:00	
Ethylbenzene	<0.20 mg/kg	0.20	1XC0576	Iowa OA-1	TKD	03/18/14 14:00	
Xylenes, total	<0.40 mg/kg	0.40	1XC0576	Iowa OA-1	TKD	03/18/14 14:00	
Surrogate: Chlorobenzene	97.4 %			60-134	TKD	03/18/14 14:00	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL= Method Reporting Limit.

Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014

Page 2 of 38

Work Order: 1C40887

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
<b>1C40887-02</b>	EGP-2			Matrix:Soil		Collected: 03/14/14 10:16	
TEH, as gasoline	<5 mg/kg	5	1XC0511	Iowa OA-2	EPP	03/19/14 18:54	
<b>TEH, as #2 diesel fuel</b>	<b>43 mg/kg</b>	<b>5</b>	1XC0511	Iowa OA-2	EPP	03/19/14 18:54	
TEH, as waste oil	<5 mg/kg	5	1XC0511	Iowa OA-2	EPP	03/19/14 18:54	
<b>Total Extractable Hydrocarbons</b>	<b>43 mg/kg</b>	<b>5</b>	1XC0511	Iowa OA-2	EPP	03/19/14 18:54	
<i>Surrogate: Pentacosane</i>	<i>86.1 %</i>			<i>35-148</i>	EPP	03/19/14 18:54	
<b>% Solids</b>	<b>85.0 %</b>	<b>0.1</b>	1XC0486	SM 2540 G	SLK	03/17/14 16:41	
Silver, total	<1.6 mg/kg dry	1.6	1XC0613	EPA 6010B	DRB	03/20/14 21:57	R-01
<b>Arsenic, total</b>	<b>21.0 mg/kg dry</b>	<b>8.2</b>	1XC0613	EPA 6010B	DRB	03/20/14 21:57	
<b>Barium, total</b>	<b>182 mg/kg dry</b>	<b>1.63</b>	1XC0613	EPA 6010B	DRB	03/20/14 21:57	
<b>Cadmium, total</b>	<b>2.8 mg/kg dry</b>	<b>1.6</b>	1XC0613	EPA 6010B	DRB	03/20/14 21:57	
<b>Chromium, total</b>	<b>15.0 mg/kg dry</b>	<b>4.9</b>	1XC0613	EPA 6010B	DRB	03/20/14 21:57	
Mercury, total	<0.11 mg/kg dry	0.11	1XC0484	EPA 7471A	RVV	03/18/14 12:50	
<b>Lead, total</b>	<b>22.4 mg/kg dry</b>	<b>8.2</b>	1XC0613	EPA 6010B	DRB	03/20/14 21:57	
Selenium, total	<4.9 mg/kg dry	4.9	1XC0613	EPA 6010B	DRB	03/20/14 21:57	R-01
<b>1C40887-03</b>	EGP-3			Matrix:Soil		Collected: 03/14/14 11:03	
Benzene	<0.20 mg/kg	0.20	1XC0576	Iowa OA-1	TKD	03/18/14 15:22	
Toluene	<0.20 mg/kg	0.20	1XC0576	Iowa OA-1	TKD	03/18/14 15:22	
Ethylbenzene	<0.20 mg/kg	0.20	1XC0576	Iowa OA-1	TKD	03/18/14 15:22	
Xylenes, total	<0.40 mg/kg	0.40	1XC0576	Iowa OA-1	TKD	03/18/14 15:22	
<i>Surrogate: Chlorobenzene</i>	<i>95.8 %</i>			<i>60-134</i>	TKD	03/18/14 15:22	
TEH, as gasoline	<5 mg/kg	5	1XC0511	Iowa OA-2	EPP	03/19/14 19:43	
<b>TEH, as #2 diesel fuel</b>	<b>32 mg/kg</b>	<b>5</b>	1XC0511	Iowa OA-2	EPP	03/19/14 19:43	
TEH, as waste oil	<5 mg/kg	5	1XC0511	Iowa OA-2	EPP	03/19/14 19:43	
<b>Total Extractable Hydrocarbons</b>	<b>32 mg/kg</b>	<b>5</b>	1XC0511	Iowa OA-2	EPP	03/19/14 19:43	
<i>Surrogate: Pentacosane</i>	<i>115 %</i>			<i>35-148</i>	EPP	03/19/14 19:43	
<b>% Solids</b>	<b>84.8 %</b>	<b>0.1</b>	1XC0486	SM 2540 G	SLK	03/17/14 16:41	
Silver, total	<0.9 mg/kg dry	0.9	1XC0613	EPA 6010B	DRB	03/20/14 22:03	
<b>Arsenic, total</b>	<b>12.2 mg/kg dry</b>	<b>4.4</b>	1XC0613	EPA 6010B	DRB	03/20/14 22:03	
<b>Barium, total</b>	<b>71.3 mg/kg dry</b>	<b>0.89</b>	1XC0613	EPA 6010B	DRB	03/20/14 22:03	
<b>Cadmium, total</b>	<b>1.6 mg/kg dry</b>	<b>0.9</b>	1XC0613	EPA 6010B	DRB	03/20/14 22:03	
<b>Chromium, total</b>	<b>11.0 mg/kg dry</b>	<b>2.7</b>	1XC0613	EPA 6010B	DRB	03/20/14 22:03	
Mercury, total	<0.11 mg/kg dry	0.11	1XC0484	EPA 7471A	RVV	03/18/14 12:53	
<b>Lead, total</b>	<b>10.5 mg/kg dry</b>	<b>4.4</b>	1XC0613	EPA 6010B	DRB	03/20/14 22:03	
Selenium, total	<2.7 mg/kg dry	2.7	1XC0613	EPA 6010B	DRB	03/20/14 22:03	
<b>1C40887-04</b>	EGP-1W			Matrix:Water		Collected: 03/14/14 09:12	
Chloromethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Vinyl Chloride	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Bromomethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014

Page 3 of 38

Work Order: 1C40887

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
<b>1C40887-04</b>	EGP-1W			Matrix: Water		Collected: 03/14/14 09:12	
Chloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
1,1-Dichloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Acetone	<10.0 ug/L	10.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Carbon Disulfide	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Methylene Chloride	<5.0 ug/L	5.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
trans-1,2-Dichloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Methyl-t-butyl Ether (MTBE)	<2.0 ug/L	2.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
1,1-Dichloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
cis-1,2-Dichloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
2-Butanone (MEK)	<5.0 ug/L	5.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
<b>Chloroform</b>	<b>2.7 ug/L</b>	<b>1.0</b>	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
1,1,1-Trichloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Carbon Tetrachloride	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Benzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
1,2-Dichloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Trichloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
1,2-Dichloropropane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Bromodichloromethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
cis-1,3-Dichloropropene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
4-Methyl-2-pentanone (MIBK)	<5.0 ug/L	5.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Toluene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
trans-1,3-Dichloropropene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
1,1,2-Trichloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Tetrachloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
2-Hexanone (MBK)	<5.0 ug/L	5.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Dibromochloromethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Chlorobenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Ethylbenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Xylenes, total	<2.0 ug/L	2.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Bromoform	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
1,1,2,2-Tetrachloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
1,3-Dichlorobenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
1,4-Dichlorobenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
1,2-Dichlorobenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 12:32	
Surrogate: Dibromofluoromethane	108 %			82-124	TKD	03/27/14 12:32	
Surrogate: 1,2-Dichloroethane-d4	108 %			78-129	TKD	03/27/14 12:32	
Surrogate: Toluene-d8	105 %			88-113	TKD	03/27/14 12:32	
Surrogate: 4-Bromofluorobenzene	99.5 %			72-142	TKD	03/27/14 12:32	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014

Page 4 of 38

Work Order: 1C40887

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
<b>1C40887-04</b>	EGP-1W			Matrix: Water		Collected: 03/14/14 09:12	
TEH, as gasoline	<0.2 mg/L	0.2	1XC0675	Iowa OA-2	EPP	03/25/14 13:34	
TEH, as #2 diesel fuel	<0.2 mg/L	0.2	1XC0675	Iowa OA-2	EPP	03/25/14 13:34	
TEH, as waste oil	<0.2 mg/L	0.2	1XC0675	Iowa OA-2	EPP	03/25/14 13:34	
Total Extractable Hydrocarbons	<0.2 mg/L	0.2	1XC0675	Iowa OA-2	EPP	03/25/14 13:34	
Surrogate: Pentacosane	110 %			50-151	EPP	03/25/14 13:34	
N-Nitrosodimethylamine	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Phenol	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Aniline	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Bis(2-Chloroethyl) Ether	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
2-Chlorophenol	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
1,3-Dichlorobenzene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
1,4-Dichlorobenzene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Benzyl Alcohol	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
1,2-Dichlorobenzene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
2-Methylphenol (o-Cresol)	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Bis[2-Chloroisopropyl]ether	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
n-Nitroso-di-n-propylamine	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
(3 & 4)-Methylphenol	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Hexachloroethane	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Nitrobenzene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Isophorone	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
2-Nitrophenol	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
2,4-Dimethylphenol	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Bis (2-Chloroethoxy) Methane	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
2,4-Dichlorophenol	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
1,2,4-Trichlorobenzene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Naphthalene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
4-Chloroaniline	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Hexachlorobutadiene	<33 ug/L	33	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
4-Chloro-3-methylphenol	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
2-Methylnaphthalene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Hexachlorocyclopentadiene	<33 ug/L	33	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
2,4,6-Trichlorophenol	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
2,4,5-Trichlorophenol	<82 ug/L	82	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
2-Chloronaphthalene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Dimethylphthalate	<25 ug/L	25	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
2-Nitroaniline	<82 ug/L	82	1XC0488	EPA 8270C	EPP	03/21/14 20:44	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014

Page 5 of 38

Work Order: 1C40887

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
<b>1C40887-04</b>	EGP-1W			Matrix: Water		Collected: 03/14/14 09:12	
Acenaphthylene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
2,6-Dinitrotoluene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
3-Nitroaniline	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Acenaphthene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
2,4-Dinitrophenol	<33 ug/L	33	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Dibenzofuran	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
2,4-Dinitrotoluene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
4-Nitrophenol	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Diethyl Phthalate	<49 ug/L	49	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Fluorene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
4-Chlorophenyl Phenyl Ether	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
4-Nitroaniline	<33 ug/L	33	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
4,6-Dinitro-2-methylphenol	<33 ug/L	33	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
N-Nitrosodiphenylamine	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Azobenzene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
4-Bromophenyl Phenyl Ether	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Hexachlorobenzene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Pentachlorophenol	<33 ug/L	33	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Phenanthrene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Anthracene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Di-n-butyl Phthalate	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Fluoranthene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Benzidine	<82 ug/L	82	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Pyrene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Butyl Benzyl Phthalate	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Benzo(a)anthracene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Chrysene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
<b>Bis(2-Ethylhexyl) Phthalate</b>	<b>27 ug/L</b>	<b>16</b>	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Di-n-octyl Phthalate	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Indeno(1,2,3-cd)Pyrene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
3,3'-Dichlorobenzidine	<33 ug/L	33	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Benzo(b)Fluoranthene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Benzo(k)Fluoranthene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Benzo(a)Pyrene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Dibenzo(a,h)anthracene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Benzo(g,h,i)perylene	<16 ug/L	16	1XC0488	EPA 8270C	EPP	03/21/14 20:44	
Surrogate: 2-Fluorophenol	63.7 %			23-99	EPP	03/21/14 20:44	
Surrogate: Phenol-d6	63.8 %			20-113	EPP	03/21/14 20:44	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014

Page 6 of 38

Work Order: 1C40887

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
<b>1C40887-04</b> EGP-1W				Matrix: Water		Collected: 03/14/14 09:12	
Surrogate: Nitrobenzene-d5	78.9 %			18-130	EPP	03/21/14 20:44	
Surrogate: 2-Fluorobiphenyl	69.0 %			17-120	EPP	03/21/14 20:44	
Surrogate: 2,4,6-Tribromophenol	121 %			36-153	EPP	03/21/14 20:44	
Surrogate: Terphenyl-d14	99.1 %			44-148	EPP	03/21/14 20:44	
<b>1C40887-05</b> EGP-2W				Matrix: Water		Collected: 03/14/14 10:27	
Chloromethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Vinyl Chloride	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Bromomethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Chloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
1,1-Dichloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Acetone	<10.0 ug/L	10.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Carbon Disulfide	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Methylene Chloride	<5.0 ug/L	5.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
trans-1,2-Dichloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Methyl-t-butyl Ether (MTBE)	<2.0 ug/L	2.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
1,1-Dichloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
cis-1,2-Dichloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
2-Butanone (MEK)	<5.0 ug/L	5.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Chloroform	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
1,1,1-Trichloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Carbon Tetrachloride	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Benzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
1,2-Dichloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Trichloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
1,2-Dichloropropane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Bromodichloromethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
cis-1,3-Dichloropropene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
4-Methyl-2-pentanone (MIBK)	<5.0 ug/L	5.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Toluene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
trans-1,3-Dichloropropene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
1,1,2-Trichloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Tetrachloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
2-Hexanone (MBK)	<5.0 ug/L	5.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Dibromochloromethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Chlorobenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Ethylbenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Xylenes, total	<2.0 ug/L	2.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014

Page 7 of 38

Work Order: 1C40887

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
<b>1C40887-05</b>	EGP-2W			Matrix: Water		Collected: 03/14/14 10:27	
Bromoform	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
1,1,2,2-Tetrachloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
1,3-Dichlorobenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
1,4-Dichlorobenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
1,2-Dichlorobenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:09	
Surrogate: Dibromofluoromethane	109 %			82-124	TKD	03/27/14 13:09	
Surrogate: 1,2-Dichloroethane-d4	110 %			78-129	TKD	03/27/14 13:09	
Surrogate: Toluene-d8	105 %			88-113	TKD	03/27/14 13:09	
Surrogate: 4-Bromofluorobenzene	99.3 %			72-142	TKD	03/27/14 13:09	
TEH, as gasoline	<0.2 mg/L	0.2	1XC0675	Iowa OA-2	EPP	03/25/14 14:23	
TEH, as #2 diesel fuel	<0.2 mg/L	0.2	1XC0675	Iowa OA-2	EPP	03/25/14 14:23	
TEH, as waste oil	<0.2 mg/L	0.2	1XC0675	Iowa OA-2	EPP	03/25/14 14:23	
Total Extractable Hydrocarbons	<0.2 mg/L	0.2	1XC0675	Iowa OA-2	EPP	03/25/14 14:23	
Surrogate: Pentacosane	111 %			50-151	EPP	03/25/14 14:23	
N-Nitrosodimethylamine	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Phenol	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Aniline	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Bis(2-Chloroethyl) Ether	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
2-Chlorophenol	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
1,3-Dichlorobenzene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
1,4-Dichlorobenzene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Benzyl Alcohol	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
1,2-Dichlorobenzene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
2-Methylphenol (o-Cresol)	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Bis[2-Chloroisopropyl]ether	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
n-Nitroso-di-n-propylamine	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
(3 & 4)-Methylphenol	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Hexachloroethane	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Nitrobenzene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Isophorone	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
2-Nitrophenol	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
2,4-Dimethylphenol	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Bis (2-Chloroethoxy) Methane	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
2,4-Dichlorophenol	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
1,2,4-Trichlorobenzene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Naphthalene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
4-Chloroaniline	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Hexachlorobutadiene	<34 ug/L	34	1XC0488	EPA 8270C	EPP	03/21/14 21:17	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014

Page 8 of 38

Work Order: 1C40887

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
<b>1C40887-05</b> EGP-2W				Matrix: Water		Collected: 03/14/14 10:27	
4-Chloro-3-methylphenol	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
2-Methylnaphthalene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Hexachlorocyclopentadiene	<34 ug/L	34	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
2,4,6-Trichlorophenol	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
2,4,5-Trichlorophenol	<84 ug/L	84	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
2-Chloronaphthalene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
2-Nitroaniline	<84 ug/L	84	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Dimethylphthalate	<25 ug/L	25	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Acenaphthylene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
2,6-Dinitrotoluene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
3-Nitroaniline	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Acenaphthene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
2,4-Dinitrophenol	<34 ug/L	34	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Dibenzofuran	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
2,4-Dinitrotoluene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
4-Nitrophenol	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Diethyl Phthalate	<51 ug/L	51	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Fluorene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
4-Chlorophenyl Phenyl Ether	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
4-Nitroaniline	<34 ug/L	34	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
4,6-Dinitro-2-methylphenol	<34 ug/L	34	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
N-Nitrosodiphenylamine	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Azobenzene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
4-Bromophenyl Phenyl Ether	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Hexachlorobenzene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Pentachlorophenol	<34 ug/L	34	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Phenanthrene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Anthracene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Di-n-butyl Phthalate	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Fluoranthene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Benzidine	<84 ug/L	84	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Pyrene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Butyl Benzyl Phthalate	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Benzo(a)anthracene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Chrysene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
<b>Bis(2-Ethylhexyl) Phthalate</b>	<b>41 ug/L</b>	<b>17</b>	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Di-n-octyl Phthalate	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014

Page 9 of 38

Work Order: 1C40887

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
<b>1C40887-05</b>	EGP-2W			Matrix: Water		Collected: 03/14/14 10:27	
Indeno(1,2,3-cd)Pyrene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
3,3'-Dichlorobenzidine	<34 ug/L	34	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Benzo(b)Fluoranthene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Benzo(k)Fluoranthene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Benzo(a)Pyrene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Dibenzo(a,h)anthracene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Benzo(g,h,i)perylene	<17 ug/L	17	1XC0488	EPA 8270C	EPP	03/21/14 21:17	
Surrogate: 2-Fluorophenol	64.2 %			23-99	EPP	03/21/14 21:17	
Surrogate: Phenol-d6	66.5 %			20-113	EPP	03/21/14 21:17	
Surrogate: Nitrobenzene-d5	66.4 %			18-130	EPP	03/21/14 21:17	
Surrogate: 2-Fluorobiphenyl	73.9 %			17-120	EPP	03/21/14 21:17	
Surrogate: 2,4,6-Tribromophenol	115 %			36-153	EPP	03/21/14 21:17	
Surrogate: Terphenyl-d14	105 %			44-148	EPP	03/21/14 21:17	
<b>1C40887-06</b>	EGP-3W			Matrix: Water		Collected: 03/14/14 11:15	
Chloromethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Vinyl Chloride	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Bromomethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Chloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
1,1-Dichloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Acetone	<10.0 ug/L	10.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Carbon Disulfide	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Methylene Chloride	<5.0 ug/L	5.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
trans-1,2-Dichloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Methyl-t-butyl Ether (MTBE)	<2.0 ug/L	2.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
1,1-Dichloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
cis-1,2-Dichloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
2-Butanone (MEK)	<5.0 ug/L	5.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
<b>Chloroform</b>	<b>1.2 ug/L</b>	<b>1.0</b>	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
1,1,1-Trichloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Carbon Tetrachloride	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Benzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
1,2-Dichloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Trichloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
1,2-Dichloropropane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Bromodichloromethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
cis-1,3-Dichloropropene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
4-Methyl-2-pentanone (MIBK)	<5.0 ug/L	5.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 10 of 38

Work Order: 1C40887

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
<b>1C40887-06</b>	EGP-3W			Matrix: Water		Collected: 03/14/14 11:15	
Toluene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
trans-1,3-Dichloropropene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
1,1,2-Trichloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Tetrachloroethylene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
2-Hexanone (MBK)	<5.0 ug/L	5.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Dibromochloromethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Chlorobenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Ethylbenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Xylenes, total	<2.0 ug/L	2.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Bromoform	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
1,1,2,2-Tetrachloroethane	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
1,3-Dichlorobenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
1,4-Dichlorobenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
1,2-Dichlorobenzene	<1.0 ug/L	1.0	1XC0921	EPA 8260B	TKD	03/27/14 13:46	
Surrogate: Dibromofluoromethane	107 %			82-124	TKD	03/27/14 13:46	
Surrogate: 1,2-Dichloroethane-d4	108 %			78-129	TKD	03/27/14 13:46	
Surrogate: Toluene-d8	104 %			88-113	TKD	03/27/14 13:46	
Surrogate: 4-Bromofluorobenzene	103 %			72-142	TKD	03/27/14 13:46	
TEH, as gasoline	<0.2 mg/L	0.2	1XC0675	Iowa OA-2	EPP	03/25/14 15:12	
TEH, as #2 diesel fuel	<0.2 mg/L	0.2	1XC0675	Iowa OA-2	EPP	03/25/14 15:12	
TEH, as waste oil	<0.2 mg/L	0.2	1XC0675	Iowa OA-2	EPP	03/25/14 15:12	
Total Extractable Hydrocarbons	<0.2 mg/L	0.2	1XC0675	Iowa OA-2	EPP	03/25/14 15:12	
Surrogate: Pentacosane	98.7 %			50-151	EPP	03/25/14 15:12	
N-Nitrosodimethylamine	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Phenol	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Aniline	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Bis(2-Chloroethyl) Ether	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
2-Chlorophenol	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
1,3-Dichlorobenzene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
1,4-Dichlorobenzene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Benzyl Alcohol	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
1,2-Dichlorobenzene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
2-Methylphenol (o-Cresol)	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Bis[2-Chloroisopropyl]ether	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
n-Nitroso-di-n-propylamine	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
(3 & 4)-Methylphenol	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Hexachloroethane	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Nitrobenzene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 11 of 38

Work Order: 1C40887

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1C40887-06 EGP-3W				Matrix: Water		Collected: 03/14/14 11:15	
Isophorone	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
2-Nitrophenol	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
2,4-Dimethylphenol	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Bis (2-Chloroethoxy) Methane	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
2,4-Dichlorophenol	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
1,2,4-Trichlorobenzene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Naphthalene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
4-Chloroaniline	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Hexachlorobutadiene	<35 ug/L	35	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
4-Chloro-3-methylphenol	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
2-Methylnaphthalene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Hexachlorocyclopentadiene	<35 ug/L	35	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
2,4,6-Trichlorophenol	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
2,4,5-Trichlorophenol	<89 ug/L	89	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
2-Chloronaphthalene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Dimethylphthalate	<27 ug/L	27	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
2-Nitroaniline	<89 ug/L	89	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Acenaphthylene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
2,6-Dinitrotoluene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
3-Nitroaniline	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Acenaphthene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
2,4-Dinitrophenol	<35 ug/L	35	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Dibenzofuran	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
2,4-Dinitrotoluene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
4-Nitrophenol	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Diethyl Phthalate	<53 ug/L	53	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Fluorene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
4-Chlorophenyl Phenyl Ether	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
4-Nitroaniline	<35 ug/L	35	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
4,6-Dinitro-2-methylphenol	<35 ug/L	35	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
N-Nitrosodiphenylamine	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Azobenzene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
4-Bromophenyl Phenyl Ether	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Hexachlorobenzene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Pentachlorophenol	<35 ug/L	35	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Phenanthrene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Anthracene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 12 of 38

Work Order: 1C40887

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
<b>1C40887-06</b>	EGP-3W			Matrix: Water		Collected: 03/14/14 11:15	
Di-n-butyl Phthalate	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Fluoranthene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Benzidine	<89 ug/L	89	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Pyrene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Butyl Benzyl Phthalate	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Benzo(a)anthracene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Chrysene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Bis(2-Ethylhexyl) Phthalate	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Di-n-octyl Phthalate	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Indeno(1,2,3-cd)Pyrene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
3,3'-Dichlorobenzidine	<35 ug/L	35	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Benzo(b)Fluoranthene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Benzo(k)Fluoranthene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Benzo(a)Pyrene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Dibenzo(a,h)anthracene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Benzo(g,h,i)perylene	<18 ug/L	18	1XC0488	EPA 8270C	EPP	03/21/14 21:50	
Surrogate: 2-Fluorophenol	60.4 %			23-99	EPP	03/21/14 21:50	
Surrogate: Phenol-d6	66.2 %			20-113	EPP	03/21/14 21:50	
Surrogate: Nitrobenzene-d5	73.9 %			18-130	EPP	03/21/14 21:50	
Surrogate: 2-Fluorobiphenyl	70.7 %			17-120	EPP	03/21/14 21:50	
Surrogate: 2,4,6-Tribromophenol	121 %			36-153	EPP	03/21/14 21:50	
Surrogate: Terphenyl-d14	90.2 %			44-148	EPP	03/21/14 21:50	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 13 of 38

Work Order: 1C40887

**Determination of Volatile Organic Compounds - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1XC0921 - EPA 5030B**

**Blank (1XC0921-BLK1)**

Prepared & Analyzed: 03/27/14

Surrogate: Dibromofluoromethane	54.9		ug/L	50.0000		110	82-124			
Surrogate: 1,2-Dichloroethane-d4	54.9		"	50.0000		110	78-129			
Surrogate: Toluene-d8	51.2		"	50.0000		102	88-113			
Surrogate: 4-Bromofluorobenzene	50.5		"	50.0000		101	72-142			
Chloromethane	ND	1.0	"							
Vinyl Chloride	ND	1.0	"							
Bromomethane	ND	1.0	"							
Chloroethane	ND	1.0	"							
1,1-Dichloroethylene	ND	1.0	"							
Acetone	ND	10.0	"							
Carbon Disulfide	ND	1.0	"							
Methylene Chloride	ND	5.0	"							
trans-1,2-Dichloroethylene	ND	1.0	"							
Methyl-t-butyl Ether (MTBE)	ND	2.0	"							
1,1-Dichloroethane	ND	1.0	"							
cis-1,2-Dichloroethylene	ND	1.0	"							
2-Butanone (MEK)	ND	5.0	"							
Chloroform	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Carbon Tetrachloride	ND	1.0	"							
Benzene	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
Trichloroethylene	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
cis-1,3-Dichloropropene	ND	1.0	"							
4-Methyl-2-pentanone (MIBK)	ND	5.0	"							
Toluene	ND	1.0	"							
trans-1,3-Dichloropropene	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
Tetrachloroethylene	ND	1.0	"							
2-Hexanone (MBK)	ND	5.0	"							
Dibromochloromethane	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	2.0	"							
Bromoform	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 14 of 38

Work Order: 1C40887

## Determination of Volatile Organic Compounds - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1XC0921 - EPA 5030B

##### Blank (1XC0921-BLK1)

Prepared & Analyzed: 03/27/14

1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	"
1,2-Dichlorobenzene	ND	1.0	"

##### LCS (1XC0921-BS1)

Prepared & Analyzed: 03/27/14

Surrogate: Dibromofluoromethane	54.2		ug/L	50.0000		108	82-124
Surrogate: 1,2-Dichloroethane-d4	55.1		"	50.0000		110	78-129
Surrogate: Toluene-d8	52.8		"	50.0000		106	88-113
Surrogate: 4-Bromofluorobenzene	52.0		"	50.0000		104	72-142
Chloromethane	113.8	1.0	"	99.5000		114	80-134
Vinyl Chloride	115.3	1.0	"	99.9000		115	85-143
Bromomethane	107.5	1.0	"	100.250		107	66-146
Chloroethane	117.5	1.0	"	99.7000		118	86-122
1,1-Dichloroethylene	56.89	1.0	"	50.0000		114	85-126
Acetone	105.7	10.0	"	105.200		100	41-151
Carbon Disulfide	121.2	1.0	"	105.600		115	80-117
Methylene Chloride	52.54	5.0	"	50.0000		105	83-118
trans-1,2-Dichloroethylene	54.89	1.0	"	50.0000		110	85-124
Methyl-t-butyl Ether (MTBE)	121.0	2.0	"	105.600		115	69-120
1,1-Dichloroethane	53.55	1.0	"	50.0000		107	83-122
cis-1,2-Dichloroethylene	53.77	1.0	"	50.0000		108	81-123
2-Butanone (MEK)	128.6	5.0	"	108.800		118	57-131
Chloroform	53.11	1.0	"	50.0000		106	83-121
1,1,1-Trichloroethane	55.01	1.0	"	50.0000		110	87-126
Carbon Tetrachloride	54.83	1.0	"	50.0000		110	86-130
Benzene	52.43	1.0	"	50.0000		105	84-121
1,2-Dichloroethane	51.75	1.0	"	50.0000		104	84-119
Trichloroethylene	52.82	1.0	"	50.0000		106	87-122
1,2-Dichloropropane	51.01	1.0	"	50.0000		102	86-123
Bromodichloromethane	52.48	1.0	"	50.0000		105	88-120
cis-1,3-Dichloropropene	53.64	1.0	"	50.0000		107	82-119
4-Methyl-2-pentanone (MIBK)	134.2	5.0	"	108.400		124	71-131
Toluene	52.07	1.0	"	50.0000		104	86-119
trans-1,3-Dichloropropene	54.76	1.0	"	50.0000		110	83-122
1,1,2-Trichloroethane	53.13	1.0	"	50.0000		106	84-118
Tetrachloroethylene	50.57	1.0	"	50.0000		101	88-124
2-Hexanone (MBK)	116.1	5.0	"	116.400		99.7	48-145
Dibromochloromethane	52.31	1.0	"	50.0000		105	87-120
Chlorobenzene	49.51	1.0	"	50.0000		99.0	87-119

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 15 of 38

Work Order: 1C40887

**Determination of Volatile Organic Compounds - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1XC0921 - EPA 5030B</b>										
<b>LCS (1XC0921-BS1)</b>				Prepared & Analyzed: 03/27/14						
Ethylbenzene	51.21	1.0	ug/L	50.0000		102	81-122			
Xylenes, total	150.5	2.0	"	150.000		100	82-118			
Bromoform	52.91	1.0	"	50.0000		106	82-124			
1,1,2,2-Tetrachloroethane	52.07	1.0	"	50.0000		104	75-130			
1,3-Dichlorobenzene	51.34	1.0	"	50.0000		103	80-122			
1,4-Dichlorobenzene	49.41	1.0	"	50.0000		98.8	82-119			
1,2-Dichlorobenzene	50.17	1.0	"	50.0000		100	82-124			
<b>Matrix Spike (1XC0921-MS1)</b>				Source: 1C40887-04		Prepared & Analyzed: 03/27/14				
Surrogate: Dibromofluoromethane	54.1		ug/L	50.0000		108	82-124			
Surrogate: 1,2-Dichloroethane-d4	55.1		"	50.0000		110	78-129			
Surrogate: Toluene-d8	52.8		"	50.0000		106	88-113			
Surrogate: 4-Bromofluorobenzene	51.5		"	50.0000		103	72-142			
Chloromethane	1125	10.0	"	995.000	ND	113	75-131			
Vinyl Chloride	1134	10.0	"	999.000	ND	113	81-140			
Bromomethane	1068	10.0	"	1002.50	ND	107	65-142			
Chloroethane	1155	10.0	"	997.000	ND	116	82-122			
1,1-Dichloroethylene	558.0	10.0	"	500.000	ND	112	82-126			
Acetone	1083	100	"	1052.00	ND	103	30-154			
Carbon Disulfide	1183	10.0	"	1056.00	ND	112	78-117			
Methylene Chloride	519.4	50.0	"	500.000	ND	104	79-121			
trans-1,2-Dichloroethylene	536.6	10.0	"	500.000	ND	107	82-125			
Methyl-t-butyl Ether (MTBE)	1222	20.0	"	1056.00	ND	116	72-122			
1,1-Dichloroethane	524.3	10.0	"	500.000	ND	105	80-123			
cis-1,2-Dichloroethylene	530.6	10.0	"	500.000	ND	106	79-127			
2-Butanone (MEK)	1322	50.0	"	1088.00	ND	121	45-143			
Chloroform	515.9	10.0	"	500.000	2.72	103	79-122			
1,1,1-Trichloroethane	545.5	10.0	"	500.000	ND	109	84-125			
Carbon Tetrachloride	543.3	10.0	"	500.000	ND	109	85-126			
Benzene	510.9	10.0	"	500.000	ND	102	82-125			
1,2-Dichloroethane	515.5	10.0	"	500.000	ND	103	83-122			
Trichloroethylene	509.9	10.0	"	500.000	ND	102	86-122			
1,2-Dichloropropane	506.1	10.0	"	500.000	ND	101	86-123			
Bromodichloromethane	511.7	10.0	"	500.000	ND	102	86-120			
cis-1,3-Dichloropropene	523.7	10.0	"	500.000	ND	105	86-121			
4-Methyl-2-pentanone (MIBK)	1357	50.0	"	1084.00	ND	125	70-136			
Toluene	503.4	10.0	"	500.000	ND	101	84-118			
trans-1,3-Dichloropropene	546.9	10.0	"	500.000	ND	109	86-118			
1,1,2-Trichloroethane	530.4	10.0	"	500.000	ND	106	84-119			

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 16 of 38

Work Order: 1C40887

## Determination of Volatile Organic Compounds - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1XC0921 - EPA 5030B

##### Matrix Spike (1XC0921-MS1)

Source: 1C40887-04

Prepared & Analyzed: 03/27/14

Tetrachloroethylene	495.9	10.0	ug/L	500.000	ND	99.2	87-123			
2-Hexanone (MBK)	1158	50.0	"	1164.00	ND	99.5	45-147			
Dibromochloromethane	519.3	10.0	"	500.000	ND	104	87-119			
Chlorobenzene	491.2	10.0	"	500.000	ND	98.2	88-116			
Ethylbenzene	506.1	10.0	"	500.000	ND	101	79-125			
Xylenes, total	1496	20.0	"	1500.00	ND	99.8	80-121			
Bromoform	535.1	10.0	"	500.000	ND	107	82-125			
1,1,2,2-Tetrachloroethane	520.3	10.0	"	500.000	ND	104	71-136			
1,3-Dichlorobenzene	496.8	10.0	"	500.000	ND	99.4	86-120			
1,4-Dichlorobenzene	479.8	10.0	"	500.000	ND	96.0	85-120			
1,2-Dichlorobenzene	495.9	10.0	"	500.000	ND	99.2	86-124			

##### Matrix Spike Dup (1XC0921-MSD1)

Source: 1C40887-04

Prepared & Analyzed: 03/27/14

Surrogate: Dibromofluoromethane	54.8		ug/L	50.0000		110	82-124			
Surrogate: 1,2-Dichloroethane-d4	55.4		"	50.0000		111	78-129			
Surrogate: Toluene-d8	52.9		"	50.0000		106	88-113			
Surrogate: 4-Bromofluorobenzene	51.2		"	50.0000		102	72-142			
Chloromethane	1142	10.0	"	995.000	ND	115	75-131	1.56	20	
Vinyl Chloride	1144	10.0	"	999.000	ND	115	81-140	0.957	14	
Bromomethane	1086	10.0	"	1002.50	ND	108	65-142	1.70	10	
Chloroethane	1172	10.0	"	997.000	ND	118	82-122	1.51	10	
1,1-Dichloroethylene	562.0	10.0	"	500.000	ND	112	82-126	0.714	11	
Acetone	1089	100	"	1052.00	ND	103	30-154	0.543	30	
Carbon Disulfide	1200	10.0	"	1056.00	ND	114	78-117	1.44	10	
Methylene Chloride	520.0	50.0	"	500.000	ND	104	79-121	0.115	10	
trans-1,2-Dichloroethylene	543.7	10.0	"	500.000	ND	109	82-125	1.31	10	
Methyl-t-butyl Ether (MTBE)	1215	20.0	"	1056.00	ND	115	72-122	0.616	10	
1,1-Dichloroethane	529.5	10.0	"	500.000	ND	106	80-123	0.987	10	
cis-1,2-Dichloroethylene	534.0	10.0	"	500.000	ND	107	79-127	0.639	13	
2-Butanone (MEK)	1281	50.0	"	1088.00	ND	118	45-143	3.11	17	
Chloroform	524.6	10.0	"	500.000	2.72	104	79-122	1.67	10	
1,1,1-Trichloroethane	546.4	10.0	"	500.000	ND	109	84-125	0.165	70	
Carbon Tetrachloride	546.8	10.0	"	500.000	ND	109	85-126	0.642	10	
Benzene	507.1	10.0	"	500.000	ND	101	82-125	0.747	10	
1,2-Dichloroethane	512.8	10.0	"	500.000	ND	103	83-122	0.525	10	
Trichloroethylene	506.5	10.0	"	500.000	ND	101	86-122	0.669	10	
1,2-Dichloropropane	502.3	10.0	"	500.000	ND	100	86-123	0.754	10	
Bromodichloromethane	513.5	10.0	"	500.000	ND	103	86-120	0.351	10	
cis-1,3-Dichloropropene	514.4	10.0	"	500.000	ND	103	86-121	1.79	10	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 17 of 38

Work Order: 1C40887

**Determination of Volatile Organic Compounds - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1XC0921 - EPA 5030B</b>										
<b>Matrix Spike Dup (1XC0921-MSD1)</b>	<b>Source: 1C40887-04</b>			<b>Prepared &amp; Analyzed: 03/27/14</b>						
4-Methyl-2-pentanone (MIBK)	1294	50.0	ug/L	1084.00	ND	119	70-136	4.77	10	
Toluene	505.3	10.0	"	500.000	ND	101	84-118	0.377	10	
trans-1,3-Dichloropropene	523.3	10.0	"	500.000	ND	105	86-118	4.41	10	
1,1,2-Trichloroethane	524.9	10.0	"	500.000	ND	105	84-119	1.04	10	
Tetrachloroethylene	487.0	10.0	"	500.000	ND	97.4	87-123	1.81	10	
2-Hexanone (MBK)	1130	50.0	"	1164.00	ND	97.1	45-147	2.41	13	
Dibromochloromethane	513.8	10.0	"	500.000	ND	103	87-119	1.06	10	
Chlorobenzene	486.8	10.0	"	500.000	ND	97.4	88-116	0.900	10	
Ethylbenzene	501.2	10.0	"	500.000	ND	100	79-125	0.973	10	
Xylenes, total	1494	20.0	"	1500.00	ND	99.6	80-121	0.174	10	
Bromoform	518.8	10.0	"	500.000	ND	104	82-125	3.09	10	
1,1,2,2-Tetrachloroethane	505.6	10.0	"	500.000	ND	101	71-136	2.87	19	
1,3-Dichlorobenzene	488.4	10.0	"	500.000	ND	97.7	86-120	1.71	11	
1,4-Dichlorobenzene	484.8	10.0	"	500.000	ND	97.0	85-120	1.04	11	
1,2-Dichlorobenzene	490.8	10.0	"	500.000	ND	98.2	86-124	1.03	10	

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL= Method Reporting Limit.*

Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 18 of 38

Work Order: 1C40887

## Determination of Volatile Petroleum Hydrocarbons - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1XC0576 - EPA 5030 Soil GC

##### Blank (1XC0576-BLK1)

Prepared & Analyzed: 03/18/14

Surrogate: Chlorobenzene	13.3		mg/kg	13.4000		99.6	60-134			
Benzene	ND	0.20	"							
Toluene	ND	0.20	"							
Ethylbenzene	ND	0.20	"							
Xylenes, total	ND	0.40	"							

##### LCS (1XC0576-BS1)

Prepared & Analyzed: 03/18/14

Surrogate: Chlorobenzene	13.8		mg/kg	13.4000		103	60-134			
Benzene	46.22	0.20	"	43.5550		106	64-127			
Toluene	43.29	0.20	"	42.1250		103	71-120			
Ethylbenzene	38.95	0.20	"	40.0600		97.2	69-118			
Xylenes, total	84.42	0.40	"	80.6500		105	70-120			

##### Matrix Spike (1XC0576-MS1)

Source: 1C40887-02

Prepared & Analyzed: 03/18/14

Surrogate: Chlorobenzene	13.1		mg/kg	13.2936		98.6	60-134			
Benzene	44.87	0.20	"	43.2093	ND	104	62-130			
Toluene	41.73	0.20	"	41.7907	ND	99.8	70-123			
Ethylbenzene	37.43	0.20	"	39.7421	ND	94.2	64-125			
Xylenes, total	80.95	0.40	"	80.0099	ND	101	62-130			

##### Matrix Spike Dup (1XC0576-MSD1)

Source: 1C40887-02

Prepared & Analyzed: 03/18/14

Surrogate: Chlorobenzene	12.9		mg/kg	13.2673		97.2	60-134			
Benzene	44.10	0.20	"	43.1238	ND	102	62-130	1.72	16	
Toluene	41.12	0.20	"	41.7079	ND	98.6	70-123	1.46	10	
Ethylbenzene	36.98	0.20	"	39.6634	ND	93.2	64-125	1.21	11	
Xylenes, total	79.98	0.40	"	79.8515	ND	100	62-130	1.21	11	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 19 of 38

Work Order: 1C40887

## Determination of Extractable Petroleum Hydrocarbons - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1XC0511 - 3545 OA-2 PFE</b>										
<b>Blank (1XC0511-BLK1)</b>				Prepared: 03/18/14 Analyzed: 03/19/14						
Surrogate: Pentacosane	2.16		mg/kg	2.48000		86.9	35-148			
TEH, as gasoline	ND	5	"							
TEH, as #2 diesel fuel	ND	5	"							
TEH, as waste oil	ND	5	"							
Total Extractable Hydrocarbons	ND	5	"							
<b>LCS (1XC0511-BS1)</b>				Prepared: 03/18/14 Analyzed: 03/19/14						
Surrogate: Pentacosane	3.19		mg/kg	2.48000		129	35-148			
TEH, as #2 diesel fuel	299.2	5	"	369.500		81.0	34-111			
<b>Matrix Spike (1XC0511-MS1)</b>				<b>Source: 1C40887-03</b>		Prepared: 03/18/14 Analyzed: 03/19/14				
Surrogate: Pentacosane	2.97		mg/kg	2.46032		121	35-148			
TEH, as #2 diesel fuel	274.0	5	"	366.568	32.3	65.9	19-118			
<b>Matrix Spike Dup (1XC0511-MSD1)</b>				<b>Source: 1C40887-03</b>		Prepared: 03/18/14 Analyzed: 03/19/14				
Surrogate: Pentacosane	2.56		mg/kg	2.44094		105	35-148			
TEH, as #2 diesel fuel	225.7	5	"	363.681	32.3	53.2	19-118	19.3	24	
<b>Reference (1XC0511-SRM1)</b>				Prepared: 03/18/14 Analyzed: 03/19/14						
Surrogate: Pentacosane	3.23		mg/kg	2.48000		130	35-148			
TEH, as #2 diesel fuel	368.6	5	"	369.500		99.8	70-130			
<b>Batch 1XC0675 - 3510C OA-2 Sep Fnl</b>										
<b>Blank (1XC0675-BLK1)</b>				Prepared & Analyzed: 03/21/14						
Surrogate: Pentacosane	0.0499		mg/L	0.0496000		101	50-151			
TEH, as gasoline	ND	0.1	"							
TEH, as #2 diesel fuel	ND	0.1	"							
TEH, as waste oil	ND	0.1	"							
Total Extractable Hydrocarbons	ND	0.1	"							

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 20 of 38

Work Order: 1C40887

**Determination of Extractable Petroleum Hydrocarbons - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1XC0675 - 3510C OA-2 Sep Fnl</b>										
<b>LCS (1XC0675-BS1)</b>				Prepared & Analyzed: 03/21/14						
Surrogate: Pentacosane	0.0574		mg/L	0.0496000		116	50-151			
TEH, as #2 diesel fuel	6.15	0.1	"	7.39000		83.3	57-111			
<b>LCS Dup (1XC0675-BSD1)</b>				Prepared & Analyzed: 03/21/14						
Surrogate: Pentacosane	0.0585		mg/L	0.0496000		118	50-151			
TEH, as #2 diesel fuel	6.07	0.1	"	7.39000		82.1	57-111	1.40	30	
<b>Reference (1XC0675-SRM1)</b>				Prepared & Analyzed: 03/21/14						
Surrogate: Pentacosane	0.0671		mg/L	0.0496000		135	50-151			
TEH, as #2 diesel fuel	8.11	0.1	"	7.39000		110	70-130			

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 21 of 38

Work Order: 1C40887

## Determination of Base/Neutral/Acid Extractable Compounds - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1XC0488 - 3520C BNA Cont Liq

##### Blank (1XC0488-BLK1)

Prepared: 03/17/14 Analyzed: 03/20/14

Surrogate: 2-Fluorophenol	58.7		ug/L	72.7200		80.7	23-99			
Surrogate: Phenol-d6	56.2		"	72.5200		77.5	20-113			
Surrogate: Nitrobenzene-d5	62.7		"	73.0000		85.9	18-130			
Surrogate: 2-Fluorobiphenyl	64.3		"	72.2000		89.0	17-120			
Surrogate: 2,4,6-Tribromophenol	122		"	72.7200		168	36-153			S-GC
Surrogate: Terphenyl-d14	71.3		"	72.8000		98.0	44-148			
N-Nitrosodimethylamine	ND	10	"							
Phenol	ND	10	"							
Aniline	ND	10	"							
Bis(2-Chloroethyl) Ether	ND	10	"							
2-Chlorophenol	ND	10	"							
1,3-Dichlorobenzene	ND	10	"							
1,4-Dichlorobenzene	ND	10	"							
Benzyl Alcohol	ND	10	"							
1,2-Dichlorobenzene	ND	10	"							
2-Methylphenol (o-Cresol)	ND	10	"							
Bis[2-Chloroisopropyl]ether	ND	10	"							
n-Nitroso-di-n-propylamine	ND	10	"							
(3 & 4)-Methylphenol	ND	10	"							
Hexachloroethane	ND	10	"							
Nitrobenzene	ND	10	"							
Isophorone	ND	10	"							
2-Nitrophenol	ND	10	"							
2,4-Dimethylphenol	ND	10	"							
Bis (2-Chloroethoxy) Methane	ND	10	"							
2,4-Dichlorophenol	ND	10	"							
1,2,4-Trichlorobenzene	ND	10	"							
Naphthalene	ND	10	"							
4-Chloroaniline	ND	10	"							
Hexachlorobutadiene	ND	20	"							
4-Chloro-3-methylphenol	ND	10	"							
2-Methylnaphthalene	ND	10	"							
Hexachlorocyclopentadiene	ND	20	"							
2,4,6-Trichlorophenol	ND	10	"							
2,4,5-Trichlorophenol	ND	50	"							
2-Chloronaphthalene	ND	10	"							
Dimethylphthalate	ND	15	"							
2-Nitroaniline	ND	50	"							

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 22 of 38

Work Order: 1C40887

## Determination of Base/Neutral/Acid Extractable Compounds - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1XC0488 - 3520C BNA Cont Liq

##### Blank (1XC0488-BLK1)

Prepared: 03/17/14 Analyzed: 03/20/14

Acenaphthylene	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	"
3-Nitroaniline	ND	10	"
Acenaphthene	ND	10	"
2,4-Dinitrophenol	ND	20	"
Dibenzofuran	ND	10	"
2,4-Dinitrotoluene	ND	10	"
4-Nitrophenol	ND	10	"
Diethyl Phthalate	ND	30	"
Fluorene	ND	10	"
4-Chlorophenyl Phenyl Ether	ND	10	"
4-Nitroaniline	ND	20	"
4,6-Dinitro-2-methylphenol	ND	20	"
N-Nitrosodiphenylamine	ND	10	"
Azobenzene	ND	10	"
4-Bromophenyl Phenyl Ether	ND	10	"
Hexachlorobenzene	ND	10	"
Pentachlorophenol	ND	20	"
Phenanthrene	ND	10	"
Anthracene	ND	10	"
Di-n-butyl Phthalate	ND	10	"
Fluoranthene	ND	10	"
Benzidine	ND	50	"
Pyrene	ND	10	"
Butyl Benzyl Phthalate	ND	10	"
Benzo(a)anthracene	ND	10	"
Chrysene	ND	10	"
Bis(2-Ethylhexyl) Phthalate	ND	10	"
Di-n-octyl Phthalate	ND	10	"
Indeno(1,2,3-cd)Pyrene	ND	10	"
3,3'-Dichlorobenzidine	ND	20	"
Benzo(b)Fluoranthene	ND	10	"
Benzo(k)Fluoranthene	ND	10	"
Benzo(a)Pyrene	ND	10	"
Dibenzo(a,h)anthracene	ND	10	"
Benzo(g,h,i)perylene	ND	10	"

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 23 of 38

Work Order: 1C40887

## Determination of Base/Neutral/Acid Extractable Compounds - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1XC0488 - 3520C BNA Cont Liq

#### LCS (1XC0488-BS1)

Prepared: 03/17/14 Analyzed: 03/20/14

Surrogate: 2-Fluorophenol	51.6		ug/L	72.7200		71.0	23-99			
Surrogate: Phenol-d6	53.1		"	72.5200		73.2	20-113			
Surrogate: Nitrobenzene-d5	59.9		"	73.0000		82.0	18-130			
Surrogate: 2-Fluorobiphenyl	58.2		"	72.2000		80.6	17-120			
Surrogate: 2,4,6-Tribromophenol	119		"	72.7200		164	36-153			S-GC
Surrogate: Terphenyl-d14	65.9		"	72.8000		90.5	44-148			
N-Nitrosodimethylamine	33.6	10	"	44.8000		75.0	18-128			
Phenol	32.9	10	"	44.8000		73.4	38-110			
Bis(2-Chloroethyl) Ether	31.7	10	"	44.8000		70.8	21-111			
2-Chlorophenol	37.4	10	"	44.8000		83.6	40-110			
1,3-Dichlorobenzene	27.0	10	"	44.8000		60.4	40-110			
1,4-Dichlorobenzene	26.4	10	"	44.8000		58.9	38-110			
Benzyl Alcohol	38.8	10	"	44.8000		86.6	22-115			
1,2-Dichlorobenzene	27.5	10	"	44.8000		61.3	41-110			
2-Methylphenol (o-Cresol)	33.2	10	"	44.8000		74.2	39-103			
Bis[2-Chloroisopropyl]ether	37.3	10	"	44.8000		83.2	36-110			
n-Nitroso-di-n-propylamine	37.5	10	"	44.8000		83.8	26-123			
(3 & 4)-Methylphenol	29.0	10	"	44.8000		64.8	40-110			
Hexachloroethane	30.7	10	"	44.8000		68.6	27-110			
Nitrobenzene	34.5	10	"	44.8000		77.1	25-114			
Isophorone	34.4	10	"	44.8000		76.9	36-115			
2-Nitrophenol	36.3	10	"	44.8000		81.0	37-111			
2,4-Dimethylphenol	22.2	10	"	44.8000		49.6	23-120			
Bis (2-Chloroethoxy) Methane	37.5	10	"	44.8000		83.7	28-113			
2,4-Dichlorophenol	39.5	10	"	44.8000		88.2	41-119			
1,2,4-Trichlorobenzene	28.5	10	"	44.8000		63.6	33-117			
Naphthalene	30.0	10	"	44.8000		66.9	20-122			
4-Chloroaniline	31.1	10	"	48.0750		64.7	14-110			
Hexachlorobutadiene	35.1	20	"	44.8000		78.3	23-139			
4-Chloro-3-methylphenol	42.3	10	"	44.8000		94.4	59-128			
2-Methylnaphthalene	34.4	10	"	44.8000		76.7	29-120			
Hexachlorocyclopentadiene	22.8	20	"	44.8000		51.0	19-110			
2,4,6-Trichlorophenol	44.3	10	"	44.8000		98.9	32-130			
2,4,5-Trichlorophenol	44.2	50	"	44.8000		98.6	39-130			
2-Chloronaphthalene	36.6	10	"	44.8000		81.6	27-117			
2-Nitroaniline	45.1	50	"	48.0900		93.8	36-128			
Dimethylphthalate	50.7	15	"	44.8000		113	46-129			
Acenaphthylene	38.9	10	"	44.8000		86.9	31-127			

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 24 of 38

Work Order: 1C40887

## Determination of Base/Neutral/Acid Extractable Compounds - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1XC0488 - 3520C BNA Cont Liq</b>										
<b>LCS (1XC0488-BS1)</b>				Prepared: 03/17/14 Analyzed: 03/20/14						
2,6-Dinitrotoluene	42.0	10	ug/L	44.8000		93.7	40-134			
3-Nitroaniline	43.6	10	"	48.1050		90.6	39-117			
Acenaphthene	38.4	10	"	44.8000		85.8	41-123			
2,4-Dinitrophenol	48.5	20	"	44.8000		108	58-126			
Dibenzofuran	45.9	10	"	44.8000		102	35-122			
2,4-Dinitrotoluene	52.1	10	"	44.8000		116	37-138			
4-Nitrophenol	67.5	10	"	44.8000		151	40-146			QS-02
Diethyl Phthalate	59.7	30	"	44.8000		133	35-155			
Fluorene	43.3	10	"	44.8000		96.6	41-137			
4-Chlorophenyl Phenyl Ether	52.0	10	"	44.8000		116	24-154			
4-Nitroaniline	48.2	20	"	48.0300		100	33-124			
4,6-Dinitro-2-methylphenol	39.8	20	"	44.8000		88.8	51-142			
N-Nitrosodiphenylamine	28.4	10	"	44.8000		63.4	46-124			
Azobenzene	33.8	10	"	48.0300		70.3	31-133			
4-Bromophenyl Phenyl Ether	46.6	10	"	44.8000		104	37-147			
Hexachlorobenzene	44.2	10	"	44.8000		98.7	23-154			
Pentachlorophenol	43.8	20	"	44.8000		97.7	54-146			
Phenanthrene	39.3	10	"	44.8000		87.8	44-131			
Anthracene	40.9	10	"	44.8000		91.4	44-131			
Di-n-butyl Phthalate	43.3	10	"	44.8000		96.7	56-134			
Fluoranthene	37.2	10	"	44.8000		83.0	49-138			
Pyrene	33.1	10	"	44.8000		73.9	46-137			
Butyl Benzyl Phthalate	41.8	10	"	44.8000		93.3	43-139			
Benzo(a)anthracene	37.0	10	"	44.7160		82.6	50-132			
Chrysene	38.9	10	"	44.8000		86.8	47-132			
Bis(2-Ethylhexyl) Phthalate	60.4	10	"	44.8000		135	60-156			
Di-n-octyl Phthalate	49.3	10	"	44.8000		110	39-168			
Indeno(1,2,3-cd)Pyrene	46.5	10	"	44.8000		104	35-169			
Benzo(b)Fluoranthene	48.6	10	"	44.8000		108	41-162			
Benzo(k)Fluoranthene	45.2	10	"	44.8000		101	28-180			
Benzo(a)Pyrene	41.3	10	"	44.8000		92.2	36-161			
Dibenzo(a,h)anthracene	44.0	10	"	44.8000		98.3	33-170			
Benzo(g,h,i)perylene	44.9	10	"	44.8000		100	19-176			

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 25 of 38

Work Order: 1C40887

## Determination of Base/Neutral/Acid Extractable Compounds - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1XC0488 - 3520C BNA Cont Liq</b>										
<b>LCS Dup (1XC0488-BSD1)</b>				Prepared: 03/17/14 Analyzed: 03/20/14						
Surrogate: 2-Fluorophenol	56.5		ug/L	72.7200		77.7	23-99			
Surrogate: Phenol-d6	54.8		"	72.5200		75.6	20-113			
Surrogate: Nitrobenzene-d5	66.6		"	73.0000		91.2	18-130			
Surrogate: 2-Fluorobiphenyl	58.2		"	72.2000		80.6	17-120			
Surrogate: 2,4,6-Tribromophenol	98.1		"	72.7200		135	36-153			
Surrogate: Terphenyl-d14	69.9		"	72.8000		96.0	44-148			
N-Nitrosodimethylamine	37.8	10	"	44.8000		84.3	18-128	11.6	30	
Phenol	34.4	10	"	44.8000		76.9	38-110	4.58	29	
Bis(2-Chloroethyl) Ether	36.3	10	"	44.8000		81.0	21-111	13.5	30	
2-Chlorophenol	40.0	10	"	44.8000		89.2	40-110	6.49	30	
1,3-Dichlorobenzene	36.9	10	"	44.8000		82.3	40-110	30.8	30	QR-02
1,4-Dichlorobenzene	40.1	10	"	44.8000		89.5	38-110	41.3	30	QR-02
Benzyl Alcohol	41.6	10	"	44.8000		92.9	22-115	7.06	27	
1,2-Dichlorobenzene	40.9	10	"	44.8000		91.2	41-110	39.2	30	QR-02
2-Methylphenol (o-Cresol)	34.3	10	"	44.8000		76.6	39-103	3.23	29	
Bis[2-Chloroisopropyl]ether	42.3	10	"	44.8000		94.3	36-110	12.5	30	
n-Nitroso-di-n-propylamine	43.9	10	"	44.8000		98.0	26-123	15.7	27	
(3 & 4)-Methylphenol	33.0	10	"	44.8000		73.7	40-110	12.8	30	
Hexachloroethane	44.6	10	"	44.8000		99.5	27-110	36.8	30	QR-02
Nitrobenzene	36.0	10	"	44.8000		80.4	25-114	4.20	30	
Isophorone	36.5	10	"	44.8000		81.6	36-115	5.95	30	
2-Nitrophenol	39.9	10	"	44.8000		89.1	37-111	9.50	30	
2,4-Dimethylphenol	24.3	10	"	44.8000		54.3	23-120	8.89	30	
Bis (2-Chloroethoxy) Methane	33.2	10	"	44.8000		74.1	28-113	12.2	30	
2,4-Dichlorophenol	40.0	10	"	44.8000		89.3	41-119	1.31	30	
1,2,4-Trichlorobenzene	38.4	10	"	44.8000		85.7	33-117	29.6	30	
Naphthalene	39.4	10	"	44.8000		88.0	20-122	27.3	30	
4-Chloroaniline	27.4	10	"	48.0750		57.1	14-110	12.5	30	
Hexachlorobutadiene	45.1	20	"	44.8000		101	23-139	25.0	30	
4-Chloro-3-methylphenol	41.4	10	"	44.8000		92.3	59-128	2.25	30	
2-Methylnaphthalene	36.8	10	"	44.8000		82.2	29-120	6.97	30	
Hexachlorocyclopentadiene	26.4	20	"	44.8000		58.9	19-110	14.5	30	
2,4,6-Trichlorophenol	39.7	10	"	44.8000		88.5	32-130	11.0	30	
2,4,5-Trichlorophenol	38.4	50	"	44.8000		85.6	39-130	14.1	30	
2-Chloronaphthalene	36.4	10	"	44.8000		81.2	27-117	0.521	30	
Dimethylphthalate	40.7	15	"	44.8000		90.9	46-129	21.9	30	
2-Nitroaniline	42.2	50	"	48.0900		87.8	36-128	6.57	30	
Acenaphthylene	32.2	10	"	44.8000		71.9	31-127	18.8	30	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 26 of 38

Work Order: 1C40887

## Determination of Base/Neutral/Acid Extractable Compounds - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1XC0488 - 3520C BNA Cont Liq</b>										
<b>LCS Dup (1XC0488-BSD1)</b>				Prepared: 03/17/14 Analyzed: 03/20/14						
2,6-Dinitrotoluene	38.8	10	ug/L	44.8000		86.6	40-134	7.82	30	
3-Nitroaniline	34.3	10	"	48.1050		71.3	39-117	23.9	30	
Acenaphthene	44.5	10	"	44.8000		99.4	41-123	14.7	30	
2,4-Dinitrophenol	45.4	20	"	44.8000		101	58-126	6.71	30	
Dibenzofuran	38.9	10	"	44.8000		86.8	35-122	16.5	30	
2,4-Dinitrotoluene	47.7	10	"	44.8000		106	37-138	8.94	30	
4-Nitrophenol	59.9	10	"	44.8000		134	40-146	11.8	30	
Diethyl Phthalate	55.7	30	"	44.8000		124	35-155	6.89	30	
Fluorene	41.6	10	"	44.8000		92.8	41-137	3.94	30	
4-Chlorophenyl Phenyl Ether	51.7	10	"	44.8000		115	24-154	0.521	30	
4-Nitroaniline	42.0	20	"	48.0300		87.4	33-124	13.9	30	
4,6-Dinitro-2-methylphenol	41.3	20	"	44.8000		92.2	51-142	3.70	24	
N-Nitrosodiphenylamine	36.0	10	"	44.8000		80.4	46-124	23.6	30	
Azobenzene	44.2	10	"	48.0300		92.0	31-133	26.7	30	
4-Bromophenyl Phenyl Ether	47.9	10	"	44.8000		107	37-147	2.84	28	
Hexachlorobenzene	53.3	10	"	44.8000		119	23-154	18.6	27	
Pentachlorophenol	49.4	20	"	44.8000		110	54-146	12.1	30	
Phenanthrene	42.9	10	"	44.8000		95.8	44-131	8.73	30	
Anthracene	39.0	10	"	44.8000		86.9	44-131	4.98	23	
Di-n-butyl Phthalate	51.5	10	"	44.8000		115	56-134	17.2	28	
Fluoranthene	41.7	10	"	44.8000		93.1	49-138	11.4	28	
Pyrene	37.4	10	"	44.8000		83.5	46-137	12.2	26	
Butyl Benzyl Phthalate	45.0	10	"	44.8000		100	43-139	7.28	30	
Benzo(a)anthracene	41.2	10	"	44.7160		92.2	50-132	10.9	28	
Chrysene	42.2	10	"	44.8000		94.3	47-132	8.23	27	
Bis(2-Ethylhexyl) Phthalate	49.4	10	"	44.8000		110	60-156	19.9	30	
Di-n-octyl Phthalate	43.3	10	"	44.8000		96.6	39-168	13.0	30	
Indeno(1,2,3-cd)Pyrene	44.5	10	"	44.8000		99.4	35-169	4.37	30	
Benzo(b)Fluoranthene	47.2	10	"	44.8000		105	41-162	2.93	30	
Benzo(k)Fluoranthene	42.1	10	"	44.8000		94.0	28-180	7.10	30	
Benzo(a)Pyrene	38.5	10	"	44.8000		86.0	36-161	6.94	30	
Dibenzo(a,h)anthracene	43.8	10	"	44.8000		97.8	33-170	0.569	30	
Benzo(g,h,i)perylene	39.3	10	"	44.8000		87.7	19-176	13.3	30	

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 27 of 38

Work Order: 1C40887

## Determination of Base/Neutral/Acid Extractable Compounds - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1XC0488 - 3520C BNA Cont Liq</b>										
<b>Reference (1XC0488-SRM1)</b>				Prepared: 03/17/14 Analyzed: 03/20/14						
Surrogate: 2-Fluorophenol	64.0		ug/L	72.7200		88.1	23-99			
Surrogate: Phenol-d6	61.8		"	72.5200		85.2	20-113			
Surrogate: 2,4,6-Tribromophenol	95.2		"	72.7200		131	36-153			
N-Nitrosodimethylamine	40.3	10	"	44.8000		90.0	70-130			
Phenol	36.1	10	"	44.8000		80.5	70-130			
Bis(2-Chloroethyl) Ether	35.5	10	"	44.8000		79.3	70-130			
2-Chlorophenol	45.8	10	"	44.8000		102	70-130			
2-Methylphenol (o-Cresol)	33.3	10	"	44.8000		74.2	70-130			
Bis[2-Chloroisopropyl]ether	44.9	10	"	44.8000		100	70-130			
n-Nitroso-di-n-propylamine	44.2	10	"	44.8000		98.7	70-130			
(3 & 4)-Methylphenol	36.6	10	"	44.8000		81.6	70-130			
2-Nitrophenol	46.0	10	"	44.8000		103	70-130			
2,4-Dimethylphenol	28.8	10	"	44.8000		64.3	70-130			QR-06
Bis (2-Chloroethoxy) Methane	41.6	10	"	44.8000		92.9	70-130			
2,4-Dichlorophenol	47.0	10	"	44.8000		105	70-130			
4-Chloro-3-methylphenol	54.7	10	"	44.8000		122	70-130			
2,4,6-Trichlorophenol	35.5	10	"	44.8000		79.2	70-130			
2,4,5-Trichlorophenol	34.8	50	"	44.8000		77.7	70-130			
Dimethylphthalate	39.8	15	"	44.8000		88.9	70-130			
2,4-Dinitrophenol	39.6	20	"	44.8000		88.5	70-130			
4-Nitrophenol	57.0	10	"	44.8000		127	70-130			
Diethyl Phthalate	47.4	30	"	44.8000		106	70-130			
4-Chlorophenyl Phenyl Ether	42.6	10	"	44.8000		95.2	70-130			
4,6-Dinitro-2-methylphenol	42.0	20	"	44.8000		93.7	70-130			
N-Nitrosodiphenylamine	36.2	10	"	44.8000		80.8	70-130			
4-Bromophenyl Phenyl Ether	46.4	10	"	44.8000		104	70-130			
Pentachlorophenol	48.9	20	"	44.8000		109	70-130			
Di-n-butyl Phthalate	45.1	10	"	44.8000		101	70-130			
Butyl Benzyl Phthalate	50.1	10	"	44.8000		112	70-130			
Bis(2-Ethylhexyl) Phthalate	45.7	10	"	44.8000		102	70-130			
Di-n-octyl Phthalate	42.7	10	"	44.8000		95.3	70-130			

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 28 of 38

Work Order: 1C40887

## Determination of Base/Neutral/Acid Extractable Compounds - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1XC0488 - 3520C BNA Cont Liq</b>										
<b>Reference (1XC0488-SRM2)</b>				Prepared: 03/17/14 Analyzed: 03/20/14						
Surrogate: Nitrobenzene-d5	81.3		ug/L	73.0000		111	18-130			
Surrogate: 2-Fluorobiphenyl	110		"	72.2000		152	17-120			S-GC
Surrogate: Terphenyl-d14	78.3		"	72.8000		108	44-148			
Aniline	49.7	10	"	48.0000		104	70-130			
1,3-Dichlorobenzene	45.2	10	"	44.8000		101	70-130			
1,4-Dichlorobenzene	45.9	10	"	44.8000		102	70-130			
Benzyl Alcohol	45.2	10	"	44.8000		101	70-130			
1,2-Dichlorobenzene	49.1	10	"	44.8000		110	70-130			
Hexachloroethane	50.6	10	"	44.8000		113	70-130			
Nitrobenzene	46.8	10	"	44.8000		104	70-130			
Isophorone	47.4	10	"	44.8000		106	70-130			
1,2,4-Trichlorobenzene	48.4	10	"	44.8000		108	70-130			
Naphthalene	59.4	10	"	44.8000		133	70-130			QR-06
4-Chloroaniline	63.6	10	"	48.0750		132	70-130			QR-06
Hexachlorobutadiene	57.7	20	"	44.8000		129	70-130			
2-Methylnaphthalene	49.1	10	"	44.8000		110	70-130			
Hexachlorocyclopentadiene	60.2	20	"	44.8000		134	70-130			QR-06
2-Chloronaphthalene	49.6	10	"	44.8000		111	70-130			
2-Nitroaniline	56.3	50	"	48.0900		117	70-130			
Acenaphthylene	57.8	10	"	44.8000		129	70-130			
2,6-Dinitrotoluene	49.2	10	"	44.8000		110	70-130			
3-Nitroaniline	52.8	10	"	48.1050		110	70-130			
Acenaphthene	53.3	10	"	44.8000		119	70-130			
Dibenzofuran	49.5	10	"	44.8000		111	70-130			
2,4-Dinitrotoluene	56.3	10	"	44.8000		126	70-130			
Fluorene	54.0	10	"	44.8000		121	70-130			
4-Nitroaniline	51.4	20	"	48.0300		107	70-130			
Azobenzene	51.5	10	"	48.0300		107	70-130			
Hexachlorobenzene	62.8	10	"	44.8000		140	70-130			QR-06
Phenanthrene	49.2	10	"	44.8000		110	70-130			
Anthracene	51.7	10	"	44.8000		115	70-130			
Fluoranthene	47.9	10	"	44.8000		107	70-130			
Pyrene	40.8	10	"	44.8000		91.1	70-130			
Benzo(a)anthracene	50.1	10	"	44.7160		112	70-130			
Chrysene	51.5	10	"	44.8000		115	70-130			
Indeno(1,2,3-cd)Pyrene	50.3	10	"	44.8000		112	70-130			
Benzo(b)Fluoranthene	46.6	10	"	44.8000		104	70-130			
Benzo(k)Fluoranthene	45.2	10	"	44.8000		101	70-130			

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 29 of 38

Work Order: 1C40887

## Determination of Base/Neutral/Acid Extractable Compounds - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1XC0488 - 3520C BNA Cont Liq

##### Reference (1XC0488-SRM2)

Prepared: 03/17/14 Analyzed: 03/20/14

Benzo(a)Pyrene	47.2	10	ug/L	44.8000		105	70-130			
Dibenzo(a,h)anthracene	48.7	10	"	44.8000		109	70-130			
Benzo(g,h,i)perylene	43.7	10	"	44.8000		97.5	70-130			

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 30 of 38

Work Order: 1C40887

**Determination of Conventional Chemistry Parameters - Quality Control**  
**Keystone Laboratories, Inc. - Newton**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1XC0486 - Wet Chem Preparation**

Duplicate (1XC0486-DUP1)		Source: 1C40905-08		Prepared & Analyzed: 03/17/14				
% Solids	2.2	0.1	%		2.2		0.917	20

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 31 of 38

Work Order: 1C40887

## Determination of Total Metals - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1XC0484 - EPA 7471A Hg Solid

**Blank (1XC0484-BLK1)** Prepared: 03/17/14 Analyzed: 03/18/14

Mercury, total	ND	0.25	mg/kg wet							
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**LCS (1XC0484-BS1)** Prepared: 03/17/14 Analyzed: 03/18/14

Mercury, total	1.13	0.25	mg/kg wet	1.00000		113	73-127			
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**Matrix Spike (1XC0484-MS1)** Source: 1C40474-01 Prepared: 03/17/14 Analyzed: 03/18/14

Mercury, total	11.5	2.4	mg/kg dry	9.41037	ND	122	57-139			
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**Matrix Spike Dup (1XC0484-MSD1)** Source: 1C40474-01 Prepared: 03/17/14 Analyzed: 03/18/14

Mercury, total	11.0	2.3	mg/kg dry	9.38592	ND	117	57-139	4.18	20	
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#### Batch 1XC0613 - EPA 3050B Digestion (Soil)

**Blank (1XC0613-BLK1)** Prepared & Analyzed: 03/20/14

Arsenic, total	ND	0.05	mg/kg wet							
Barium, total	ND	0.01	"							
Cadmium, total	ND	0.01	"							
Chromium, total	ND	0.03	"							
Lead, total	ND	0.05	"							
Selenium, total	ND	0.03	"							
Silver, total	ND	0.01	"							

**LCS (1XC0613-BS1)** Prepared & Analyzed: 03/20/14

Arsenic, total	1.0	0.05	mg/kg wet	1.00000		99.7	80-120			
Barium, total	1.03	0.01	"	1.00000		103	80-120			
Cadmium, total	1.0	0.01	"	1.00000		99.0	80-120			
Chromium, total	1.0	0.03	"	1.00000		101	80-120			
Lead, total	1.0	0.05	"	1.00000		98.8	80-120			
Selenium, total	1.0	0.03	"	1.00000		98.1	80-120			
Silver, total	1.0	0.01	"	1.00000		101	80-120			

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 32 of 38

Work Order: 1C40887

## Determination of Total Metals - Quality Control

### Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1XC0613 - EPA 3050B Digestion (Soil)

**Matrix Spike (1XC0613-MS1)** Source: 1C41033-01 Prepared & Analyzed: 03/20/14

Arsenic, total	96.4	5.0	mg/kg dry	95.5696	9.3	91.1	75-125			
Barium, total	133	1.00	"	95.5696	38.6	98.4	75-125			
Cadmium, total	87.3	1.0	"	95.5696	1.9	89.4	75-125			
Chromium, total	88.7	3.0	"	95.5696	3.5	89.1	75-125			
Lead, total	83.9	5.0	"	95.5696	4.2	83.5	75-125			
Selenium, total	85.0	3.0	"	95.5696	ND	89.0	75-125			
Silver, total	89.8	1.0	"	95.5696	ND	94.0	75-125			

**Matrix Spike Dup (1XC0613-MSD1)** Source: 1C41033-01 Prepared & Analyzed: 03/20/14

Arsenic, total	105	5.0	mg/kg dry	96.2795	9.3	99.4	75-125	8.69	20	
Barium, total	149	1.00	"	96.2795	38.6	115	75-125	15.2	20	
Cadmium, total	96.7	1.0	"	96.2795	1.9	98.5	75-125	9.70	20	
Chromium, total	96.3	3.0	"	96.2795	3.5	96.4	75-125	7.90	20	
Lead, total	89.2	5.0	"	96.2795	4.2	88.3	75-125	5.69	20	
Selenium, total	95.3	3.0	"	96.2795	ND	99.0	75-125	10.7	20	
Silver, total	101	1.0	"	96.2795	ND	105	75-125	11.2	20	

**Post Spike (1XC0613-PS1)** Source: 1C41033-01 Prepared & Analyzed: 03/20/14

Arsenic, total	1.2		mg/kg dry	1.00000	0.1	104	80-120			
Barium, total	1.48		"	1.00000	0.55	92.9	80-120			
Cadmium, total	1.0		"	1.00000	0.03	101	80-120			
Chromium, total	1.0		"	1.00000	0.05	92.2	80-120			
Lead, total	0.9		"	1.00000	0.06	87.7	80-120			
Selenium, total	1.0		"	1.00000	-0.04	103	80-120			
Silver, total	1.1		"	1.00000	-0.006	110	80-120			

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 33 of 38

Work Order: 1C40887

## Certified Analyses included in this Report

Method/Matrix	Analyte	Certifications
<b>EPA 6010B in Soil</b>		
	Arsenic, total	NELAC, SIA1X, KS-NT
	Barium, total	NELAC, SIA1X, KS-NT
	Cadmium, total	NELAC, SIA1X, KS-NT
	Chromium, total	NELAC, SIA1X, KS-NT
	Lead, total	NELAC, SIA1X, KS-NT
	Selenium, total	NELAC, SIA1X, KS-NT
	Silver, total	NELAC, SIA1X, KS-NT
<b>EPA 7471A in Soil</b>		
	Mercury, total	KS-NT, NELAC, SIA1X
<b>EPA 8260B in Water</b>		
	Chloromethane	KS-NT, NELAC, SIA1X
	Vinyl Chloride	KS-NT, NELAC, SIA1X
	Bromomethane	KS-NT, NELAC, SIA1X
	Chloroethane	KS-NT, NELAC, SIA1X
	1,1-Dichloroethylene	KS-NT, NELAC, SIA1X
	Acetone	KS-NT, NELAC, SIA1X
	Carbon Disulfide	KS-NT, NELAC, SIA1X
	Methylene Chloride	KS-NT, NELAC, SIA1X
	trans-1,2-Dichloroethylene	KS-NT, NELAC, SIA1X
	Methyl-t-butyl Ether (MTBE)	KS-NT, NELAC, SIA1X
	1,1-Dichloroethane	KS-NT, NELAC, SIA1X
	cis-1,2-Dichloroethylene	SIA1X
	2-Butanone (MEK)	KS-NT, NELAC, SIA1X
	Chloroform	KS-NT, NELAC, SIA1X
	1,1,1-Trichloroethane	KS-NT, NELAC, SIA1X
	Carbon Tetrachloride	KS-NT, NELAC, SIA1X
	Benzene	KS-NT, NELAC, SIA1X
	1,2-Dichloroethane	KS-NT, NELAC, SIA1X
	Trichloroethylene	KS-NT, NELAC, SIA1X
	1,2-Dichloropropane	KS-NT, NELAC, SIA1X
	Bromodichloromethane	KS-NT, NELAC, SIA1X
	cis-1,3-Dichloropropene	KS-NT, NELAC, SIA1X
	4-Methyl-2-pentanone (MIBK)	KS-NT, NELAC, SIA1X

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 34 of 38

Work Order: 1C40887

Toluene	KS-NT,NELAC,SIA1X
trans-1,3-Dichloropropene	KS-NT,NELAC,SIA1X
1,1,2-Trichloroethane	KS-NT,NELAC,SIA1X
Tetrachloroethylene	KS-NT,NELAC,SIA1X
2-Hexanone (MBK)	KS-NT,NELAC,SIA1X
Dibromochloromethane	KS-NT,NELAC,SIA1X
Chlorobenzene	KS-NT,NELAC,SIA1X
Ethylbenzene	KS-NT,NELAC,SIA1X
Xylenes, total	KS-NT,NELAC,SIA1X
Bromoform	KS-NT,NELAC,SIA1X
1,1,2,2-Tetrachloroethane	KS-NT,NELAC,SIA1X
1,3-Dichlorobenzene	KS-NT,NELAC,SIA1X
1,4-Dichlorobenzene	KS-NT,NELAC,SIA1X
1,2-Dichlorobenzene	KS-NT,NELAC,SIA1X
Naphthalene	KS-NT,NELAC

**EPA 8270C in Water**

N-Nitrosodimethylamine	SIA1X
Phenol	KS-NT,NELAC,SIA1X
Bis(2-Chloroethyl) Ether	SIA1X
2-Chlorophenol	KS-NT,NELAC,SIA1X
1,3-Dichlorobenzene	SIA1X
1,4-Dichlorobenzene	KS-NT,NELAC,SIA1X
Benzyl Alcohol	SIA1X
1,2-Dichlorobenzene	SIA1X
2-Methylphenol (o-Cresol)	KS-NT,NELAC,SIA1X
Bis[2-Chloroisopropyl]ether	KS-NT,NELAC,SIA1X
n-Nitroso-di-n-propylamine	SIA1X
(3 & 4)-Methylphenol	KS-NT,NELAC,SIA1X
Hexachloroethane	KS-NT,NELAC,SIA1X
Nitrobenzene	KS-NT,NELAC,SIA1X
Isophorone	KS-NT,NELAC,SIA1X
2-Nitrophenol	KS-NT,NELAC,SIA1X
2,4-Dimethylphenol	KS-NT,NELAC,SIA1X
Bis (2-Chloroethoxy) Methane	KS-NT,NELAC,SIA1X
2,4-Dichlorophenol	KS-NT,NELAC,SIA1X
1,2,4-Trichlorobenzene	KS-NT,NELAC,SIA1X
Naphthalene	KS-NT,NELAC,SIA1X

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 35 of 38

Work Order: 1C40887

4-Chloroaniline	KS-NT,NELAC,SIA1X
Hexachlorobutadiene	KS-NT,NELAC
4-Chloro-3-methylphenol	KS-NT,NELAC,SIA1X
2-Methylnaphthalene	KS-NT,NELAC,SIA1X
Hexachlorocyclopentadiene	KS-NT,NELAC,SIA1X
2,4,6-Trichlorophenol	KS-NT,NELAC,SIA1X
2,4,5-Trichlorophenol	KS-NT,NELAC,SIA1X
2-Chloronaphthalene	KS-NT,NELAC,SIA1X
2-Nitroaniline	KS-NT,NELAC,SIA1X
Dimethylphthalate	KS-NT,NELAC,SIA1X
Acenaphthylene	KS-NT,NELAC,SIA1X
2,6-Dinitrotoluene	KS-NT,NELAC,SIA1X
3-Nitroaniline	SIA1X
Acenaphthene	KS-NT,NELAC,SIA1X
2,4-Dinitrophenol	KS-NT,NELAC,SIA1X
Dibenzofuran	KS-NT,NELAC,SIA1X
2,4-Dinitrotoluene	KS-NT,NELAC,SIA1X
4-Nitrophenol	KS-NT,NELAC,SIA1X
Diethyl Phthalate	KS-NT,NELAC,SIA1X
Fluorene	KS-NT,NELAC,SIA1X
4-Chlorophenyl Phenyl Ether	KS-NT,NELAC,SIA1X
4-Nitroaniline	SIA1X
4,6-Dinitro-2-methylphenol	KS-NT,NELAC,SIA1X
N-Nitrosodiphenylamine	KS-NT,NELAC
4-Bromophenyl Phenyl Ether	KS-NT,NELAC,SIA1X
Hexachlorobenzene	KS-NT,NELAC,SIA1X
Pentachlorophenol	KS-NT,NELAC
Phenanthrene	KS-NT,NELAC,SIA1X
Anthracene	KS-NT,NELAC,SIA1X
Di-n-butyl Phthalate	KS-NT,NELAC,SIA1X
Fluoranthene	KS-NT,NELAC,SIA1X
Pyrene	KS-NT,NELAC,SIA1X
Butyl Benzyl Phthalate	KS-NT,NELAC,SIA1X
Benzo(a)anthracene	KS-NT,NELAC,SIA1X
Chrysene	KS-NT,NELAC,SIA1X
Bis(2-Ethylhexyl) Phthalate	KS-NT,NELAC,SIA1X
Di-n-octyl Phthalate	KS-NT,NELAC,SIA1X

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 36 of 38

Work Order: 1C40887

Indeno(1,2,3-cd)Pyrene	KS-NT,NELAC,SIA1X
3,3'-Dichlorobenzidine	KS-NT,NELAC,SIA1X
Benzo(b)Fluoranthene	KS-NT,NELAC,SIA1X
Benzo(k)Fluoranthene	KS-NT,NELAC,SIA1X
Benzo(a)Pyrene	KS-NT,NELAC,SIA1X
Dibenzo(a,h)anthracene	KS-NT,NELAC,SIA1X
Benzo(g,h,i)perylene	KS-NT,NELAC,SIA1X

**Iowa OA-1 in Soil**

Benzene	SIA1X
Toluene	SIA1X
Ethylbenzene	SIA1X
Xylenes, total	SIA1X

**Iowa OA-2 in Soil**

Total Extractable Hydrocarbons	SIA1X
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**Iowa OA-2 in Water**

Total Extractable Hydrocarbons	SIA1X
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**OA-1 (GC/MS) in Water**

Methyl-t-butyl Ether (MTBE)	SIA1X
Benzene	SIA1X
Toluene	SIA1X
Ethylbenzene	SIA1X
Xylenes, total	SIA1X

**SM 2540 G in Soil**

% Solids	SIA1X
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Code	Description	Number	Expires
KS-KC	Kansas Department of Health and Environment-KC	E-10110	04/30/2014
KS-NT	Kansas Department of Health and Environment	E-10287	10/30/2014
MO-KC	Missouri Department of Natural Resources	140	04/30/2014
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2014
SIA1X	Iowa Department of Natural Resources	95	02/01/2014

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Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 37 of 38

Work Order: 1C40887

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#### Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QR-06 The reference standard was outside of established control limits.
- QS-02 The spike recovery for this QC sample exceeded established acceptance limits. However, all samples were below the reporting and/or regulatory limit so the data is acceptable.
- R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.
- S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

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End of Report

*Sue Thompson*

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Keystone Laboratories, Inc.

Sue Thompson  
Project Manager II

Allender Butzke Engineers, Inc.  
3660 109th Street  
Urbandale, IA 50322

March 28, 2014  
Page 38 of 38

Work Order: 1C40887

CHAIN OF CUSTODY RECORD							
<b>Keystone</b> LABORATORIES, INC. <input type="checkbox"/> 600 E. 17th St. S. <input type="checkbox"/> 3012 Ansbrough Ave. Newton, IA 50208 Phone: 641-792-8451 Fax: 641-792-7989 www.keystonelabs.com		<input type="checkbox"/> 1155 Adams, Suite 120 Kansas City, KS 66103 Phone: 913-321-7856 Fax: 913-321-7937					
PRINT OR TYPE INFORMATION BELOW SAMPLER: <u>Don Edds</u> SITE NAME: <u>E. Grand Parking</u> ADDRESS: <u>505 E. Grand Ave.</u> CITY/ST/ZIP: <u>Des Moines IA 50322</u> PHONE: <u>515 252-1885</u>		REPORT TO: NAME: <u>Don Edds</u> COMPANY NAME: <u>Allender Butzke</u> ADDRESS: <u>3660 109th Street</u> CITY/ST/ZIP: <u>Urbandale IA 50322</u> PHONE: <u>515 252-1885</u> FAX: <u>515 252-1888</u>					
BILL TO: NAME: <u>Same as Report</u> COMPANY NAME: <u></u> ADDRESS: <u></u> CITY/ST/ZIP: <u></u> PHONE: <u></u> Keystone Quote No.: <u></u>		ANALYSES REQUIRED LAB USE ONLY LABORATORY WORK ORDER NO. <u>1C40887</u> SAMPLE TEMPERATURE UPON RECEIPT: <u></u> °C SAMPLE CONDITION/COMMENTS: <u></u> LABORATORY SAMPLE NUMBER: <u>01</u> <u>02</u> <u>03</u> <u>04</u> <u>05</u> <u>06</u>					
CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED
EGP-1	3/14/14	9:08	Test Boring	2	soil	G	OA-1 OA-2 RCRA Metals Semi-VOCs VOCs
EGP-2		10:16	" "	2	"	"	"
EGP-3		11:03	" "	3	"	"	"
EGP-1W		9:19	Test Well	1	H <sub>2</sub> O	"	"
EGP-2W		10:27	" "	5	"	"	"
EGP-3W		11:15	" "	5	"	"	"
Relinquished by: (Signature) <u>Don Edds</u>		Date <u>3-17-14</u>	Received by: (Signature) <u>[Signature]</u>		Date <u>3-17-14</u>	Time <u>1:15</u>	
Relinquished by: (Signature) <u>[Signature]</u>		Date <u>3-17-14</u>	Received for Lab by: (Signature) <u>[Signature]</u>		Date <u>3-17-14</u>	Time <u>1:15</u>	
Remarks: <u>Email to Edds@abengineers.com</u>							
Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy							
FORM: CCR 7-97							

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