

LIMITIED SITE INVESTIGATION

**Crane Building
1440 Walnut Street
Des Moines, Iowa**

November 7, 2011
Terracon Project No. 08117101

Prepared for:
LWO Properties, LLC
St. Paul, Minnesota

Prepared by:
Terracon Consultants, Inc.
Des Moines, Iowa

Offices Nationwide
Employee-Owned

Established in 1965
terracon.com

Terracon

Geotechnical ■ Environmental ■ Construction Materials ■ Facilities



November 7, 2011

Mr. Larry Olson
LWO Properties, LLC
1600 University Avenue, Suite 212
St. Paul, Minnesota 55104

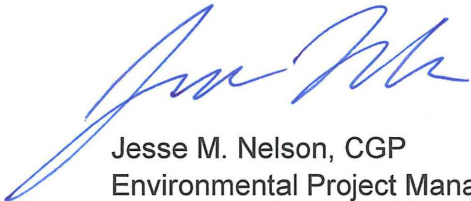
Re: Limited Site Investigation
Crane Building
1440 Walnut Street, Des Moines, Iowa
Terracon Project No. 08117101

Dear Mr. Olson:

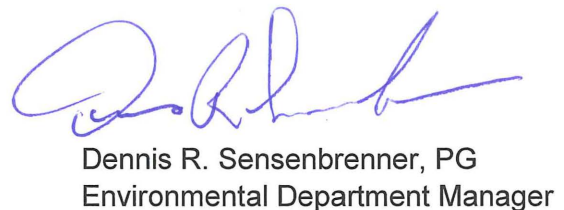
Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed Limited Site Investigation (LSI) report for the referenced site. Two copies of the LSI report are enclosed for your records. The LSI investigation was performed in accordance with Terracon's Proposal No. 08110623 dated October 11, 2011.

We appreciate the opportunity to perform these services for LWO Properties, LLC. Please contact either of the undersigned at (515) 244-3184 if you have questions or comments regarding the information provided in the report.

Sincerely,
Terracon Consultants, Inc.



Jesse M. Nelson, CGP
Environmental Project Manager



Dennis R. Sensenbrenner, PG
Environmental Department Manager

Enclosure

cc: Renie Neuberger, Neuberger Consulting, LLC, 2425 South 12th Street, West Des Moines, Iowa 50265



Terracon Consultants Inc, 600 SW Seventh St. Suite M Des Moines, IA 50309
P [515] 244-3184 F [515] 244-5249

Geotechnical



Environmental



Construction Materials



Facilities

TABLE OF CONTENTS

	Page No.
1.0 INTRODUCTION.....	1
2.0 FIELD ACTIVITIES	3
3.0 LABORATORY ANALYTICAL METHODS	6
4.0 DATA EVALUATION	6
5.0 FINDINGS AND CONCLUSIONS.....	8
6.0 RECOMMENDATIONS.....	8

LIST OF APPENDICES

- Appendix A: Figure 1 – Topographic Map
Figure 2 – Site Plan Map
Figure 3 – Boring Location Map
Figure 4 – Groundwater Flow Map
Appendix B: Boring Logs
Appendix C: Laboratory Data Sheets

LIMITED SITE INVESTIGATION

**Crane Building
1440 Walnut Street
Des Moines, Iowa**

**Terracon Project No. 08117101
November 7, 2011**

1.0 INTRODUCTION

1.1 Site Description

Site Name	Crane Building
Site Location/Address	1440 Walnut Street Des Moines, Iowa
General Site Description	Five story warehouse building with a below grade parking garage consisting of a reported 62,000 total square feet.

1.2 Scope of Work

Terracon Consultants, Inc. (Terracon) conducted an Environmental Site Assessment (ESA Report No. 08107728) dated August 11, 2011 at the Crane Building, 1440 Walnut Street, Des Moines, Iowa. The ESA Report identified the following recognized environmental conditions (REC) associated with this site:

- During the site reconnaissance, two ASTs were observed within the site building. Both tanks are approximately 500 gallons in size and were not in use. Staining was observed beneath the tank located in the basement and both tanks were rusted. Based on the size, age, and condition of the tanks and the confirmed staining, both tanks represent a REC for the subject site.
- Two hydraulic lifts were observed at the site. The basement has a lift system and the associated tanks were noted during reconnaissance. A second lift located on the fifth floor did not have tanks. Staining was not observed at the lifts, but based on age, lack of operation, and apparent lack of maintenance the basement lift represents a REC for the subject site.

- The historical use of the adjacent properties include residential dwellings, auto garages/auto repair facilities, screen printing, printing, hydraulic machinery sales/repair, photograph processing, rail yard, and commercial sales. Based on the types of hazardous materials associated with these types of facilities, unknown hazardous materials handling practices, and lack of regulation in the past, the historical use of the surrounding properties represents a REC to the subject site.

At the request of LWO Properties, LLC, the objective of the proposed LSI was to provide additional information regarding the potential presence of the elevated chemicals of concern in the on-site soils and groundwater as a result of the historical site and adjacent property operations. Terracon's LSI was conducted in accordance with Terracon's proposal (No. 08110623) dated October 11, 2011.

A topographic map is included as Figure 1, an area site plan based on a 2010 aerial photograph indicating the present configuration of the subject property is included as Figure 2, and a boring location map and groundwater flow map based the 2010 aerial photograph and field site sketch depicting the approximate location of the borings is included as Figure 3 and 4. These figures are included in Appendix A.

1.3 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either expressed or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These LSI services were performed in accordance with the scope of work agreed with you, our client, as reflected in our proposal and were not restricted by ASTM E1903-97.

1.4 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this LSI. Subsurface conditions may

vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

1.5 Reliance

This report has been prepared for the exclusive use of LWO Properties, LLC, any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of LWO Properties, LLC and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, LSI report, and Terracon's Terms and Conditions. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

2.0 FIELD ACTIVITIES

2.1 Borings and Monitoring Wells

Terracon's field activities were conducted on October 26, 2011 by Mr. Eric Brown, Terracon environmental professional. As part of the approved scope of work, borings were advanced adjacent to the basement AST and the basement hydraulic lift system. A third boring was advanced down gradient of the AST and lift borings. The three borings were converted to temporary monitoring wells to obtain groundwater samples. The borings/temporary monitoring wells were installed to define the impacts associated with the historical use of the site. The boring and temporary monitoring well placement was as follows:

- Boring B-1 was located adjacent to the basement AST.
- Boring B-2 was located adjacent to the basement hydraulic lift system.
- Boring B-3 was located down gradient of the basement AST and hydraulic lift system.

The approximate soil boring locations are illustrated on Figure 3 in Appendix A.

Drilling services were performed by a State of Iowa certified well contractor using direct push methods (Geoprobe) under the supervision of a Terracon environmental professional. Soil samples were collected using four foot core samplers and acetate liners in a continuous sampling procedure. Drilling equipment was cleaned using an Alconox[®] wash and potable water rinse prior to beginning the project and before beginning each soil boring. Sampling equipment

was also cleaned using an Alconox® wash and potable water rinse prior to beginning the project and before beginning each soil boring.

The soil borings were advanced to approximately 24 feet below ground surface (bgs) to collect soil samples and to intersect the groundwater level. Soil samples were collected continuously and observed to document soil lithology, color, moisture content, and sensory evidence of impairment.

The general soil lithology encountered during sample collection consisted of the following:

- Surface – Concrete was observed at all borings.
- Clay – Brown silty clay was observed at borings B-1 and B-3 from 0.5 feet to 2 feet bgs.
- Sand – All borings were observed to contain fine brown sand from 2 feet bgs to boring termination at 24 feet bgs.
- Gravel – Traces of gravel and/or pebbles were observed at boring B-1 from 2 feet to 20 feet bgs, at boring B-2 from 8 feet to 24 feet bgs, and at boring B-3 at 2 feet to 12 feet bgs and from 16 feet to 24 feet bgs.

Terracon field screened the soil samples for organic vapors using a photoionization detector (PID). This device provides a direct reading in parts per million (ppm) of volatile organic vapors. The PID is a nonspecific total vapor detector and cannot be used to identify unknown substances; it can only roughly quantify them. Terracon calibrated the PID in accordance with the manufacturer's recommendations before and after the field activities with 100 ppm isobutylene. Upon removal of the sampler from the borehole, Terracon cut a portion of each sample and sealed it in a clear plastic soil bag. After a stabilization period, Terracon screened the headspace above the soil using the PID equipped with a 10.6 eV lamp source. The boring logs located in Appendix B include the field screening results for each soil boring.

PID readings throughout the borings were observed to not exceed background levels.

The groundwater flow direction and the depth to shallow groundwater, if present, would likely vary depending upon seasonal variations in rainfall and depth to the soil/bedrock interface. The temporary monitoring wells were surveyed to an arbitrary bench mark set at the site. The groundwater flow direction beneath the site is estimated to the southwest based on the data obtained in the short term investigation. Figure 4 the Groundwater Flow Direction Map is included in Appendix A.

Subsequent to abandonment, the borings were converted to temporary monitoring wells. The temporary monitoring wells were completed using the following methodology:

- Installation of 10 feet of 1-inch diameter, 0.010-inch machine slotted PVC well screen with a threaded bottom cap.
- Installation of 15 feet of 1-inch diameter, threaded, flush joint PVC riser pipe to above ground surface
- Installation of sand filter pack above the top of screen and hydrated bentonite to ground surface

Well construction details are presented on the soil boring logs for these temporary monitoring wells and are included in Appendix B.

The temporary monitoring wells were developed by removing groundwater with a peristaltic pump and polyethylene tubing dedicated to each temporary monitoring well until the groundwater was relatively free of fine-grained sediment. Approximately 5 gallons of groundwater was removed from each temporary monitoring well during development activities. Prior to development and sampling, water level measurements were collected and ranged from 19.89 to 19.91 feet bgs.

Following completion of sampling activities, the borings were backfilled with a mixture of hydrated bentonite pellets and drill cuttings.

2.2 Soil and Groundwater Sampling

The soil and groundwater samples collected from the soil borings/temporary monitoring wells installed on-site for the LSI were analyzed for Volatile Organic Compounds (VOCs), Total Extractable Hydrocarbons (TEH) as diesel and waste oil, and Polychlorinated Biphenyls (PCB's). The following discusses the sampling program for the investigative borings.

Sample acquisition for VOCs, TEH, and PCBs analysis involved the collection of one soil sample from each soil boring at the interval of highest field screening or at the capillary fringe if field screening readings were below background readings. Soil samples were collected from 18-20 feet bgs at borings B-1 and B-3 and from 21-24 feet bgs at boring B-2. Due to the lack of PID readings above back ground levels throughout all borings, soil samples were collected from the capillary fringe as determined during drilling.

The soil sampling intervals are included on the lithologic boring logs included in Appendix B and on the chain-of-custody documents submitted to the Test America laboratory in Cedar Falls, Iowa which are included in Appendix C Laboratory Data Sheets.

Following development, the temporary monitoring wells were allowed to return to static conditions. Groundwater samples were collected from the temporary monitoring wells utilizing a

peristaltic pump and dedicated polyethylene tubing.

Soil and groundwater samples were collected in laboratory provided containers and placed on ice in a cooler that was secured with a custody seal. The sample cooler and completed chain-of-custody forms were relinquished to Test America, Inc. in Cedar Falls, Iowa for standard analysis turnaround.

3.0 LABORATORY ANALYTICAL METHODS

The soil samples collected from the borings were analyzed for Volatile Organic Compounds (VOCs) according to EPA Method 8260B, Total Extractable Hydrocarbons (TEH) as diesel and waste oil according to Iowa Method OA-2, and Polychlorinated Biphenyls (PCB's) according to EPA method 8082. The groundwater samples collected from the temporary monitoring wells were analyzed for Volatile Organic Compounds (VOCs) according to EPA Method 8260B, Total Extractable Hydrocarbons (TEH) as diesel and waste oil according to Iowa Method OA-2, and Polychlorinated Biphenyls (PCB's) according to EPA method 8082. The executed chain-of-custody forms and laboratory data sheets are provided in Appendix C.

4.0 DATA EVALUATION

4.1 Soil Samples

The soil samples collected from the borings exhibited field screening readings below background levels (0 ppm). Synopsis of the laboratory results are as follows:

- Concentrations above the laboratory detection limits were not reported at borings B-1 and B-3.
- Concentrations above the laboratory detection limits are reported at boring B-2 for TEH as waste oil.

Terracon compared the VOCs, TEH, and PCBs analytical results to the Iowa Department of Natural Resources Land Recycling Program Statewide Standards and Iowa Department of Natural Resources Underground Storage Tank Program: Risk Based Corrective Action (RBCA) Tier I "Look-up" Table Statewide Standards for soil. The State of Iowa applicable standards (Chapter's 135 & 137)¹ do not currently have a standard for TEH as waste oil for soil.

¹ Iowa Land Recycling Program (567 IAC 137), IDNR Risk Based Corrective Action (RBCA) Tier 1 (567 IAC 135.8)

The results of the analysis of the soil samples are summarized in Table 1. Concentrations not summarized above or in Table 1 were analyzed below laboratory method detection limits.

Table 1 – Laboratory Results for Soil Samples (mg/kg)

<u>Analysis</u>	<u>B-1</u>	<u>B-2</u>	<u>B-3</u>	<u>Iowa State Wide Standard (mg/kg)*</u>
<u>Total Extractable Hydrocarbons OA-2</u>				
Diesel	<MDL	<MDL	<MDL	3,800
Gasoline	<MDL	<MDL	<MDL	NA
Motor Oil	<MDL	32.1	<MDL	NA

*= Iowa UST RBCA Tier 1 Look-up Table State Standard

*=Iowa Land Recycling Program State Wide Standard

NA = Statewide Standard not established

< MDL= Analyte was not detected above the identified laboratory method detection limit

4.2 Groundwater Samples

Groundwater samples were collected from the temporary monitoring wells installed within the borings. Synopsis of the laboratory results are as follows:

- Concentrations above the laboratory detection limits were reported at borings B-1, B-2, and B-3 for Tetrachloroethene and Trichloroethene. However, the concentrations are below the applicable SWS.

Terracon compared the VOCs, TEH, and PCBs analytical results to the Iowa Department of Natural Resources Land Recycling Program Statewide Standards and Iowa Department of Natural Resources Underground Storage Tank Program: Risk Based Corrective Action (RBCA) Tier I "Look-up" Table Statewide Standards for groundwater.

The results of the analysis of the groundwater samples are summarized in Table 2. Concentrations not summarized above or in Table 2 were analyzed below laboratory method detection limits.

Table 2 – Laboratory Results for Groundwater Samples (mg/L)

Analysis	B-3	B-4	B-5	Iowa State Wide Standard (mg/L)* PGWS/NPGS
Volatile Organic Compounds 8260B				
Tetrachloroethene	0.00194	0.00250	0.00132	0.005/0.025
Trichloroethene	0.00268	0.00221	0.00209	0.005/0.025

*= Iowa UST RBCA Tier 1 Look-up Table State Standard

*=Iowa Land Recycling Program State Wide Standard

PGWS/NPGWS = Protected Groundwater Source/Non-Protected Groundwater Source

< MDL= Analyte was not detected above the identified laboratory method detection limit

5.0 FINDINGS AND CONCLUSIONS

The findings of this investigation are as follows:

- Concentrations of Volatile Organic Compounds (VOCs), Total Extractable Hydrocarbons (TEH) as diesel and waste oil, and Polychlorinated Biphenyls (PCB's) in soil were analyzed below laboratory detection limits and/or applicable SWS.
- Concentrations of TEH as diesel and waste oil and PCBs in groundwater were analyzed below laboratory detection limits and/or applicable SWS.
- Concentrations of VOCs in groundwater were analyzed above the laboratory detection limits, but below applicable SWS.

Concentrations of chemicals in the soil and groundwater were detected at concentrations below the State of Iowa Action levels. The client should understand the limitations of this data. Limited Site Investigations (LSI) are conducted to provide additional information regarding possible chemicals in the subsurface related to Recognized Environmental Conditions (developed in the Phase I ESA). Confirmation of chemical constituents in the subsurface through the LSI indicates chemicals of concern have been released in or around the site. Fate & transport of chemicals in the subsurface can vary significantly across a given site. Additional testing may be required to define the extent of the chemicals of concern in the subsurface.

6.0 RECOMMENDATIONS

The recommendations of this investigation are as follows:

- Terracon recommends consultation with an environmental attorney regarding potential reporting obligations and potential liability issues in connection with constituents detected in the on-site groundwater during this investigation. Should legal counsel recommend reporting the identification of chemicals of concern discovered during this LSI, it is possible that the IDNR may request some additional subsurface investigations of the potentially responsible party (present owner) to further characterize our findings both vertically and horizontally.
- If soils or groundwater located on the site are to be disturbed during future construction activities, proper procedures should be followed with respect to worker health and safety, and any affected soil or groundwater encountered should be properly characterized, treated and/or disposed in accordance with applicable local, state or federal regulations. Terracon recommends retaining an environmental professional to assist in managing these environmental issues should they be encountered during site redevelopment.

The environmental findings resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable, or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this investigation. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations, or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

APPENDIX A

Figure 1 – Topographic Map

Figure 2 – Site Plan Map

Figure 3 – Boring Location Map

Figure 4 – Groundwater Flow Map



LOCATION
OF SUBJECT
PROPERTY

FIGURE 1 – Topographic Map

Crane Building
1440 Walnut Street
Des Moines, Iowa

Terracon

600 SW 7th Street
Des Moines, Iowa 50309

08117101

Figure 1 –
Topo Map

Date 11/2/11

Drawn by: JMN

Des Moines SW
USGS Topographic Map
1965





**LOCATION
OF SUBJECT
PROPERTY**



2010 Aerial Photograph

FIGURE 2 – Site Plan Map

Crane Building
1440 Walnut Street
Des Moines, Iowa

	 600 SW 7th Street Des Moines, Iowa 50309	08117101
		Figure 2-Site Plan Map
Drawn by: JMN		Date 11/2/11

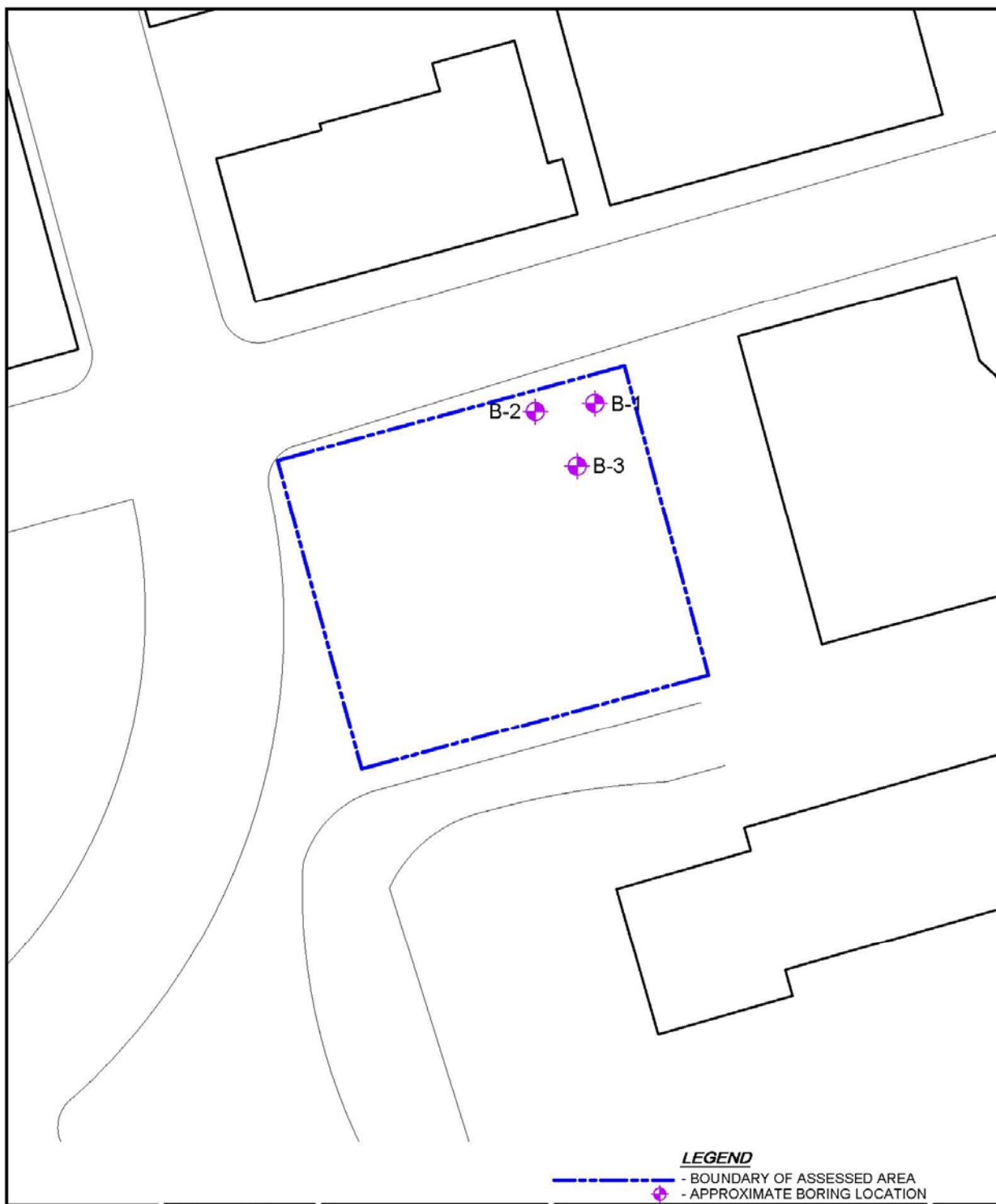


FIGURE 3 – Boring Location Map

Crane Building
1440 Walnut Street
Des Moines, Iowa

Terracon
600 SW 7th Street
Des Moines, Iowa 50309

08117101

Figure 3 – Boring
Location Map

Date 11/4/11

Drawn by: JMN

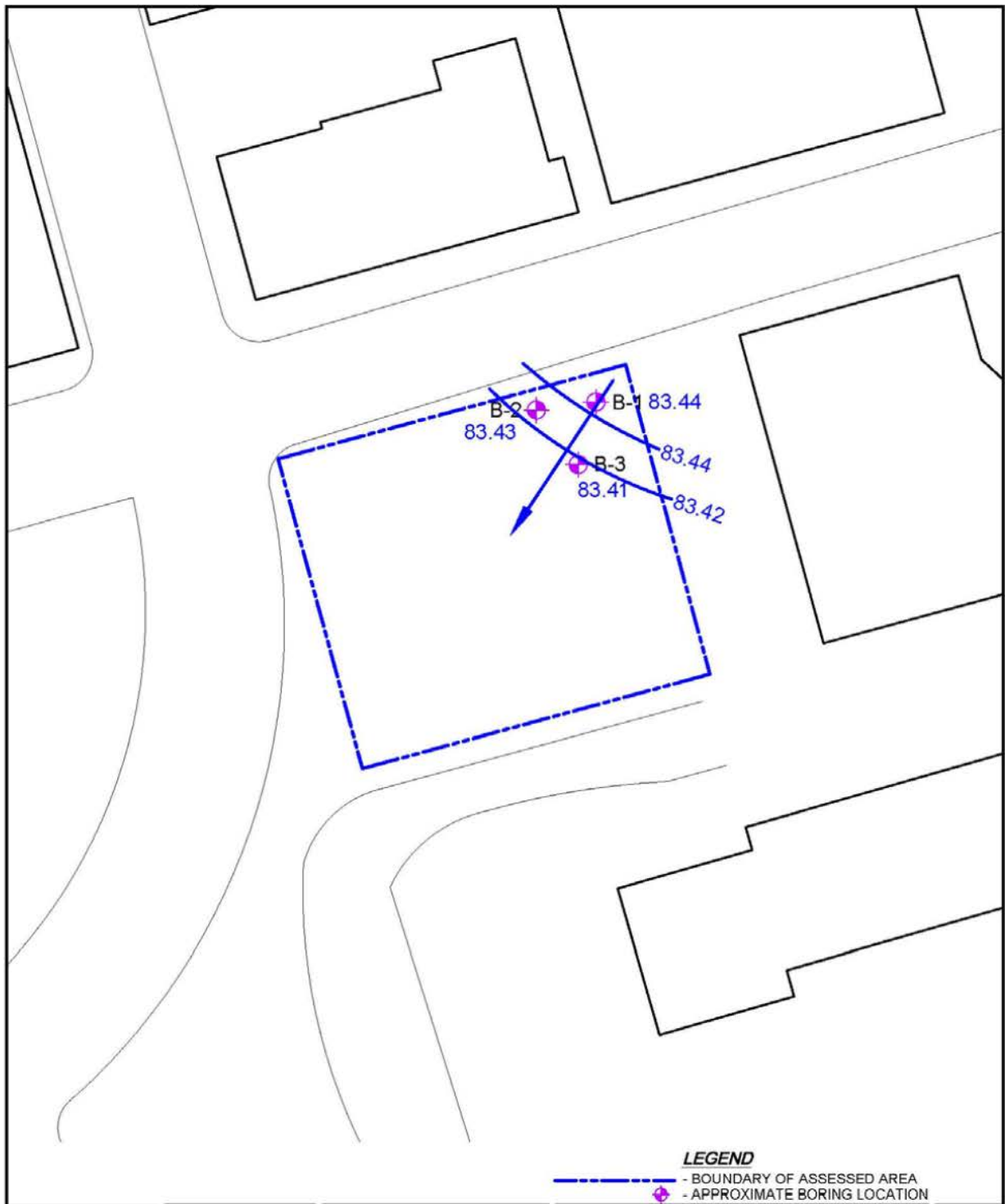


FIGURE 4 – Groundwater Flow Map

Crane Building
 1440 Walnut Street
 Des Moines, Iowa

	Terracon 600 SW 7th Street Des Moines, Iowa 50309	08117101
		Figure 4 – GW Flow Map
Drawn by: JMN		Date 11/4/11

APPENDIX B

Boring Logs

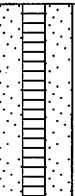
SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: B-1		Facility Name: Crane Building		Facility Street Address: 1440 Walnut Street, Des Moines, Iowa		
Boring Depth (ft) X Diameter (in): 24.0 x 2				Drilling Method: Geoprobe		
Well Contractor Name: Gary Everman				Logged by: Eric Brown		
Registration Number: 2396						
Ground Surface Elevation (ASL): 102.42			Top of Casing Elevation (ASL): 103.35			
Date: 10/26/2011		Date: 10/26/2011		UST Number:		
Start Time: 9:37 a.m.		End Time: 10:11 a.m.		LUST Number:		
Depth (feet)	Well Construction Details	Blow Count if applicable	Sample No.	Type*	PID / FID Reading	Rock Formations, Soil, Color and Classifications, Observations (moisture, odor, etc.) First column for USCS
			1	SS	0.0	Concrete at Surface
			2	SS	0.0	CL SILTY CLAY
			3	SS	0.0	ML Brown
			4	SS	0.0	SP FINE SAND, Trace
			5	SS	0.0	Gravel and Pebble
			6	SS	0.0	Seams
			7	SS	0.0	Brown
			8	SS	0.0	
			9	SS	0.0	
			10	SS	0.0	
			11	SS	0.0	
			12	SS	0.0	
			13	SS	0.0	
			14	SS	0.0	
			15	SS	0.0	
			16	SS	0.0	
			17	SS	0.0	
			18*	SS	0.0	
			19	SS	0.0	
			20	SS	0.0	

* SS (split spoon) HS (hollow stem auger) NOTE: USCS and soil classifications are based on visual observations by the field crew.

Observations	Date:	10/26/2011			
Water Level (ASL)	Level:	▽ 83.44			
Static Water Level Symbol	Time:	10:35 a.m.			

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: B-1		Facility Name: Crane Building		Facility Street Address: 1440 Walnut Street, Des Moines, Iowa		
Boring Depth (ft) X Diameter (in): 24.0 x 2				Drilling Method: Geoprobe		
Well Contractor Name: Gary Everman Registration Number: 2396				Logged by: Eric Brown		
Ground Surface Elevation (ASL): 102.42			Top of Casing Elevation (ASL): 103.35			
Date: 10/26/2011 Start Time: 9:37 a.m.		Date: 10/26/2011 End Time: 10:11 a.m.		UST Number: LUST Number:		
Depth (feet)	Well Construction Details	Blow Count if applicable	Sample No. Type*		PID / FID Reading	Rock Formations, Soil, Color and Classifications, Observations (moisture, odor, etc.) First column for USCS
			21	SS	0.0	SP FINE TO COARSE SAND , Trace Gravel Brown
			22	SS	0.0	
			23	SS	0.0	
			24	SS	0.0	
						BOTTOM OF BORING

* SS (split spoon) HS (hollow stem auger) NOTE: USCS and soil classifications are based on visual observations by the field crew.

Observations	Date:	10/26/2011				
Water Level (ASL)	Level:	83.44				
Static Water Level Symbol	Time:	10:35 a.m.				

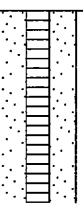
SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: B-2		Facility Name: Crane Building		Facility Street Address: 1440 Walnut Street, Des Moines, Iowa		
Boring Depth (ft) X Diameter (in): 24.0 x 2				Drilling Method: Geoprobe		
Well Contractor Name: Gary Everman				Logged by: Eric Brown		
Registration Number: 2396						
Ground Surface Elevation (ASL): 102.4			Top of Casing Elevation (ASL): 103.33			
Date: 10/26/2011		Date: 10/26/2011		UST Number:		
Start Time: 11:10 a.m.		End Time: 12:20 p.m.		LUST Number:		
Depth (feet)	Well Construction Details	Blow Count if applicable	Sample No.	Type*	PID / FID Reading	Rock Formations, Soil, Color and Classifications, Observations (moisture, odor, etc.) First column for USCS
			1	SS	0.0	Concrete at Surface
			2	SS	0.0	SM FINE SAND With Silt Seams Brown
			3	SS	0.0	
			4	SS	0.0	
			5	SS	0.0	SP FINE SAND Brown
			6	SS	0.0	
			7	SS	0.0	
			8	SS	0.0	
			9	SS	0.0	SP FINE SAND With Pebble Seams, Trace Gravel Brown
			10	SS	0.0	
			11	SS	0.0	
			12	SS	0.0	
			13	SS	0.0	
			14	SS	0.0	
			15	SS	0.0	
			16	SS	0.0	
			17	SS	0.0	
			18	SS	0.0	
			19	SS	0.0	
			20	SS	0.0	

* SS (split spoon) HS (hollow stem auger) NOTE: USCS and soil classifications are based on visual observations by the field crew.

Observations	Date:	10/26/2011			
Water Level (ASL)	Level:	▽ 83.43			
Static Water Level Symbol	Time:	12:40 p.m.			

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: B-2		Facility Name: Crane Building		Facility Street Address: 1440 Walnut Street, Des Moines, Iowa		
Boring Depth (ft) X Diameter (in): 24.0 x 2				Drilling Method: Geoprobe		
Well Contractor Name: Gary Everman				Logged by: Eric Brown		
Registration Number: 2396						
Ground Surface Elevation (ASL): 102.4			Top of Casing Elevation (ASL): 103.33			
Date: 10/26/2011		Date: 10/26/2011		UST Number:		
Start Time: 11:10 a.m.		End Time: 12:20 p.m.		LUST Number:		
Depth (feet)	Well Construction Details	Blow Count if applicable	Sample No.	Type*	PID / FID Reading	Rock Formations, Soil, Color and Classifications, Observations (moisture, odor, etc.) First column for USCS
			21*	SS	0.0	SP FINE TO COARSE SAND , Trace Pebbles Brown
			22	SS	0.0	
			23	SS	0.0	
			24	SS	0.0	
						BOTTOM OF BORING

* SS (split spoon) HS (hollow stem auger) NOTE: USCS and soil classifications are based on visual observations by the field crew.

Observations	Date:	10/26/2011			
Water Level (ASL)	Level:	▽ 83.43			
Static Water Level Symbol	Time:	12:40 p.m.			

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: B-3		Facility Name: Crane Building		Facility Street Address: 1440 Walnut Street, Des Moines, Iowa		
Boring Depth (ft) X Diameter (in): 24.0 x 2				Drilling Method: Geoprobe		
Well Contractor Name: Gary Everman				Logged by: Eric Brown		
Registration Number: 2396						
Ground Surface Elevation (ASL): 102.37			Top of Casing Elevation (ASL): 103.3			
Date: 10/26/2011		Date: 10/26/2011		UST Number:		
Start Time: 1:20 p.m.		End Time: 2:12 p.m.		LUST Number:		
Depth (feet)	Well Construction Details	Blow Count if applicable	Sample No.	Type*	PID / FID Reading	Rock Formations, Soil, Color and Classifications, Observations (moisture, odor, etc.) First column for USCS
			1	SS	0.0	Concrete at Surface
			2	SS	0.0	CL SILTY CLAY
			3	SS	0.0	ML Brown
			4	SS	0.0	SP FINE SAND, Trace
			5	SS	0.0	Gravel
			6	SS	0.0	Brown
			7	SS	0.0	
			8	SS	0.0	
			9	SS	0.0	SP FINE TO COARSE
			10	SS	0.0	SAND, Trace
			11	SS	0.0	Pebbles
			12	SS	0.0	Brown
			13	SS	0.0	
			14	SS	0.0	SP FINE SAND, Trace
			15	SS	0.0	Gravel
			16	SS	0.0	Brown
			17	SS	0.0	
			18*	SS	0.0	SP FINE SAND, Trace
			19	SS	0.0	Gravel
			20	SS	0.0	Brown

* SS (split spoon) HS (hollow stem auger) NOTE: USCS and soil classifications are based on visual observations by the field crew.

Observations	Date:	10/26/2011			
Water Level (ASL)	Level:	▽ 83.41			
Static Water Level Symbol	Time:	2:30 p.m.			

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: B-3		Facility Name: Crane Building		Facility Street Address: 1440 Walnut Street, Des Moines, Iowa		
Boring Depth (ft) X Diameter (in): 24.0 x 2				Drilling Method: Geoprobe		
Well Contractor Name: Gary Everman Registration Number: 2396				Logged by: Eric Brown		
Ground Surface Elevation (ASL): 102.37			Top of Casing Elevation (ASL): 103.3			
Date: 10/26/2011 Start Time: 1:20 p.m.		Date: 10/26/2011 End Time: 2:12 p.m.		UST Number: LUST Number:		
Depth (feet)	Well Construction Details	Blow Count if applicable	Sample No.	Type*	PID / FID Reading	Rock Formations, Soil, Color and Classifications, Observations (moisture, odor, etc.) First column for USCS
			21	SS	0.0	SP FINE TO COARSE SAND , Trace Gravel Brown
			22	SS	0.0	
			23	SS	0.0	
			24	SS	0.0	
						BOTTOM OF BORING

* SS (split spoon) HS (hollow stem auger) NOTE: USCS and soil classifications are based on visual observations by the field crew.

Observations	Date:	10/26/2011				
Water Level (ASL)	Level:	▽ 83.41				
Static Water Level Symbol	Time:	2:30 p.m.				

APPENDIX C

Laboratory Data Sheets

November 03, 2011

Client:

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309

Work Order: CUJ1751
Project Name: Crane
Project Number: 08117101

Attn: Jesse Nelson

Date Received: 10/27/11

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(800)750-2401

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
B-1 18-20'	CUJ1751-01	10/26/11 10:00
B-2 21-24'	CUJ1751-02	10/26/11 12:11
B-3 18-20'	CUJ1751-03	10/26/11 14:00
Trip Blank	CUJ1751-04	10/26/11
B-1	CUJ1751-05	10/26/11 10:45
B-2	CUJ1751-06	10/26/11 12:43
B-3	CUJ1751-07	10/26/11 14:34

Samples were received into laboratory at a temperature of 2.80 °C.

NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

Please refer to the Temperature and Sample Receipt form that is included with this report for additional information regarding the condition of samples at the time of receipt by the laboratory.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

Reproduction of this analytical report is permitted only in its entirety. This report shall not be reproduced except in full without the written approval of the laboratory.

TestAmerica Laboratories, Inc. certifies that the analytical results contained herein apply only to the specific sample analyzed.

Approved By:



TestAmerica Cedar Falls
Angela Muehling
Project Coordinator

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-01 (B-1 18-20' - Soil)				Sampled: 10/26/11 10:00			Recvd: 10/27/11 18:00		
General Chemistry Parameters									
% Solids	95.1		%	0.100	1	10/28/11 17:08	hnc	11J1535	SM 2540 G
Volatile Organic Compounds									
Acetone	<124	L1	ug/kg dry	124	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Acrylonitrile	<124		ug/kg dry	124	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Benzene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Bromobenzene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Bromochloromethane	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Bromodichloromethane	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Bromoform	<24.9		ug/kg dry	24.9	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Bromomethane	<49.8		ug/kg dry	49.8	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
2-Butanone (MEK)	<124		ug/kg dry	124	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
n-Butylbenzene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
sec-Butylbenzene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
tert-Butylbenzene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Carbon disulfide	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Carbon Tetrachloride	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Chlorobenzene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Chlorodibromomethane	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Chloroethane	<49.8		ug/kg dry	49.8	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Chloroform	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Chloromethane	<49.8		ug/kg dry	49.8	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
2-Chlorotoluene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
4-Chlorotoluene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
1,2-Dibromo-3-chloropropane	<124		ug/kg dry	124	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
1,2-Dibromoethane (EDB)	<124		ug/kg dry	124	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Dibromomethane	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
1,2-Dichlorobenzene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
1,3-Dichlorobenzene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
1,4-Dichlorobenzene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Dichlorodifluoromethane	<37.3		ug/kg dry	37.3	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
1,1-Dichloroethane	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
1,2-Dichloroethane	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
1,1-Dichloroethene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
cis-1,2-Dichloroethene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
trans-1,2-Dichloroethene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
1,2-Dichloropropane	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
1,3-Dichloropropane	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
2,2-Dichloropropane	<49.8		ug/kg dry	49.8	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
1,1-Dichloropropene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
cis-1,3-Dichloropropene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
trans-1,3-Dichloropropene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Ethylbenzene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Hexachlorobutadiene	<62.2		ug/kg dry	62.2	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-01 (B-1 18-20' - Soil) - cont.				Sampled: 10/26/11 10:00			Recvd: 10/27/11 18:00		
Volatile Organic Compounds - cont.									
Hexane	<62.2	L1	ug/kg dry	62.2	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Isopropylbenzene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
p-Isopropyltoluene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Methylene Chloride	<124		ug/kg dry	124	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Methyl tert-Butyl Ether	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Naphthalene	<62.2		ug/kg dry	62.2	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
n-Propylbenzene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Styrene	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
1,1,1,2-Tetrachloroethane	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
1,1,2,2-Tetrachloroethane	<12.4		ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B
Tetrachloroethene	<12.4	ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B	
Toluene	<12.4	ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B	
1,2,3-Trichlorobenzene	<62.2	ug/kg dry	62.2	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B	
1,2,4-Trichlorobenzene	<62.2	ug/kg dry	62.2	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B	
1,1,1-Trichloroethane	<12.4	ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B	
1,1,2-Trichloroethane	<12.4	ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B	
Trichloroethene	<12.4	ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B	
Trichlorofluoromethane	<49.8	ug/kg dry	49.8	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B	
1,2,3-Trichloropropane	<12.4	ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B	
1,2,4-Trimethylbenzene	<12.4	ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B	
1,3,5-Trimethylbenzene	<12.4	ug/kg dry	12.4	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B	
Vinyl chloride	<37.3	ug/kg dry	37.3	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B	
Xylenes, total	<37.3	ug/kg dry	37.3	2.37	10/31/11 23:06	ZTB	11K0099	SW 8260B	
Surr: Dibromofluoromethane (75-125%)	95 %								
Surr: Toluene-d8 (80-120%)	100 %								
Surr: 4-Bromofluorobenzene (80-120%)	99 %								
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	<11.8		mg/kg	11.8	1	10/31/11 15:41	mag	[CALC]	OA-2 - 8015B
Diesel	<11.8		mg/kg	11.8	1.18	10/31/11 15:41	mag	11J1517	OA-2 - 8015B
Gasoline	<11.8		mg/kg	11.8	1.18	10/31/11 15:41	mag	11J1517	OA-2 - 8015B
Motor Oil	<11.8		mg/kg	11.8	1.18	10/31/11 15:41	mag	11J1517	OA-2 - 8015B
Surr: Octacosane (50-150%)	101 %								
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	<0.0624		mg/kg dry	0.0624	1.19	11/02/11 11:35	jar	11J1558	SW 8082
PCB-1221	<0.0624		mg/kg dry	0.0624	1.19	11/02/11 11:35	jar	11J1558	SW 8082
PCB-1232	<0.0624		mg/kg dry	0.0624	1.19	11/02/11 11:35	jar	11J1558	SW 8082
PCB-1242	<0.0624		mg/kg dry	0.0624	1.19	11/02/11 11:35	jar	11J1558	SW 8082
PCB-1248	<0.0624		mg/kg dry	0.0624	1.19	11/02/11 11:35	jar	11J1558	SW 8082
PCB-1254	<0.0624		mg/kg dry	0.0624	1.19	11/02/11 11:35	jar	11J1558	SW 8082
PCB-1260	<0.0624		mg/kg dry	0.0624	1.19	11/02/11 11:35	jar	11J1558	SW 8082
PCB-1268	<0.0624		mg/kg dry	0.0624	1.19	11/02/11 11:35	jar	11J1558	SW 8082
Surr: Decachlorobiphenyl (55-120%)	84 %								
Surr: Tetrachloro-meta-xylene (45-105%)	60 %								

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-02 (B-2 21-24' - Soil)				Sampled: 10/26/11 12:11			Recvd: 10/27/11 18:00		
General Chemistry Parameters									
% Solids	89.8		%	0.100	1	10/28/11 17:08	hnc	11J1535	SM 2540 G
Volatile Organic Compounds									
Acetone	<132	L1	ug/kg dry	132	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Acrylonitrile	<132		ug/kg dry	132	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Benzene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Bromobenzene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Bromochloromethane	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Bromodichloromethane	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Bromoform	<26.4		ug/kg dry	26.4	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Bromomethane	<52.8		ug/kg dry	52.8	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
2-Butanone (MEK)	<132		ug/kg dry	132	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
n-Butylbenzene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
sec-Butylbenzene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
tert-Butylbenzene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Carbon disulfide	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Carbon Tetrachloride	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Chlorobenzene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Chlorodibromomethane	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Chloroethane	<52.8		ug/kg dry	52.8	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Chloroform	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Chloromethane	<52.8		ug/kg dry	52.8	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
2-Chlorotoluene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
4-Chlorotoluene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
1,2-Dibromo-3-chloropropane	<132		ug/kg dry	132	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
1,2-Dibromoethane (EDB)	<132		ug/kg dry	132	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Dibromomethane	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
1,2-Dichlorobenzene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
1,3-Dichlorobenzene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
1,4-Dichlorobenzene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Dichlorodifluoromethane	<39.6		ug/kg dry	39.6	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
1,1-Dichloroethane	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
1,2-Dichloroethane	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
1,1-Dichloroethene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
cis-1,2-Dichloroethene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
trans-1,2-Dichloroethene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
1,2-Dichloropropane	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
1,3-Dichloropropane	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
2,2-Dichloropropane	<52.8		ug/kg dry	52.8	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
1,1-Dichloropropene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
cis-1,3-Dichloropropene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
trans-1,3-Dichloropropene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Ethylbenzene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Hexachlorobutadiene	<66.0		ug/kg dry	66.0	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-02 (B-2 21-24' - Soil) - cont.				Sampled: 10/26/11 12:11			Recvd: 10/27/11 18:00		
Volatile Organic Compounds - cont.									
Hexane	<66.0	L1	ug/kg dry	66.0	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Isopropylbenzene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
p-Isopropyltoluene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Methylene Chloride	<132		ug/kg dry	132	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Methyl tert-Butyl Ether	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Naphthalene	<66.0		ug/kg dry	66.0	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
n-Propylbenzene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Styrene	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
1,1,1,2-Tetrachloroethane	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
1,1,2,2-Tetrachloroethane	<13.2		ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B
Tetrachloroethene	<13.2	ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B	
Toluene	<13.2	ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B	
1,2,3-Trichlorobenzene	<66.0	ug/kg dry	66.0	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B	
1,2,4-Trichlorobenzene	<66.0	ug/kg dry	66.0	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B	
1,1,1-Trichloroethane	<13.2	ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B	
1,1,2-Trichloroethane	<13.2	ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B	
Trichloroethene	<13.2	ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B	
Trichlorofluoromethane	<52.8	ug/kg dry	52.8	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B	
1,2,3-Trichloropropane	<13.2	ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B	
1,2,4-Trimethylbenzene	<13.2	ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B	
1,3,5-Trimethylbenzene	<13.2	ug/kg dry	13.2	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B	
Vinyl chloride	<39.6	ug/kg dry	39.6	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B	
Xylenes, total	<39.6	ug/kg dry	39.6	2.37	10/31/11 23:30	ZTB	11K0099	SW 8260B	
Surr: Dibromofluoromethane (75-125%)	94 %								
Surr: Toluene-d8 (80-120%)	102 %								
Surr: 4-Bromofluorobenzene (80-120%)	99 %								
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	32.1		mg/kg	11.8	1	10/31/11 16:16	mag	[CALC]	OA-2 - 8015B
Diesel	<11.8		mg/kg	11.8	1.18	10/31/11 16:16	mag	11J1517	OA-2 - 8015B
Gasoline	<11.8		mg/kg	11.8	1.18	10/31/11 16:16	mag	11J1517	OA-2 - 8015B
Motor Oil	32.1		mg/kg	11.8	1.18	10/31/11 16:16	mag	11J1517	OA-2 - 8015B
Surr: Octacosane (50-150%)	131 %								
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	<0.0653		mg/kg dry	0.0653	1.17	11/02/11 17:39	jar	11J1558	SW 8082
PCB-1221	<0.0653		mg/kg dry	0.0653	1.17	11/02/11 17:39	jar	11J1558	SW 8082
PCB-1232	<0.0653		mg/kg dry	0.0653	1.17	11/02/11 17:39	jar	11J1558	SW 8082
PCB-1242	<0.0653		mg/kg dry	0.0653	1.17	11/02/11 17:39	jar	11J1558	SW 8082
PCB-1248	<0.0653		mg/kg dry	0.0653	1.17	11/02/11 17:39	jar	11J1558	SW 8082
PCB-1254	<0.0653		mg/kg dry	0.0653	1.17	11/02/11 17:39	jar	11J1558	SW 8082
PCB-1260	<0.0653		mg/kg dry	0.0653	1.17	11/02/11 17:39	jar	11J1558	SW 8082
PCB-1268	<0.0653		mg/kg dry	0.0653	1.17	11/02/11 17:39	jar	11J1558	SW 8082
Surr: Decachlorobiphenyl (55-120%)	58 %								
Surr: Tetrachloro-meta-xylene (45-105%)	56 %								

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-03 (B-3 18-20' - Soil)				Sampled: 10/26/11 14:00			Recvd: 10/27/11 18:00		
General Chemistry Parameters									
% Solids	94.7		%	0.100	1	10/28/11 17:08	hnc	11J1535	SM 2540 G
Volatile Organic Compounds									
Acetone	<124	L1	ug/kg dry	124	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Acrylonitrile	<124		ug/kg dry	124	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Benzene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Bromobenzene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Bromochloromethane	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Bromodichloromethane	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Bromoform	<24.8		ug/kg dry	24.8	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Bromomethane	<49.7		ug/kg dry	49.7	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
2-Butanone (MEK)	<124		ug/kg dry	124	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
n-Butylbenzene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
sec-Butylbenzene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
tert-Butylbenzene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Carbon disulfide	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Carbon Tetrachloride	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Chlorobenzene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Chlorodibromomethane	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Chloroethane	<49.7		ug/kg dry	49.7	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Chloroform	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Chloromethane	<49.7		ug/kg dry	49.7	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
2-Chlorotoluene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
4-Chlorotoluene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
1,2-Dibromo-3-chloropropane	<124		ug/kg dry	124	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
1,2-Dibromoethane (EDB)	<124		ug/kg dry	124	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Dibromomethane	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
1,2-Dichlorobenzene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
1,3-Dichlorobenzene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
1,4-Dichlorobenzene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Dichlorodifluoromethane	<37.3		ug/kg dry	37.3	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
1,1-Dichloroethane	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
1,2-Dichloroethane	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
1,1-Dichloroethene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
cis-1,2-Dichloroethene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
trans-1,2-Dichloroethene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
1,2-Dichloropropane	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
1,3-Dichloropropane	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
2,2-Dichloropropane	<49.7		ug/kg dry	49.7	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
1,1-Dichloropropene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
cis-1,3-Dichloropropene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
trans-1,3-Dichloropropene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Ethylbenzene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Hexachlorobutadiene	<62.1		ug/kg dry	62.1	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-03 (B-3 18-20' - Soil) - cont.				Sampled: 10/26/11 14:00			Recvd: 10/27/11 18:00		
Volatile Organic Compounds - cont.									
Hexane	<62.1	L1	ug/kg dry	62.1	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Isopropylbenzene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
p-Isopropyltoluene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Methylene Chloride	<124		ug/kg dry	124	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Methyl tert-Butyl Ether	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Naphthalene	<62.1		ug/kg dry	62.1	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
n-Propylbenzene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Styrene	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
1,1,1,2-Tetrachloroethane	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
1,1,2,2-Tetrachloroethane	<12.4		ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B
Tetrachloroethene	<12.4	ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B	
Toluene	<12.4	ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B	
1,2,3-Trichlorobenzene	<62.1	ug/kg dry	62.1	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B	
1,2,4-Trichlorobenzene	<62.1	ug/kg dry	62.1	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B	
1,1,1-Trichloroethane	<12.4	ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B	
1,1,2-Trichloroethane	<12.4	ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B	
Trichloroethene	<12.4	ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B	
Trichlorofluoromethane	<49.7	ug/kg dry	49.7	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B	
1,2,3-Trichloropropane	<12.4	ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B	
1,2,4-Trimethylbenzene	<12.4	ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B	
1,3,5-Trimethylbenzene	<12.4	ug/kg dry	12.4	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B	
Vinyl chloride	<37.3	ug/kg dry	37.3	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B	
Xylenes, total	<37.3	ug/kg dry	37.3	2.35	10/31/11 23:53	ZTB	11K0099	SW 8260B	
Surr: Dibromofluoromethane (75-125%)	93 %								
Surr: Toluene-d8 (80-120%)	102 %								
Surr: 4-Bromofluorobenzene (80-120%)	100 %								
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	<11.7		mg/kg	11.7	1	10/31/11 16:59	mag	[CALC]	OA-2 - 8015B
Diesel	<11.7		mg/kg	11.7	1.17	10/31/11 16:59	mag	11J1517	OA-2 - 8015B
Gasoline	<11.7		mg/kg	11.7	1.17	10/31/11 16:59	mag	11J1517	OA-2 - 8015B
Motor Oil	<11.7		mg/kg	11.7	1.17	10/31/11 16:59	mag	11J1517	OA-2 - 8015B
Surr: Octacosane (50-150%)	106 %								
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	<0.0614		mg/kg dry	0.0614	1.16	11/02/11 17:50	jar	11J1558	SW 8082
PCB-1221	<0.0614		mg/kg dry	0.0614	1.16	11/02/11 17:50	jar	11J1558	SW 8082
PCB-1232	<0.0614		mg/kg dry	0.0614	1.16	11/02/11 17:50	jar	11J1558	SW 8082
PCB-1242	<0.0614		mg/kg dry	0.0614	1.16	11/02/11 17:50	jar	11J1558	SW 8082
PCB-1248	<0.0614		mg/kg dry	0.0614	1.16	11/02/11 17:50	jar	11J1558	SW 8082
PCB-1254	<0.0614		mg/kg dry	0.0614	1.16	11/02/11 17:50	jar	11J1558	SW 8082
PCB-1260	<0.0614		mg/kg dry	0.0614	1.16	11/02/11 17:50	jar	11J1558	SW 8082
PCB-1268	<0.0614		mg/kg dry	0.0614	1.16	11/02/11 17:50	jar	11J1558	SW 8082
Surr: Decachlorobiphenyl (55-120%)	67 %								
Surr: Tetrachloro-meta-xylene (45-105%)	53 %								

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-04 (Trip Blank - Water)				Sampled: 10/26/11			Recvd: 10/27/11 18:00		
Volatile Organic Compounds									
Acetone	<10.0	CIN	ug/L	10.0	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Acrylonitrile	<10.0		ug/L	10.0	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Benzene	<0.500		ug/L	0.500	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Bromobenzene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Bromochloromethane	<5.00		ug/L	5.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Bromodichloromethane	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Bromoform	<5.00		ug/L	5.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Bromomethane	<20.0		ug/L	20.0	1	10/29/11 12:33	sjn	11J1574	SW 8260B
2-Butanone (MEK)	<10.0		ug/L	10.0	1	10/29/11 12:33	sjn	11J1574	SW 8260B
n-Butylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
sec-Butylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
tert-Butylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Carbon Tetrachloride	<2.00		ug/L	2.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Chlorodibromomethane	<5.00		ug/L	5.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Chloroethane	<4.00		ug/L	4.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Chloromethane	<3.00		ug/L	3.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
2-Chlorotoluene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
4-Chlorotoluene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,2-Dibromo-3-chloropropane	<10.0		ug/L	10.0	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,2-Dibromoethane (EDB)	<10.0		ug/L	10.0	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,3-Dichlorobenzene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Dichlorodifluoromethane	<3.00		ug/L	3.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,1-Dichloroethane	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,1-Dichloroethene	<2.00		ug/L	2.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
cis-1,2-Dichloroethene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
trans-1,2-Dichloroethene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,3-Dichloropropane	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
2,2-Dichloropropane	<4.00		ug/L	4.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,1-Dichloropropene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
cis-1,3-Dichloropropene	<5.00		ug/L	5.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
trans-1,3-Dichloropropene	<5.00		ug/L	5.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Ethylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Hexane	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Isopropylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-04 (Trip Blank - Water) - cont.				Sampled: 10/26/11			Recvd: 10/27/11 18:00		
Volatile Organic Compounds - cont.									
p-Isopropyltoluene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Methylene Chloride	<5.00		ug/L	5.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Methyl tert-Butyl Ether	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Naphthalene	<5.00		ug/L	5.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
n-Propylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Styrene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Toluene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,2,3-Trichlorobenzene	<5.00		ug/L	5.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,2,4-Trichlorobenzene	<5.00		ug/L	5.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Trichloroethene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Trichlorofluoromethane	<4.00		ug/L	4.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,2,3-Trichloropropane	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,2,4-Trimethylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
1,3,5-Trimethylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Vinyl chloride	<1.00		ug/L	1.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Xylenes, total	<3.00		ug/L	3.00	1	10/29/11 12:33	sjn	11J1574	SW 8260B
Surr: Dibromofluoromethane (75-120%)	95 %								
Surr: Toluene-d8 (80-120%)	99 %								
Surr: 4-Bromofluorobenzene (75-110%)	100 %								
VOC Preservation Check									
pH	<2.00		units	2.00	1	10/31/11 15:30	fmk	11J1614	SW
Sample ID: CUJ1751-05 (B-1 - Ground Water)				Sampled: 10/26/11 10:45			Recvd: 10/27/11 18:00		
Volatile Organic Compounds									
Acetone	<10.0		ug/L	10.0	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Acrylonitrile	<10.0		ug/L	10.0	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Benzene	<0.500		ug/L	0.500	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Bromobenzene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Bromochloromethane	<5.00		ug/L	5.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Bromodichloromethane	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Bromoform	<5.00		ug/L	5.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Bromomethane	<20.0	CIN	ug/L	20.0	1	10/29/11 12:58	sjn	11J1574	SW 8260B
2-Butanone (MEK)	<10.0		ug/L	10.0	1	10/29/11 12:58	sjn	11J1574	SW 8260B
n-Butylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
sec-Butylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
tert-Butylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Carbon Tetrachloride	<2.00		ug/L	2.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-05 (B-1 - Ground Water) - cont.				Sampled: 10/26/11 10:45			Recvd: 10/27/11 18:00		
Volatile Organic Compounds - cont.									
Chlorodibromomethane	<5.00		ug/L	5.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Chloroethane	<4.00		ug/L	4.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Chloromethane	<3.00		ug/L	3.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
2-Chlorotoluene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
4-Chlorotoluene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,2-Dibromo-3-chloropropane	<10.0		ug/L	10.0	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,2-Dibromoethane (EDB)	<10.0		ug/L	10.0	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,3-Dichlorobenzene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Dichlorodifluoromethane	<3.00		ug/L	3.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,1-Dichloroethane	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,1-Dichloroethene	<2.00		ug/L	2.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
cis-1,2-Dichloroethene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
trans-1,2-Dichloroethene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,3-Dichloropropane	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
2,2-Dichloropropane	<4.00		ug/L	4.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,1-Dichloropropene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
cis-1,3-Dichloropropene	<5.00		ug/L	5.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
trans-1,3-Dichloropropene	<5.00		ug/L	5.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Ethylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Hexane	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Isopropylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
p-Isopropyltoluene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Methylene Chloride	<5.00		ug/L	5.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Methyl tert-Butyl Ether	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Naphthalene	<5.00		ug/L	5.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
n-Propylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Styrene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Tetrachloroethene	1.94		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Toluene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,2,3-Trichlorobenzene	<5.00		ug/L	5.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,2,4-Trichlorobenzene	<5.00		ug/L	5.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Trichloroethene	2.68		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-05 (B-1 - Ground Water) - cont.				Sampled: 10/26/11 10:45			Recvd: 10/27/11 18:00		
Volatile Organic Compounds - cont.									
Trichlorofluoromethane	<4.00		ug/L	4.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,2,3-Trichloropropane	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,2,4-Trimethylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
1,3,5-Trimethylbenzene	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Vinyl chloride	<1.00		ug/L	1.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Xylenes, total	<3.00		ug/L	3.00	1	10/29/11 12:58	sjn	11J1574	SW 8260B
Surr: Dibromofluoromethane (75-120%)	96 %								
Surr: Toluene-d8 (80-120%)	99 %								
Surr: 4-Bromofluorobenzene (75-110%)	100 %								
VOC Preservation Check									
pH	>2		units	2.00	1	10/31/11 15:30	fmk	11J1614	SW
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	<300		ug/L	300	1	10/31/11 19:57	mag	[CALC]	OA-2 - 8015B
Diesel	<300		ug/L	300	1.01	10/31/11 19:57	mag	11J1496	OA-2 - 8015B
Gasoline	<300		ug/L	300	1.01	10/31/11 19:57	mag	11J1496	OA-2 - 8015B
Motor Oil	<300		ug/L	300	1.01	10/31/11 19:57	mag	11J1496	OA-2 - 8015B
Surr: Octacosane (55-150%)	79 %								
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	<0.800		ug/L	0.800	1.03	11/01/11 20:26	jar	11J1563	SW 8082
PCB-1221	<0.800		ug/L	0.800	1.03	11/01/11 20:26	jar	11J1563	SW 8082
PCB-1232	<0.800		ug/L	0.800	1.03	11/01/11 20:26	jar	11J1563	SW 8082
PCB-1242	<0.800		ug/L	0.800	1.03	11/01/11 20:26	jar	11J1563	SW 8082
PCB-1248	<0.800		ug/L	0.800	1.03	11/01/11 20:26	jar	11J1563	SW 8082
PCB-1254	<0.800		ug/L	0.800	1.03	11/01/11 20:26	jar	11J1563	SW 8082
PCB-1260	<0.800		ug/L	0.800	1.03	11/01/11 20:26	jar	11J1563	SW 8082
PCB-1268	<0.800		ug/L	0.800	1.03	11/01/11 20:26	jar	11J1563	SW 8082
Surr: Decachlorobiphenyl (45-110%)	60 %								
Surr: Tetrachloro-meta-xylene (40-90%)	55 %								

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-06 (B-2 - Ground Water)				Sampled: 10/26/11 12:43			Recvd: 10/27/11 18:00		
Volatile Organic Compounds									
Acetone	<10.0	CIN	ug/L	10.0	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Acrylonitrile	<10.0		ug/L	10.0	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Benzene	<0.500		ug/L	0.500	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Bromobenzene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Bromochloromethane	<5.00		ug/L	5.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Bromodichloromethane	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Bromoform	<5.00		ug/L	5.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Bromomethane	<20.0		ug/L	20.0	1	10/29/11 13:23	sjn	11J1574	SW 8260B
2-Butanone (MEK)	<10.0		ug/L	10.0	1	10/29/11 13:23	sjn	11J1574	SW 8260B
n-Butylbenzene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
sec-Butylbenzene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
tert-Butylbenzene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Carbon Tetrachloride	<2.00		ug/L	2.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Chlorodibromomethane	<5.00		ug/L	5.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Chloroethane	<4.00		ug/L	4.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Chloromethane	<3.00		ug/L	3.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
2-Chlorotoluene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
4-Chlorotoluene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
1,2-Dibromo-3-chloropropane	<10.0		ug/L	10.0	1	10/29/11 13:23	sjn	11J1574	SW 8260B
1,2-Dibromoethane (EDB)	<10.0		ug/L	10.0	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
1,3-Dichlorobenzene	<1.00	ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
1,4-Dichlorobenzene	<1.00	ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
Dichlorodifluoromethane	<3.00	ug/L	3.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
1,1-Dichloroethane	<1.00	ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
1,2-Dichloroethane	<1.00	ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
1,1-Dichloroethene	<2.00	ug/L	2.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
cis-1,2-Dichloroethene	<1.00	ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
trans-1,2-Dichloroethene	<1.00	ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
1,2-Dichloropropane	<1.00	ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
1,3-Dichloropropane	<1.00	ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
2,2-Dichloropropane	<4.00	ug/L	4.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
1,1-Dichloropropene	<1.00	ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
cis-1,3-Dichloropropene	<5.00	ug/L	5.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
trans-1,3-Dichloropropene	<5.00	ug/L	5.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
Ethylbenzene	<1.00	ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
Hexachlorobutadiene	<5.00	ug/L	5.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
Hexane	<1.00	ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	
Isopropylbenzene	<1.00	ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B	

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-06 (B-2 - Ground Water) - cont.				Sampled: 10/26/11 12:43			Recvd: 10/27/11 18:00		
Volatile Organic Compounds - cont.									
p-Isopropyltoluene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Methylene Chloride	<5.00		ug/L	5.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Methyl tert-Butyl Ether	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Naphthalene	<5.00		ug/L	5.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
n-Propylbenzene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Styrene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Tetrachloroethene	2.50		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Toluene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
1,2,3-Trichlorobenzene	<5.00		ug/L	5.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
1,2,4-Trichlorobenzene	<5.00		ug/L	5.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Trichloroethene	2.21		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Trichlorofluoromethane	<4.00		ug/L	4.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
1,2,3-Trichloropropane	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
1,2,4-Trimethylbenzene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
1,3,5-Trimethylbenzene	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Vinyl chloride	<1.00		ug/L	1.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Xylenes, total	<3.00		ug/L	3.00	1	10/29/11 13:23	sjn	11J1574	SW 8260B
Surr: Dibromofluoromethane (75-120%)	97 %								
Surr: Toluene-d8 (80-120%)	97 %								
Surr: 4-Bromofluorobenzene (75-110%)	98 %								
VOC Preservation Check									
pH	>2		units	2.00	1	10/31/11 15:30	fmk	11J1614	SW
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	<300		ug/L	300	1	10/31/11 20:39	mag	[CALC]	OA-2 - 8015B
Diesel	<300		ug/L	300	1.01	10/31/11 20:39	mag	11J1496	OA-2 - 8015B
Gasoline	<300		ug/L	300	1.01	10/31/11 20:39	mag	11J1496	OA-2 - 8015B
Motor Oil	<300		ug/L	300	1.01	10/31/11 20:39	mag	11J1496	OA-2 - 8015B
Surr: Octacosane (55-150%)	80 %								
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	<0.800		ug/L	0.800	1.05	11/01/11 20:37	jar	11J1563	SW 8082
PCB-1221	<0.800		ug/L	0.800	1.05	11/01/11 20:37	jar	11J1563	SW 8082
PCB-1232	<0.800		ug/L	0.800	1.05	11/01/11 20:37	jar	11J1563	SW 8082
PCB-1242	<0.800		ug/L	0.800	1.05	11/01/11 20:37	jar	11J1563	SW 8082
PCB-1248	<0.800		ug/L	0.800	1.05	11/01/11 20:37	jar	11J1563	SW 8082
PCB-1254	<0.800		ug/L	0.800	1.05	11/01/11 20:37	jar	11J1563	SW 8082
PCB-1260	<0.800		ug/L	0.800	1.05	11/01/11 20:37	jar	11J1563	SW 8082
PCB-1268	<0.800		ug/L	0.800	1.05	11/01/11 20:37	jar	11J1563	SW 8082
Surr: Decachlorobiphenyl (45-110%)	52 %								
Surr: Tetrachloro-meta-xylene (40-90%)	51 %								

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-07 (B-3 - Ground Water)				Sampled: 10/26/11 14:34			Recvd: 10/27/11 18:00		
Volatile Organic Compounds									
Acetone	<10.0	CIN	ug/L	10.0	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Acrylonitrile	<10.0		ug/L	10.0	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Benzene	<0.500		ug/L	0.500	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Bromobenzene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Bromochloromethane	<5.00		ug/L	5.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Bromodichloromethane	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Bromoform	<5.00		ug/L	5.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Bromomethane	<20.0		ug/L	20.0	1	10/29/11 13:49	sjn	11J1574	SW 8260B
2-Butanone (MEK)	<10.0		ug/L	10.0	1	10/29/11 13:49	sjn	11J1574	SW 8260B
n-Butylbenzene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
sec-Butylbenzene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
tert-Butylbenzene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Carbon Tetrachloride	<2.00		ug/L	2.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Chlorodibromomethane	<5.00		ug/L	5.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Chloroethane	<4.00		ug/L	4.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Chloromethane	<3.00		ug/L	3.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
2-Chlorotoluene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
4-Chlorotoluene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
1,2-Dibromo-3-chloropropane	<10.0		ug/L	10.0	1	10/29/11 13:49	sjn	11J1574	SW 8260B
1,2-Dibromoethane (EDB)	<10.0		ug/L	10.0	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
1,3-Dichlorobenzene	<1.00	ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
1,4-Dichlorobenzene	<1.00	ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
Dichlorodifluoromethane	<3.00	ug/L	3.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
1,1-Dichloroethane	<1.00	ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
1,2-Dichloroethane	<1.00	ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
1,1-Dichloroethene	<2.00	ug/L	2.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
cis-1,2-Dichloroethene	<1.00	ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
trans-1,2-Dichloroethene	<1.00	ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
1,2-Dichloropropane	<1.00	ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
1,3-Dichloropropane	<1.00	ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
2,2-Dichloropropane	<4.00	ug/L	4.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
1,1-Dichloropropene	<1.00	ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
cis-1,3-Dichloropropene	<5.00	ug/L	5.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
trans-1,3-Dichloropropene	<5.00	ug/L	5.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
Ethylbenzene	<1.00	ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
Hexachlorobutadiene	<5.00	ug/L	5.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
Hexane	<1.00	ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	
Isopropylbenzene	<1.00	ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B	

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUJ1751-07 (B-3 - Ground Water) - cont.				Sampled: 10/26/11 14:34			Recvd: 10/27/11 18:00		
Volatile Organic Compounds - cont.									
p-Isopropyltoluene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Methylene Chloride	<5.00		ug/L	5.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Methyl tert-Butyl Ether	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Naphthalene	<5.00		ug/L	5.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
n-Propylbenzene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Styrene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Tetrachloroethene	1.32		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Toluene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
1,2,3-Trichlorobenzene	<5.00		ug/L	5.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
1,2,4-Trichlorobenzene	<5.00		ug/L	5.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Trichloroethene	2.09		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Trichlorofluoromethane	<4.00		ug/L	4.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
1,2,3-Trichloropropane	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
1,2,4-Trimethylbenzene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
1,3,5-Trimethylbenzene	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Vinyl chloride	<1.00		ug/L	1.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Xylenes, total	<3.00		ug/L	3.00	1	10/29/11 13:49	sjn	11J1574	SW 8260B
Surr: Dibromofluoromethane (75-120%)	95 %								
Surr: Toluene-d8 (80-120%)	98 %								
Surr: 4-Bromofluorobenzene (75-110%)	100 %								
VOC Preservation Check									
pH	>2		units	2.00	1	10/31/11 15:30	fmk	11J1614	SW
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	<300		ug/L	300	1	10/31/11 21:22	mag	[CALC]	OA-2 - 8015B
Diesel	<300		ug/L	300	1.01	10/31/11 21:22	mag	11J1496	OA-2 - 8015B
Gasoline	<300		ug/L	300	1.01	10/31/11 21:22	mag	11J1496	OA-2 - 8015B
Motor Oil	<300		ug/L	300	1.01	10/31/11 21:22	mag	11J1496	OA-2 - 8015B
Surr: Octacosane (55-150%)	84 %								
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	<0.800		ug/L	0.800	1.04	11/01/11 20:47	jar	11J1563	SW 8082
PCB-1221	<0.800		ug/L	0.800	1.04	11/01/11 20:47	jar	11J1563	SW 8082
PCB-1232	<0.800		ug/L	0.800	1.04	11/01/11 20:47	jar	11J1563	SW 8082
PCB-1242	<0.800		ug/L	0.800	1.04	11/01/11 20:47	jar	11J1563	SW 8082
PCB-1248	<0.800		ug/L	0.800	1.04	11/01/11 20:47	jar	11J1563	SW 8082
PCB-1254	<0.800		ug/L	0.800	1.04	11/01/11 20:47	jar	11J1563	SW 8082
PCB-1260	<0.800		ug/L	0.800	1.04	11/01/11 20:47	jar	11J1563	SW 8082
PCB-1268	<0.800		ug/L	0.800	1.04	11/01/11 20:47	jar	11J1563	SW 8082
Surr: Decachlorobiphenyl (45-110%)	47 %								
Surr: Tetrachloro-meta-xylene (40-90%)	49 %								

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
Polychlorinated Biphenyls by EPA Method 8082							
SW 8082	11J1558	CUJ1751-01	25.27	10.00	10/31/11 10:03	AM	SW 3546 GC
SW 8082	11J1558	CUJ1751-02	25.60	10.00	10/31/11 10:03	AM	SW 3546 GC
SW 8082	11J1558	CUJ1751-03	25.78	10.00	10/31/11 10:03	AM	SW 3546 GC
SW 8082	11J1563	CUJ1751-05	970.00	5.00	10/31/11 10:10	AM	SW 3510C GC
SW 8082	11J1563	CUJ1751-06	950.00	5.00	10/31/11 10:10	AM	SW 3510C GC
SW 8082	11J1563	CUJ1751-07	960.00	5.00	10/31/11 10:10	AM	SW 3510C GC
UST ANALYSIS PARAMETERS							
OA-2 - 8015B	[CALC]	CUJ1751-01	1.00	1.00	10/28/11 14:03		[CALC]
OA-2 - 8015B	11J1517	CUJ1751-01	25.39	1.50	10/28/11 14:03	EEE	SW 3546 GC
OA-2 - 8015B	[CALC]	CUJ1751-02	1.00	1.00	10/28/11 14:03		[CALC]
OA-2 - 8015B	11J1517	CUJ1751-02	25.41	1.50	10/28/11 14:03	EEE	SW 3546 GC
OA-2 - 8015B	[CALC]	CUJ1751-03	1.00	1.00	10/28/11 14:03		[CALC]
OA-2 - 8015B	11J1517	CUJ1751-03	25.65	1.50	10/28/11 14:03	EEE	SW 3546 GC
OA-2 - 8015B	[CALC]	CUJ1751-05	1.00	1.00	10/28/11 11:16		[CALC]
OA-2 - 8015B	11J1496	CUJ1751-05	990.00	1.00	10/28/11 11:16	EEE	SW 3510C GC
OA-2 - 8015B	[CALC]	CUJ1751-06	1.00	1.00	10/28/11 11:16		[CALC]
OA-2 - 8015B	11J1496	CUJ1751-06	990.00	1.00	10/28/11 11:16	EEE	SW 3510C GC
OA-2 - 8015B	[CALC]	CUJ1751-07	1.00	1.00	10/28/11 11:16		[CALC]
OA-2 - 8015B	11J1496	CUJ1751-07	990.00	1.00	10/28/11 11:16	EEE	SW 3510C GC

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Volatile Organic Compounds													
Acetone	11J1574			ug/L	N/A	10.0	<10.0						
Acrylonitrile	11J1574			ug/L	N/A	10.0	<10.0						
Benzene	11J1574			ug/L	N/A	0.500	<0.500						
Bromobenzene	11J1574			ug/L	N/A	1.00	<1.00						
Bromochloromethane	11J1574			ug/L	N/A	5.00	<5.00						
Bromodichloromethane	11J1574			ug/L	N/A	1.00	<1.00						
Bromoform	11J1574			ug/L	N/A	5.00	<5.00						
Bromomethane	11J1574			ug/L	N/A	4.00	<4.00						CIN
2-Butanone (MEK)	11J1574			ug/L	N/A	10.0	<10.0						
n-Butylbenzene	11J1574			ug/L	N/A	1.00	<1.00						
sec-Butylbenzene	11J1574			ug/L	N/A	1.00	<1.00						
tert-Butylbenzene	11J1574			ug/L	N/A	1.00	<1.00						
Carbon disulfide	11J1574			ug/L	N/A	1.00	<1.00						
Carbon Tetrachloride	11J1574			ug/L	N/A	2.00	<2.00						
Chlorobenzene	11J1574			ug/L	N/A	1.00	<1.00						
Chlorodibromomethane	11J1574			ug/L	N/A	5.00	<5.00						
Chloroethane	11J1574			ug/L	N/A	4.00	<4.00						
Chloroform	11J1574			ug/L	N/A	1.00	<1.00						
Chloromethane	11J1574			ug/L	N/A	3.00	<3.00						
2-Chlorotoluene	11J1574			ug/L	N/A	1.00	<1.00						
4-Chlorotoluene	11J1574			ug/L	N/A	1.00	<1.00						
1,2-Dibromo-3-chloropropane	11J1574			ug/L	N/A	10.0	<10.0						
1,2-Dibromoethane (EDB)	11J1574			ug/L	N/A	10.0	<10.0						
Dibromomethane	11J1574			ug/L	N/A	1.00	<1.00						
1,2-Dichlorobenzene	11J1574			ug/L	N/A	1.00	<1.00						
1,3-Dichlorobenzene	11J1574			ug/L	N/A	1.00	<1.00						
1,4-Dichlorobenzene	11J1574			ug/L	N/A	1.00	<1.00						
Dichlorodifluoromethane	11J1574			ug/L	N/A	3.00	<3.00						
1,1-Dichloroethane	11J1574			ug/L	N/A	1.00	<1.00						
1,2-Dichloroethane	11J1574			ug/L	N/A	1.00	<1.00						
1,1-Dichloroethene	11J1574			ug/L	N/A	2.00	<2.00						
cis-1,2-Dichloroethene	11J1574			ug/L	N/A	1.00	<1.00						
trans-1,2-Dichloroethene	11J1574			ug/L	N/A	1.00	<1.00						
1,2-Dichloropropane	11J1574			ug/L	N/A	1.00	<1.00						
1,3-Dichloropropane	11J1574			ug/L	N/A	1.00	<1.00						
2,2-Dichloropropane	11J1574			ug/L	N/A	4.00	<4.00						
1,1-Dichloropropene	11J1574			ug/L	N/A	1.00	<1.00						
cis-1,3-Dichloropropene	11J1574			ug/L	N/A	5.00	<5.00						
trans-1,3-Dichloropropene	11J1574			ug/L	N/A	5.00	<5.00						
Ethylbenzene	11J1574			ug/L	N/A	1.00	<1.00						
Hexachlorobutadiene	11J1574			ug/L	N/A	5.00	<5.00						
Hexane	11J1574			ug/L	N/A	1.00	<1.00						
Isopropylbenzene	11J1574			ug/L	N/A	1.00	<1.00						
p-Isopropyltoluene	11J1574			ug/L	N/A	1.00	<1.00						
Methylene Chloride	11J1574			ug/L	N/A	5.00	<5.00						

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Volatile Organic Compounds														
Methyl tert-Butyl Ether	11J1574			ug/L	N/A	1.00	<1.00							
Naphthalene	11J1574			ug/L	N/A	5.00	<5.00							
n-Propylbenzene	11J1574			ug/L	N/A	1.00	<1.00							
Styrene	11J1574			ug/L	N/A	1.00	<1.00							
1,1,1,2-Tetrachloroethane	11J1574			ug/L	N/A	1.00	<1.00							
1,1,2,2-Tetrachloroethane	11J1574			ug/L	N/A	1.00	<1.00							
Tetrachloroethene	11J1574			ug/L	N/A	1.00	<1.00							
Toluene	11J1574			ug/L	N/A	1.00	<1.00							
1,2,3-Trichlorobenzene	11J1574			ug/L	N/A	5.00	<5.00							
1,2,4-Trichlorobenzene	11J1574			ug/L	N/A	5.00	<5.00							
1,1,1-Trichloroethane	11J1574			ug/L	N/A	1.00	<1.00							
1,1,2-Trichloroethane	11J1574			ug/L	N/A	1.00	<1.00							
Trichloroethene	11J1574			ug/L	N/A	1.00	<1.00							
Trichlorofluoromethane	11J1574			ug/L	N/A	4.00	<4.00							
1,2,3-Trichloropropane	11J1574			ug/L	N/A	1.00	<1.00							
1,2,4-Trimethylbenzene	11J1574			ug/L	N/A	1.00	<1.00							
1,3,5-Trimethylbenzene	11J1574			ug/L	N/A	1.00	<1.00							
Vinyl chloride	11J1574			ug/L	N/A	1.00	<1.00							
Xylenes, total	11J1574			ug/L	N/A	3.00	<3.00							
Surrogate: Dibromofluoromethane	11J1574			ug/L					96		75-120			
Surrogate: Toluene-d8	11J1574			ug/L					100		80-120			
Surrogate: 4-Bromofluorobenzene	11J1574			ug/L					99		75-110			
Acetone	11K0099			ug/kg wet	N/A	91.7	<91.7							L1
Acrylonitrile	11K0099			ug/kg wet	N/A	91.7	<91.7							
Benzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
Bromobenzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
Bromochloromethane	11K0099			ug/kg wet	N/A	9.17	<9.17							
Bromodichloromethane	11K0099			ug/kg wet	N/A	9.17	<9.17							
Bromoform	11K0099			ug/kg wet	N/A	18.3	<18.3							
Bromomethane	11K0099			ug/kg wet	N/A	36.7	<36.7							
2-Butanone (MEK)	11K0099			ug/kg wet	N/A	91.7	<91.7							
n-Butylbenzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
sec-Butylbenzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
tert-Butylbenzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
Carbon disulfide	11K0099			ug/kg wet	N/A	9.17	<9.17							
Carbon Tetrachloride	11K0099			ug/kg wet	N/A	9.17	<9.17							
Chlorobenzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
Chlorodibromomethane	11K0099			ug/kg wet	N/A	9.17	<9.17							
Chloroethane	11K0099			ug/kg wet	N/A	36.7	<36.7							
Chloroform	11K0099			ug/kg wet	N/A	9.17	<9.17							
Chloromethane	11K0099			ug/kg wet	N/A	36.7	<36.7							
2-Chlorotoluene	11K0099			ug/kg wet	N/A	9.17	<9.17							
4-Chlorotoluene	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,2-Dibromo-3-chloropropane	11K0099			ug/kg wet	N/A	91.7	<91.7							

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Volatile Organic Compounds														
1,2-Dibromoethane (EDB)	11K0099			ug/kg wet	N/A	91.7	<91.7							
Dibromomethane	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,2-Dichlorobenzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,3-Dichlorobenzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,4-Dichlorobenzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
Dichlorodifluoromethane	11K0099			ug/kg wet	N/A	27.5	<27.5							
1,1-Dichloroethane	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,2-Dichloroethane	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,1-Dichloroethene	11K0099			ug/kg wet	N/A	9.17	<9.17							
cis-1,2-Dichloroethene	11K0099			ug/kg wet	N/A	9.17	<9.17							
trans-1,2-Dichloroethene	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,2-Dichloropropane	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,3-Dichloropropane	11K0099			ug/kg wet	N/A	9.17	<9.17							
2,2-Dichloropropane	11K0099			ug/kg wet	N/A	36.7	<36.7							
1,1-Dichloropropene	11K0099			ug/kg wet	N/A	9.17	<9.17							
cis-1,3-Dichloropropene	11K0099			ug/kg wet	N/A	9.17	<9.17							
trans-1,3-Dichloropropene	11K0099			ug/kg wet	N/A	9.17	<9.17							
Ethylbenzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
Hexachlorobutadiene	11K0099			ug/kg wet	N/A	45.9	<45.9							
Hexane	11K0099			ug/kg wet	N/A	45.9	<45.9							
Isopropylbenzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
p-Isopropyltoluene	11K0099			ug/kg wet	N/A	9.17	<9.17							
Methylene Chloride	11K0099			ug/kg wet	N/A	91.7	<91.7							L1
Methyl tert-Butyl Ether	11K0099			ug/kg wet	N/A	9.17	<9.17							
Naphthalene	11K0099			ug/kg wet	N/A	45.9	<45.9							
n-Propylbenzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
Styrene	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,1,1,2-Tetrachloroethane	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,1,2,2-Tetrachloroethane	11K0099			ug/kg wet	N/A	9.17	<9.17							
Tetrachloroethene	11K0099			ug/kg wet	N/A	9.17	<9.17							
Toluene	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,2,3-Trichlorobenzene	11K0099			ug/kg wet	N/A	45.9	<45.9							
1,2,4-Trichlorobenzene	11K0099			ug/kg wet	N/A	45.9	<45.9							
1,1,1-Trichloroethane	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,1,2-Trichloroethane	11K0099			ug/kg wet	N/A	9.17	<9.17							
Trichloroethene	11K0099			ug/kg wet	N/A	9.17	<9.17							
Trichlorofluoromethane	11K0099			ug/kg wet	N/A	36.7	<36.7							
1,2,3-Trichloropropane	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,2,4-Trimethylbenzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
1,3,5-Trimethylbenzene	11K0099			ug/kg wet	N/A	9.17	<9.17							
Vinyl chloride	11K0099			ug/kg wet	N/A	27.5	<27.5							
Xylenes, total	11K0099			ug/kg wet	N/A	27.5	<27.5							
Surrogate: Dibromofluoromethane	11K0099			ug/L					98		75-125			
Surrogate: Toluene-d8	11K0099			ug/L					101		80-120			
Surrogate: 4-Bromofluorobenzene	11K0099			ug/L					97		80-120			

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Volatile Organic Compounds														
UST ANALYSIS PARAMETERS														
Diesel	11J1496			ug/L	N/A	300	<300							
Gasoline	11J1496			ug/L	N/A	300	<300							
Motor Oil	11J1496			ug/L	N/A	300	<300							
Surrogate: Octacosane	11J1496			ug/L					63		55-150			
Diesel	11J1517			mg/kg	N/A	11.9	<11.9							
Gasoline	11J1517			mg/kg	N/A	11.9	13.5							
Motor Oil	11J1517			mg/kg	N/A	11.9	<11.9							
Surrogate: Octacosane	11J1517			mg/kg					95		50-150			
Polychlorinated Biphenyls by EPA Method 8082														
PCB-1016	11J1558			mg/kg wet	N/A	0.0600	<0.0600							
PCB-1221	11J1558			mg/kg wet	N/A	0.0600	<0.0600							
PCB-1232	11J1558			mg/kg wet	N/A	0.0600	<0.0600							
PCB-1242	11J1558			mg/kg wet	N/A	0.0600	<0.0600							
PCB-1248	11J1558			mg/kg wet	N/A	0.0600	<0.0600							
PCB-1254	11J1558			mg/kg wet	N/A	0.0600	<0.0600							
PCB-1260	11J1558			mg/kg wet	N/A	0.0600	<0.0600							
PCB-1268	11J1558			mg/kg wet	N/A	0.0600	<0.0600							
Surrogate: Decachlorobiphenyl	11J1558			mg/kg wet					88		55-120			
Surrogate: Tetrachloro-meta-xylene	11J1558			mg/kg wet					70		45-105			
PCB-1016	11J1563			ug/L	N/A	0.800	<0.800							
PCB-1221	11J1563			ug/L	N/A	0.800	<0.800							
PCB-1232	11J1563			ug/L	N/A	0.800	<0.800							
PCB-1242	11J1563			ug/L	N/A	0.800	<0.800							
PCB-1248	11J1563			ug/L	N/A	0.800	<0.800							
PCB-1254	11J1563			ug/L	N/A	0.800	<0.800							
PCB-1260	11J1563			ug/L	N/A	0.800	<0.800							
PCB-1268	11J1563			ug/L	N/A	0.800	<0.800							
Surrogate: Decachlorobiphenyl	11J1563			ug/L					62		45-110			
Surrogate: Tetrachloro-meta-xylene	11J1563			ug/L					36		40-90			Z6

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
General Chemistry Parameters													
QC Source Sample: CUJ1798-11													
% Solids	11J1535	87.3		%	N/A	0.100	87.5				0	10	H3
QC Source Sample: CUJ1751-02													
% Solids	11J1535	89.8		%	N/A	0.100	89.5				0	10	

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Volatile Organic Compounds														
Acetone	11J1574		20.0	ug/L	N/A	N/A	16.6		83		60-150			
Acrylonitrile	11J1574		20.0	ug/L	N/A	N/A	18.8		94		50-145			
Benzene	11J1574		20.0	ug/L	N/A	N/A	20.0		100		70-130			
Bromobenzene	11J1574		20.0	ug/L	N/A	N/A	19.4		97		75-130			
Bromochloromethane	11J1574		20.0	ug/L	N/A	N/A	22.3		112		65-145			
Bromodichloromethane	11J1574		20.0	ug/L	N/A	N/A	19.0		95		60-130			
Bromoform	11J1574		20.0	ug/L	N/A	N/A	17.8		89		30-125			
Bromomethane	11J1574		20.0	ug/L	N/A	N/A	12.2		61		35-130			CIN
2-Butanone (MEK)	11J1574		20.0	ug/L	N/A	N/A	17.4		87		55-140			
n-Butylbenzene	11J1574		20.0	ug/L	N/A	N/A	18.7		94		55-135			
sec-Butylbenzene	11J1574		20.0	ug/L	N/A	N/A	19.3		96		65-135			
tert-Butylbenzene	11J1574		20.0	ug/L	N/A	N/A	19.3		96		60-135			
Carbon disulfide	11J1574		20.0	ug/L	N/A	N/A	19.8		99		40-130			
Carbon Tetrachloride	11J1574		20.0	ug/L	N/A	N/A	21.6		108		55-130			
Chlorobenzene	11J1574		20.0	ug/L	N/A	N/A	19.7		98		75-125			
Chlorodibromomethane	11J1574		20.0	ug/L	N/A	N/A	19.0		95		45-125			
Chloroethane	11J1574		20.0	ug/L	N/A	N/A	18.8		94		55-135			
Chloroform	11J1574		20.0	ug/L	N/A	N/A	18.5		92		70-125			
Chloromethane	11J1574		20.0	ug/L	N/A	N/A	16.7		83		30-125			
2-Chlorotoluene	11J1574		20.0	ug/L	N/A	N/A	18.8		94		75-135			
4-Chlorotoluene	11J1574		20.0	ug/L	N/A	N/A	18.7		93		70-140			
1,2-Dibromo-3-chloropropane	11J1574		20.0	ug/L	N/A	N/A	15.4		77		35-130			
1,2-Dibromoethane (EDB)	11J1574		20.0	ug/L	N/A	N/A	19.8		99		70-135			
Dibromomethane	11J1574		20.0	ug/L	N/A	N/A	20.1		101		75-130			
1,2-Dichlorobenzene	11J1574		20.0	ug/L	N/A	N/A	18.3		91		65-135			
1,3-Dichlorobenzene	11J1574		20.0	ug/L	N/A	N/A	18.7		93		70-130			
1,4-Dichlorobenzene	11J1574		20.0	ug/L	N/A	N/A	18.4		92		60-140			
Dichlorodifluoromethane	11J1574		20.0	ug/L	N/A	N/A	14.7		73		35-130			
1,1-Dichloroethane	11J1574		20.0	ug/L	N/A	N/A	19.0		95		60-130			
1,2-Dichloroethane	11J1574		20.0	ug/L	N/A	N/A	18.3		92		65-140			
1,1-Dichloroethene	11J1574		20.0	ug/L	N/A	N/A	18.9		95		60-135			
cis-1,2-Dichloroethene	11J1574		20.0	ug/L	N/A	N/A	19.6		98		70-135			
trans-1,2-Dichloroethene	11J1574		20.0	ug/L	N/A	N/A	19.4		97		60-145			
1,2-Dichloropropane	11J1574		20.0	ug/L	N/A	N/A	19.9		100		65-130			
1,3-Dichloropropane	11J1574		20.0	ug/L	N/A	N/A	19.5		98		75-125			
2,2-Dichloropropane	11J1574		20.0	ug/L	N/A	N/A	19.2		96		25-120			
1,1-Dichloropropene	11J1574		20.0	ug/L	N/A	N/A	19.5		97		60-140			
cis-1,3-Dichloropropene	11J1574		20.0	ug/L	N/A	N/A	20.4		102		30-120			
trans-1,3-Dichloropropene	11J1574		20.0	ug/L	N/A	N/A	19.1		96		35-120			
Ethylbenzene	11J1574		20.0	ug/L	N/A	N/A	19.7		98		70-130			
Hexachlorobutadiene	11J1574		20.0	ug/L	N/A	N/A	20.4		102		60-135			
Hexane	11J1574		20.0	ug/L	N/A	N/A	22.4		112		40-135			
Isopropylbenzene	11J1574		20.0	ug/L	N/A	N/A	18.0		90		70-125			
p-Isopropyltoluene	11J1574		20.0	ug/L	N/A	N/A	19.1		95		60-140			
Methylene Chloride	11J1574		20.0	ug/L	N/A	N/A	18.8		94		55-145			

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Volatile Organic Compounds														
Methyl tert-Butyl Ether	11J1574		20.0	ug/L	N/A	N/A	19.6		98		50-135			
Naphthalene	11J1574		20.0	ug/L	N/A	N/A	16.2		81		40-135			
n-Propylbenzene	11J1574		20.0	ug/L	N/A	N/A	19.4		97		70-135			
Styrene	11J1574		20.0	ug/L	N/A	N/A	19.1		96		70-130			
1,1,1,2-Tetrachloroethane	11J1574		20.0	ug/L	N/A	N/A	20.0		100		65-120			
1,1,2,2-Tetrachloroethane	11J1574		20.0	ug/L	N/A	N/A	17.2		86		65-130			
Tetrachloroethene	11J1574		20.0	ug/L	N/A	N/A	20.4		102		70-135			
Toluene	11J1574		20.0	ug/L	N/A	N/A	20.1		100		70-135			
1,2,3-Trichlorobenzene	11J1574		20.0	ug/L	N/A	N/A	17.7		88		55-130			
1,2,4-Trichlorobenzene	11J1574		20.0	ug/L	N/A	N/A	17.9		90		40-135			
1,1,1-Trichloroethane	11J1574		20.0	ug/L	N/A	N/A	20.9		104		60-125			
1,1,2-Trichloroethane	11J1574		20.0	ug/L	N/A	N/A	19.2		96		75-125			
Trichloroethene	11J1574		20.0	ug/L	N/A	N/A	19.5		98		70-130			
Trichlorofluoromethane	11J1574		20.0	ug/L	N/A	N/A	19.4		97		55-145			
1,2,3-Trichloropropane	11J1574		20.0	ug/L	N/A	N/A	17.3		87		60-150			
1,2,4-Trimethylbenzene	11J1574		20.0	ug/L	N/A	N/A	19.0		95		70-140			
1,3,5-Trimethylbenzene	11J1574		20.0	ug/L	N/A	N/A	19.1		95		70-140			
Vinyl chloride	11J1574		20.0	ug/L	N/A	N/A	19.4		97		45-135			
Xylenes, total	11J1574		60.0	ug/L	N/A	N/A	59.6		99		70-130			
<i>Surrogate: Dibromofluoromethane</i>	<i>11J1574</i>			ug/L					<i>98</i>		<i>75-120</i>			
<i>Surrogate: Toluene-d8</i>	<i>11J1574</i>			ug/L					<i>99</i>		<i>80-120</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>11J1574</i>			ug/L					<i>101</i>		<i>80-120</i>			
Acetone	11K0099		38.2	ug/kg wet	N/A	95.5	63.4		166		65-150			L1
Acrylonitrile	11K0099		38.2	ug/kg wet	N/A	95.5	33.0		86		45-140			
Benzene	11K0099		38.2	ug/kg wet	N/A	9.55	31.0		81		55-135			
Bromobenzene	11K0099		38.2	ug/kg wet	N/A	9.55	31.4		82		65-125			
Bromochloromethane	11K0099		38.2	ug/kg wet	N/A	9.55	34.2		89		65-130			
Bromodichloromethane	11K0099		38.2	ug/kg wet	N/A	9.55	34.9		92		65-130			
Bromoform	11K0099		38.2	ug/kg wet	N/A	19.1	31.1		81		50-135			
Bromomethane	11K0099		38.2	ug/kg wet	N/A	38.2	34.9		91		45-135			
2-Butanone (MEK)	11K0099		38.2	ug/kg wet	N/A	95.5	47.9		125		50-145			
n-Butylbenzene	11K0099		38.2	ug/kg wet	N/A	9.55	25.3		66		55-130			
sec-Butylbenzene	11K0099		38.2	ug/kg wet	N/A	9.55	28.5		75		60-125			
tert-Butylbenzene	11K0099		38.2	ug/kg wet	N/A	9.55	30.0		79		55-125			
Carbon disulfide	11K0099		38.2	ug/kg wet	N/A	9.55	29.3		77		40-135			
Carbon Tetrachloride	11K0099		38.2	ug/kg wet	N/A	9.55	30.7		80		55-130			
Chlorobenzene	11K0099		38.2	ug/kg wet	N/A	9.55	30.0		79		60-120			
Chlorodibromomethane	11K0099		38.2	ug/kg wet	N/A	9.55	32.4		85		55-130			
Chloroethane	11K0099		38.2	ug/kg wet	N/A	38.2	30.5		80		50-145			
Chloroform	11K0099		38.2	ug/kg wet	N/A	9.55	30.6		80		65-130			
Chloromethane	11K0099		38.2	ug/kg wet	N/A	38.2	34.8		91		40-135			
2-Chlorotoluene	11K0099		38.2	ug/kg wet	N/A	9.55	29.2		77		60-125			
4-Chlorotoluene	11K0099		38.2	ug/kg wet	N/A	9.55	27.9		73		60-125			
1,2-Dibromo-3-chloropropane	11K0099		38.2	ug/kg wet	N/A	95.5	34.4		90		50-140			

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Volatile Organic Compounds														
1,2-Dibromoethane (EDB)	11K0099		38.2	ug/kg wet	N/A	95.5	32.6		86		55-140			
Dibromomethane	11K0099		38.2	ug/kg wet	N/A	9.55	35.8		94		65-135			
1,2-Dichlorobenzene	11K0099		38.2	ug/kg wet	N/A	9.55	30.1		79		65-120			
1,3-Dichlorobenzene	11K0099		38.2	ug/kg wet	N/A	9.55	27.1		71		60-125			
1,4-Dichlorobenzene	11K0099		38.2	ug/kg wet	N/A	9.55	25.9		68		60-125			
Dichlorodifluoromethane	11K0099		38.2	ug/kg wet	N/A	28.6	32.2		84		40-135			
1,1-Dichloroethane	11K0099		38.2	ug/kg wet	N/A	9.55	32.2		84		55-135			
1,2-Dichloroethane	11K0099		38.2	ug/kg wet	N/A	9.55	32.1		84		60-140			
1,1-Dichloroethene	11K0099		38.2	ug/kg wet	N/A	9.55	31.1		81		50-145			
cis-1,2-Dichloroethene	11K0099		38.2	ug/kg wet	N/A	9.55	31.0		81		60-135			
trans-1,2-Dichloroethene	11K0099		38.2	ug/kg wet	N/A	9.55	32.3		85		55-135			
1,2-Dichloropropane	11K0099		38.2	ug/kg wet	N/A	9.55	32.3		85		55-130			
1,3-Dichloropropane	11K0099		38.2	ug/kg wet	N/A	9.55	33.1		87		55-140			
2,2-Dichloropropane	11K0099		38.2	ug/kg wet	N/A	38.2	30.2		79		40-135			
1,1-Dichloropropene	11K0099		38.2	ug/kg wet	N/A	9.55	29.5		77		55-130			
cis-1,3-Dichloropropene	11K0099		38.2	ug/kg wet	N/A	9.55	31.5		82		50-115			
trans-1,3-Dichloropropene	11K0099		38.2	ug/kg wet	N/A	9.55	30.3		79		55-130			
Ethylbenzene	11K0099		38.2	ug/kg wet	N/A	9.55	29.6		78		60-125			
Hexachlorobutadiene	11K0099		38.2	ug/kg wet	N/A	47.7	27.0		71		40-135			
Hexane	11K0099		38.2	ug/kg wet	N/A	47.7	24.3		64		45-140			
Isopropylbenzene	11K0099		38.2	ug/kg wet	N/A	9.55	29.2		76		60-125			
p-Isopropyltoluene	11K0099		38.2	ug/kg wet	N/A	9.55	26.3		69		60-120			
Methylene Chloride	11K0099		38.2	ug/kg wet	N/A	95.5	73.2		192		55-145			L1
Methyl tert-Butyl Ether	11K0099		38.2	ug/kg wet	N/A	9.55	32.5		85		55-130			
Naphthalene	11K0099		38.2	ug/kg wet	N/A	47.7	32.0		84		50-130			
n-Propylbenzene	11K0099		38.2	ug/kg wet	N/A	9.55	27.6		72		50-125			
Styrene	11K0099		38.2	ug/kg wet	N/A	9.55	28.9		76		60-125			
1,1,1,2-Tetrachloroethane	11K0099		38.2	ug/kg wet	N/A	9.55	32.5		85		65-125			
1,1,2,2-Tetrachloroethane	11K0099		38.2	ug/kg wet	N/A	9.55	32.5		85		60-125			
Tetrachloroethene	11K0099		38.2	ug/kg wet	N/A	9.55	28.4		74		55-125			
Toluene	11K0099		38.2	ug/kg wet	N/A	9.55	30.4		80		60-130			
1,2,3-Trichlorobenzene	11K0099		38.2	ug/kg wet	N/A	47.7	27.4		72		50-130			
1,2,4-Trichlorobenzene	11K0099		38.2	ug/kg wet	N/A	47.7	24.1		63		45-135			
1,1,1-Trichloroethane	11K0099		38.2	ug/kg wet	N/A	9.55	33.1		87		60-125			
1,1,2-Trichloroethane	11K0099		38.2	ug/kg wet	N/A	9.55	34.9		92		55-135			
Trichloroethene	11K0099		38.2	ug/kg wet	N/A	9.55	28.5		75		60-130			
Trichlorofluoromethane	11K0099		38.2	ug/kg wet	N/A	38.2	31.2		82		50-145			
1,2,3-Trichloropropane	11K0099		38.2	ug/kg wet	N/A	9.55	33.1		87		50-145			
1,2,4-Trimethylbenzene	11K0099		38.2	ug/kg wet	N/A	9.55	29.7		78		55-125			
1,3,5-Trimethylbenzene	11K0099		38.2	ug/kg wet	N/A	9.55	29.2		76		50-130			
Vinyl chloride	11K0099		38.2	ug/kg wet	N/A	28.6	33.5		88		45-140			
Xylenes, total	11K0099		115	ug/kg wet	N/A	28.6	86.4		75		50-130			
Surrogate: Dibromofluoromethane	11K0099			ug/L					96		75-125			
Surrogate: Toluene-d8	11K0099			ug/L					101		80-120			
Surrogate: 4-Bromofluorobenzene	11K0099			ug/L					99		80-120			

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Volatile Organic Compounds														
UST ANALYSIS PARAMETERS														
Gasoline	11J1496		2000	ug/L	N/A	300	1190	1240	60	62	20-95	4	35	
Surrogate: Octacosane	11J1496			ug/L					88	96	45-140			
Diesel	11J1517		78.9	mg/kg	N/A	11.8	80.5		102		65-125			
Surrogate: Octacosane	11J1517			mg/kg					93		65-150			
Polychlorinated Biphenyls by EPA Method 8082														
PCB-1016	11J1558		0.200	mg/kg wet	N/A	0.0600	0.140		70		45-120			
Surrogate: Decachlorobiphenyl	11J1558			mg/kg wet					86		60-115			
Surrogate: Tetrachloro-meta-xylene	11J1558			mg/kg wet					68		45-100			
PCB-1016	11J1563		5.00	ug/L	N/A	0.800	3.03	2.33	61	47	35-105	26	20	R7
Surrogate: Decachlorobiphenyl	11J1563			ug/L					62	56	45-110			
Surrogate: Tetrachloro-meta-xylene	11J1563			ug/L					52	40	35-90			

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds														
QC Source Sample: CUJ1501-03														
Acetone	11J1574	0.0800	20.0	ug/L	N/A	N/A	11.4	10.6	57	53	45-150	7	35	
Acrylonitrile	11J1574	<10.0	20.0	ug/L	N/A	N/A	16.0	17.0	80	85	45-145	6	35	
Benzene	11J1574	<0.50	20.0	ug/L	N/A	N/A	15.7	15.4	78	77	50-130	2	20	
Bromobenzene	11J1574	<1.00	20.0	ug/L	N/A	N/A	16.3	16.3	82	82	60-135	0	15	
Bromochloromethane	11J1574	<5.00	20.0	ug/L	N/A	N/A	19.0	18.4	95	92	55-145	3	25	
Bromodichloromethane	11J1574	<1.00	20.0	ug/L	N/A	N/A	15.5	15.7	77	79	50-130	2	15	
Bromoform	11J1574	<5.00	20.0	ug/L	N/A	N/A	15.4	15.4	77	77	30-125	0	25	
Bromomethane	11J1574	0.0700	20.0	ug/L	N/A	N/A	9.76	9.11	48	45	30-130	7	35	CIN
2-Butanone (MEK)	11J1574	0.160	20.0	ug/L	N/A	N/A	14.9	14.4	74	71	45-140	3	35	
n-Butylbenzene	11J1574	<1.00	20.0	ug/L	N/A	N/A	13.4	13.2	67	66	40-135	1	20	
sec-Butylbenzene	11J1574	<1.00	20.0	ug/L	N/A	N/A	13.2	13.3	66	66	40-135	1	20	
tert-Butylbenzene	11J1574	<1.00	20.0	ug/L	N/A	N/A	13.7	14.2	69	71	40-135	3	20	
Carbon disulfide	11J1574	0.110	20.0	ug/L	N/A	N/A	14.6	14.0	72	70	30-130	4	30	
Carbon Tetrachloride	11J1574	0.210	20.0	ug/L	N/A	N/A	13.6	13.4	67	66	35-130	1	20	
Chlorobenzene	11J1574	<1.00	20.0	ug/L	N/A	N/A	16.2	15.8	81	79	60-130	2	15	
Chlorodibromomethane	11J1574	<5.00	20.0	ug/L	N/A	N/A	15.7	16.2	78	81	35-130	3	20	
Chloroethane	11J1574	0.110	20.0	ug/L	N/A	N/A	13.9	13.7	69	68	40-135	2	20	
Chloroform	11J1574	<1.00	20.0	ug/L	N/A	N/A	15.4	15.1	77	76	55-125	2	15	
Chloromethane	11J1574	0.150	20.0	ug/L	N/A	N/A	13.3	13.2	66	65	25-125	1	25	
2-Chlorotoluene	11J1574	<1.00	20.0	ug/L	N/A	N/A	15.0	15.0	75	75	55-140	0	20	
4-Chlorotoluene	11J1574	<1.00	20.0	ug/L	N/A	N/A	14.9	14.9	74	74	50-140	0	20	
1,2-Dibromo-3-chloropropane	11J1574	<10.0	20.0	ug/L	N/A	N/A	14.2	14.3	71	71	35-130	1	30	
1,2-Dibromoethane (EDB)	11J1574	<10.0	20.0	ug/L	N/A	N/A	17.1	17.2	86	86	55-140	1	20	
Dibromomethane	11J1574	<1.00	20.0	ug/L	N/A	N/A	16.8	17.0	84	85	60-135	1	15	
1,2-Dichlorobenzene	11J1574	<1.00	20.0	ug/L	N/A	N/A	15.6	15.9	78	79	55-140	2	20	
1,3-Dichlorobenzene	11J1574	0.0600	20.0	ug/L	N/A	N/A	15.6	15.9	78	79	55-135	2	15	
1,4-Dichlorobenzene	11J1574	0.0600	20.0	ug/L	N/A	N/A	15.2	15.5	76	77	55-140	2	15	
Dichlorodifluoromethane	11J1574	<3.00	20.0	ug/L	N/A	N/A	8.93	8.71	45	44	15-130	2	25	
1,1-Dichloroethane	11J1574	<1.00	20.0	ug/L	N/A	N/A	15.2	14.8	76	74	50-130	2	25	
1,2-Dichloroethane	11J1574	<1.00	20.0	ug/L	N/A	N/A	16.2	16.0	81	80	55-140	1	15	
1,1-Dichloroethene	11J1574	<2.00	20.0	ug/L	N/A	N/A	13.0	12.6	65	63	35-135	3	30	
cis-1,2-Dichloroethene	11J1574	<1.00	20.0	ug/L	N/A	N/A	16.6	16.1	83	81	45-135	3	20	
trans-1,2-Dichloroethene	11J1574	<1.00	20.0	ug/L	N/A	N/A	15.4	14.8	77	74	45-145	4	35	
1,2-Dichloropropane	11J1574	<1.00	20.0	ug/L	N/A	N/A	16.6	16.6	83	83	55-130	0	15	
1,3-Dichloropropane	11J1574	<1.00	20.0	ug/L	N/A	N/A	16.7	16.8	84	84	60-135	1	15	
2,2-Dichloropropane	11J1574	0.160	20.0	ug/L	N/A	N/A	14.6	14.4	72	71	20-120	2	35	
1,1-Dichloropropene	11J1574	<1.00	20.0	ug/L	N/A	N/A	13.4	12.6	67	63	40-140	6	20	
cis-1,3-Dichloropropene	11J1574	<5.00	20.0	ug/L	N/A	N/A	17.2	17.0	86	85	25-120	1	20	
trans-1,3-Dichloropropene	11J1574	<5.00	20.0	ug/L	N/A	N/A	16.0	16.6	80	83	25-120	4	20	
Ethylbenzene	11J1574	0.0200	20.0	ug/L	N/A	N/A	15.1	14.9	76	74	45-135	2	20	
Hexachlorobutadiene	11J1574	<5.00	20.0	ug/L	N/A	N/A	15.5	14.1	78	71	40-135	9	30	
Hexane	11J1574	<1.00	20.0	ug/L	N/A	N/A	12.0	11.8	60	59	25-135	2	35	
Isopropylbenzene	11J1574	<1.00	20.0	ug/L	N/A	N/A	12.9	12.8	64	64	45-125	0	15	
p-Isopropyltoluene	11J1574	<1.00	20.0	ug/L	N/A	N/A	13.7	14.0	69	70	40-140	2	20	
Methylene Chloride	11J1574	<5.00	20.0	ug/L	N/A	N/A	16.2	15.8	81	79	45-145	3	30	

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds														
QC Source Sample: CUJ1501-03														
Methyl tert-Butyl Ether	11J1574	<1.00	20.0	ug/L	N/A	N/A	17.0	17.1	85	86	40-135	0	25	
Naphthalene	11J1574	0.0700	20.0	ug/L	N/A	N/A	15.0	15.2	75	75	40-135	1	20	
n-Propylbenzene	11J1574	<1.00	20.0	ug/L	N/A	N/A	14.0	14.1	70	70	45-140	1	20	
Styrene	11J1574	<1.00	20.0	ug/L	N/A	N/A	15.6	15.5	78	77	40-135	1	20	
1,1,1,2-Tetrachloroethane	11J1574	<1.00	20.0	ug/L	N/A	N/A	16.5	16.4	83	82	50-130	0	20	
1,1,2,2-Tetrachloroethane	11J1574	<1.00	20.0	ug/L	N/A	N/A	15.0	15.2	75	76	55-140	2	20	
Tetrachloroethene	11J1574	0.210	20.0	ug/L	N/A	N/A	13.8	14.0	68	69	40-135	1	20	
Toluene	11J1574	0.0100	20.0	ug/L	N/A	N/A	15.7	15.4	78	77	45-135	2	20	
1,2,3-Trichlorobenzene	11J1574	<5.00	20.0	ug/L	N/A	N/A	15.7	16.6	78	83	50-140	6	25	
1,2,4-Trichlorobenzene	11J1574	<5.00	20.0	ug/L	N/A	N/A	15.4	16.0	77	80	40-135	4	25	
1,1,1-Trichloroethane	11J1574	<1.00	20.0	ug/L	N/A	N/A	14.4	14.4	72	72	40-125	0	20	
1,1,2-Trichloroethane	11J1574	<1.00	20.0	ug/L	N/A	N/A	16.5	16.3	83	81	60-130	1	15	
Trichloroethene	11J1574	<1.00	20.0	ug/L	N/A	N/A	14.9	14.7	75	74	50-130	1	20	
Trichlorofluoromethane	11J1574	<4.00	20.0	ug/L	N/A	N/A	12.6	12.1	63	61	40-145	3	25	
1,2,3-Trichloropropane	11J1574	<1.00	20.0	ug/L	N/A	N/A	15.1	15.5	75	77	55-150	3	20	
1,2,4-Trimethylbenzene	11J1574	<1.00	20.0	ug/L	N/A	N/A	15.0	15.2	75	76	45-140	1	20	
1,3,5-Trimethylbenzene	11J1574	<1.00	20.0	ug/L	N/A	N/A	14.2	14.5	71	72	45-140	2	20	
Vinyl chloride	11J1574	0.400	20.0	ug/L	N/A	N/A	13.7	13.2	66	64	30-135	3	20	
Xylenes, total	11J1574	<3.00	60.0	ug/L	N/A	N/A	46.3	45.5	77	76	40-135	2	20	
Surrogate: Dibromofluoromethane	11J1574			ug/L					97	99	75-120			
Surrogate: Toluene-d8	11J1574			ug/L					100	100	80-120			
Surrogate: 4-Bromofluorobenzene	11J1574			ug/L					100	102	80-120			
QC Source Sample: CUJ1741-02														
Acetone	11K0099	58.0	53.2	ug/kg dry	N/A	133	119	105	114	89	55-150	13	40	L1
Acrylonitrile	11K0099	<133	53.2	ug/kg dry	N/A	133	48.3	46.7	91	89	35-140	4	40	
Benzene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	42.9	43.0	81	82	40-135	0	40	
Bromobenzene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	43.3	43.4	81	83	30-125	0	40	
Bromochloromethane	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	46.2	45.3	87	87	55-130	2	35	
Bromodichloromethane	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	45.8	44.0	86	84	50-130	4	35	
Bromoform	11K0099	<26.6	53.2	ug/kg dry	N/A	26.6	41.7	39.5	78	76	35-135	6	40	
Bromomethane	11K0099	<53.2	53.2	ug/kg dry	N/A	53.2	51.4	49.5	97	95	40-135	4	35	
2-Butanone (MEK)	11K0099	<133	53.2	ug/kg dry	N/A	133	51.6	48.5	97	93	40-145	6	40	
n-Butylbenzene	11K0099	1.03	53.2	ug/kg dry	N/A	13.3	35.0	33.4	64	62	20-130	5	40	
sec-Butylbenzene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	37.6	38.5	71	74	25-125	2	40	
tert-Butylbenzene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	39.7	41.2	75	79	25-125	4	40	
Carbon disulfide	11K0099	0.976	53.2	ug/kg dry	N/A	13.3	42.2	41.3	77	77	35-135	2	40	
Carbon Tetrachloride	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	42.9	45.9	81	88	45-130	7	35	
Chlorobenzene	11K0099	0.225	53.2	ug/kg dry	N/A	13.3	40.2	42.0	75	80	35-120	4	35	
Chlorodibromomethane	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	44.3	43.4	83	83	45-130	2	40	
Chloroethane	11K0099	<53.2	53.2	ug/kg dry	N/A	53.2	46.6	48.4	88	93	45-145	4	35	
Chloroform	11K0099	0.901	53.2	ug/kg dry	N/A	13.3	43.0	42.3	79	79	55-130	2	35	
Chloromethane	11K0099	<53.2	53.2	ug/kg dry	N/A	53.2	46.2	48.8	87	94	40-135	5	40	
2-Chlorotoluene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	40.9	40.4	77	77	25-125	1	40	
4-Chlorotoluene	11K0099	0.501	53.2	ug/kg dry	N/A	13.3	37.8	38.7	70	73	25-125	2	40	
1,2-Dibromo-3-chloropropane	11K0099	<133	53.2	ug/kg dry	N/A	133	48.8	50.7	92	97	35-140	4	40	

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds														
QC Source Sample: CUJ1741-02														
1,2-Dibromoethane (EDB)	11K0099	<133	53.2	ug/kg dry	N/A	133	45.7	46.1	86	88	45-140	1	35	
Dibromomethane	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	47.8	48.0	90	92	50-135	0	35	
1,2-Dichlorobenzene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	39.8	39.5	75	76	25-120	1	40	
1,3-Dichlorobenzene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	37.0	36.9	70	71	25-125	0	40	
1,4-Dichlorobenzene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	36.0	35.9	68	69	20-125	0	40	
Dichlorodifluoromethane	11K0099	<39.9	53.2	ug/kg dry	N/A	39.9	45.6	46.0	86	88	35-135	1	35	
1,1-Dichloroethane	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	44.8	44.1	84	84	50-135	2	35	
1,2-Dichloroethane	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	45.5	43.3	86	83	50-140	5	40	
1,1-Dichloroethene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	45.7	45.4	86	87	45-145	1	35	
cis-1,2-Dichloroethene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	44.6	44.6	84	85	50-135	0	35	
trans-1,2-Dichloroethene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	45.8	44.0	86	84	45-135	4	40	
1,2-Dichloropropane	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	44.5	45.6	84	87	50-130	2	35	
1,3-Dichloropropane	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	45.5	43.8	86	84	45-140	4	40	
2,2-Dichloropropane	11K0099	<53.2	53.2	ug/kg dry	N/A	53.2	41.5	40.7	78	78	40-135	2	35	
1,1-Dichloropropene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	43.5	40.6	82	78	40-130	7	35	
cis-1,3-Dichloropropene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	42.3	43.2	80	83	35-115	2	40	
trans-1,3-Dichloropropene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	43.3	41.8	81	80	35-130	4	40	
Ethylbenzene	11K0099	1.23	53.2	ug/kg dry	N/A	13.3	42.7	41.6	78	77	30-125	3	40	
Hexachlorobutadiene	11K0099	<66.5	53.2	ug/kg dry	N/A	66.5	32.7	33.0	61	63	10-135	1	40	
Hexane	11K0099	1.70	53.2	ug/kg dry	N/A	66.5	34.1	32.7	61	59	20-140	4	40	
Isopropylbenzene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	39.9	41.1	75	79	25-125	3	40	
p-Isopropyltoluene	11K0099	0.426	53.2	ug/kg dry	N/A	13.3	35.6	36.8	66	70	20-120	3	40	
Methylene Chloride	11K0099	59.4	53.2	ug/kg dry	N/A	133	117	116	108	108	35-145	1	35	L1
Methyl tert-Butyl Ether	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	45.9	44.8	86	86	55-130	3	40	
Naphthalene	11K0099	<66.5	53.2	ug/kg dry	N/A	66.5	45.2	42.0	85	81	15-130	7	40	
n-Propylbenzene	11K0099	0.901	53.2	ug/kg dry	N/A	13.3	38.3	38.3	70	72	20-125	0	40	
Styrene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	40.0	40.6	75	78	20-125	2	40	
1,1,1,2-Tetrachloroethane	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	42.5	45.1	80	86	45-120	6	35	
1,1,2,2-Tetrachloroethane	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	46.1	46.0	87	88	40-125	0	40	
Tetrachloroethene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	38.2	37.2	72	71	30-125	3	40	
Toluene	11K0099	1.00	53.2	ug/kg dry	N/A	13.3	41.4	43.1	76	81	35-130	4	40	
1,2,3-Trichlorobenzene	11K0099	<66.5	53.2	ug/kg dry	N/A	66.5	36.5	36.1	69	69	10-130	1	40	
1,2,4-Trichlorobenzene	11K0099	0.651	53.2	ug/kg dry	N/A	66.5	31.0	31.9	57	60	15-135	3	40	
1,1,1-Trichloroethane	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	43.0	43.9	81	84	45-125	2	35	
1,1,2-Trichloroethane	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	45.8	44.0	86	84	45-135	4	40	
Trichloroethene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	39.5	39.7	74	76	40-130	1	35	
Trichlorofluoromethane	11K0099	<53.2	53.2	ug/kg dry	N/A	53.2	45.8	43.2	86	83	45-145	6	35	
1,2,3-Trichloropropane	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	45.9	44.6	86	85	50-145	3	40	
1,2,4-Trimethylbenzene	11K0099	4.76	53.2	ug/kg dry	N/A	13.3	47.5	40.6	80	69	20-125	16	40	
1,3,5-Trimethylbenzene	11K0099	<13.3	53.2	ug/kg dry	N/A	13.3	39.9	41.1	75	79	20-130	3	35	
Vinyl chloride	11K0099	<39.9	53.2	ug/kg dry	N/A	39.9	44.5	48.5	84	93	40-140	9	40	
Xylenes, total	11K0099	5.46	160	ug/kg dry	N/A	39.9	131	119	78	72	30-130	10	40	
Surrogate: Dibromofluoromethane	11K0099			ug/L					96	94	75-125			
Surrogate: Toluene-d8	11K0099			ug/L					100	101	80-120			
Surrogate: 4-Bromofluorobenzene	11K0099			ug/L					99	102	80-120			

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
Volatile Organic Compounds														
UST ANALYSIS PARAMETERS														
QC Source Sample: CUJ1649-01														
Diesel	11J1517	45.4	77.1	mg/kg	N/A	11.6	95.8	95.6	65	64	45-130	0	30	
Surrogate: Octacosane	11J1517			mg/kg							55-150			ZX
Polychlorinated Biphenyls by EPA Method 8082														
QC Source Sample: CUJ1714-01														
PCB-1016	11J1558	<0.0766	0.255	mg/kg dry	N/A	0.0766	0.154	0.159	60	63	25-120	4	35	
Surrogate: Decachlorobiphenyl	11J1558			mg/kg dry					80	85	30-125			
Surrogate: Tetrachloro-meta-xylene	11J1558			mg/kg dry					69	65	30-115			

TERRACON - DES MOINES
600 SW 7th St., Suite M
Des Moines, IA 50309
Jesse Nelson

Work Order: CUJ1751
Project: Crane
Project Number: 08117101

Received: 10/27/11
Reported: 11/03/11 15:38

CERTIFICATION SUMMARY

TestAmerica Cedar Falls

Method	Matrix	Nelac	Iowa
OA-2 - 8015B	Solid/Soil	X	X
OA-2 - 8015B	Water - NonPotable	X	X
SM 2540 G	Solid/Soil		X
SW 8082	Solid/Soil	X	X
SW 8082	Water - NonPotable	X	X
SW 8260B	Solid/Soil	X	X
SW 8260B	Water - NonPotable	X	X
SW	Water - NonPotable		

Any abnormalities or departures from sample acceptance policy shall be documented on the 'Sample Receipt and Temperature Log Form' and 'Sample Non-conformance Form' (if applicable) included with this report.

For information concerning certifications of this facility or another TestAmerica facility, please visit our website at www.TestAmericaInc.com

Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) and are sampled in accordance with TA-CF SOP CF-FSS-01.

DATA QUALIFIERS AND DEFINITIONS

>2	>2
CIN	The % RSD for this compound was above 15%. The average % RSD for all compounds in the calibration met the 15% criteria specified in EPA methods 8260B/8270C.
H3	Sample was received and analyzed past holding time.
L1	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was outside control limits.
R7	LCS/LCSD RPD exceeded the acceptance limit. Recovery met acceptance criteria.
Z6	Surrogate recovery was outside control limits.
ZX	Due to sample matrix effects, the surrogate recovery was outside the control limits.

ADDITIONAL COMMENTS

Results are reported on a wet weight basis unless otherwise noted.

[illegible]

Sample Receipt and Temperature Log Form

Client: Terracon Project: _____

City: Des Moines, Ia

Date: 10/27/11 Receiver's Initials: JMH Time (Delivered): 1800

Temperature Record:

Cooler ID# (If Applicable)

CF-28

2.8

°C / On Ice

☒ Temp Blank

☐ Temperature out of compliance

Thermometer:

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

Courier:

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

Custody seals present?

☒ Yes

Custody seals intact?

☒ Yes ☐ No

☐ Non-Conformance report started

Exceptions Noted

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

purge vials

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