

CON 12-15 Doc #26545

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LIMITED PHASE II ENVIRONMENTAL SITE **ASSESSMENT**

GREEN PLAINS GRAIN MAIN SITE 701 4TH AVENUE WEST SPENCER, IOWA

ATC PROJECT # 353.40020.0001

Prepared for:

Green Plains Grain Company LLC 450 Regency Parkway Suite 400 Omaha, Nebraska 68114

Prepared by:

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December 21, 2011

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LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT

Green Plains Grain Main Site 701 4th Avenue West Spencer, Iowa

TABLE OF CONTENTS

1.0 INTRODUCTION AND LIMITATIONS	
1.1 Introduction	1-1
1.2 Limitations	1-1
2.0 SUBSURFACE INVESTIGATION	
2.1 Sampling Plan	
2.1.1 Sample Locations	
2.1.2 Soil and Water Sampling	
2.1.3 Regulatory Considerations and Laboratory Analyses	
2.2 Field Observations	
2.2.1 Lithology	
2.2.2 Field Evidence of Hydrocarbons	
2.3 Discussion of Results	
3.0 SUMMARY OF FINDINGS	

FIGURE

Figure 1 – Site Map

APPENDICES

Appendix A – Soil Boring Logs Appendix B – Tables Appendix C – Laboratory Analytical Report



1.0 INTRODUCTION AND LIMITATIONS

1.1 INTRODUCTION

ATC Associates (ATC) was retained by Green Plains Grain Company LLC (client) to conduct a Limited Phase II Environmental Site Assessment (ESA) of the following property:

Green Plains Grain Main Site 701 4th Avenue West Spencer, Iowa

Historical information obtained by ATC indicated that a bulk oil storage facility was located on the property. The client wished to investigate the recognized environmental condition (former use and storage of petroleum fuels) as part of a real estate transaction involving the above property. Therefore, ATC's scope of work was to conduct field activities, collect and analyze soil and groundwater samples and prepare a formal report including findings and recommendations regarding the potential environmental impact to the above referenced property in Spencer, Iowa.

1.2 LIMITATIONS

ATC has prepared this report in a professional manner, using that degree of skill and care exercised for similar projects under similar conditions by reputable and competent environmental consultants. ATC shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the report was prepared. ATC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report and the site inspection. ATC believes the conclusions stated herein to be factual, but no guarantee is made or implied.

This study and report has been prepared on behalf of and for the exclusive use of Green Plains Grain Company LLC solely for use and reliance in the environmental assessment of this site. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of Green Plains Grain Company LLC and ATC. Notwithstanding anything to the contrary herein, any third party reliance is limited to the agreed upon scope of work by and between ATC and Green Plains Grain Company LLC.



2.0 SUBSURFACE INVESTIGATION

2.1 SAMPLING PLAN

2.1.1 Sample Locations

On November 21, 2011, ATC mobilized an environmental professional and a drilling subcontractor to the site to advance up to three soil borings to a depth of 15 feet below grade in an effort to determine subsurface conditions (soil boring locations are shown in Figure 1). A temporary 2" PVC well casing was installed in the three boring locations for groundwater sampling purposes.

Soil borings B-1, B-2, and B-3 were advanced in the parking lot east of the feed mill and west of the Spencer Ag Center in the approximate location of the former bulk storage facility. The three borings formed a rough triangle with B-1 in the southeast corner, B-2 in the north corner, and B-3 in the southwest corner. The approximate distance from north to south was 53 feet and from east to west was 15 feet.

The three borings were advanced to 15 feet below grade. Temporary monitoring wells, consisting of 2" PVC well screen and solid pipe, were installed in borings B-1, B-2, and B-3.

2.1.2 Soil and Water Sampling

Soil samples were continuously collected from ground surface to the boring termination depth at the three boring locations. All retrieved samples were assessed for evidence of petroleum impacts by visual and olfactory examination. The samples were also field-screened for the presence of volatiles using a photo ionization detector (PID). A soil sample was collected and analyzed from each boring at a depth corresponding to the highest recorded field PID reading at, or above, the observed water table.

Proper sample collection and handling protocol was exercised (disposable gloves, clean sampling equipment) to ensure sample integrity. All sample containers were properly labeled and stored in a cooler, preserved with ice to 4°C for delivery to a State Certified Laboratory, TestAmerica Laboratories (Cedar Falls, Iowa). Chain-of-custody documentation was initiated in the field and accompanied the samples to the laboratory.

Groundwater was encountered in the temporary monitoring wells at depths ranging from approximately 6 to 10 feet below grade.

Groundwater samples were collected for analysis from the temporary monitoring wells in Borings B-1, B-2, and B-3. The temporary monitoring wells were developed using a disposable bailer with approximately two to five gallons removed from the well prior to sample collection. The groundwater sample was then collected with the disposable bailer and containerized in the appropriate sample bottles.



Following completion of site activities, the 2" PVC well screen and solid pipe were removed from the borings. The borings were then filled with auger cuttings to a depth of four feet below grade, then bentonite was added to just below the ground surface, and auger cuttings were placed on the surface.

2.1.3 Regulatory Considerations and Laboratory Analyses

Soil samples collected from three boring locations and groundwater from three temporary wells were submitted to the laboratory for analysis for benzene, toluene, ethyl benzene and xylenes (BTEX) per Iowa OA-1 methodology and total extractable hydrocarbons per Iowa OA-2 methodology.

Sample results were compared against the Iowa DNR, Contaminated Sites Section, Statewide Standards for Contamination in Soil and Groundwater Table. The results of the comparison can be found in Tables 3-1 and 3-2 in Appendix B.

2.2 FIELD OBSERVATIONS

2.2.1 Lithology

Lithologies encountered at the boring locations generally consisted of gravel overlying sand deposits. Groundwater was found to be approximately 6 to 10 feet below ground surface. Soil boring logs are included in Appendix A.

2.2.2 Field Evidence of Hydrocarbons

Visible or olfactory evidence of environmental impacts were identified in the four soil borings advanced on site. Field recorded PID readings ranged from <10 parts per million (ppm) from a few sample intervals to 122.1 ppm in B-1 at 14-15 feet, to 339 ppm in B-2 at 14-15 feet, and to 34.7 ppm in B-3 at 14-15 feet. The groundwater samples collected also exhibited petroleum odors and/or discoloration. PID readings are indicated on the boring logs.

2.3 DISCUSSION OF RESULTS

Based on the data obtained from the limited subsurface exploration program conducted by ATC Associates, petroleum hydrocarbon contaminants have been identified on site. Soil and groundwater analytical results were compared to the Iowa DNR, Contaminated Sites Section, Statewide Standards for Contamination in Soil and Groundwater Table. The results of the comparison can be found in Tables 3-1 and 3-2 in Appendix B.



Soil sample analytical results indicate that toluene, ethyl benzene, and xylenes were identified in the soil sample analyzed from boring B-2 with concentrations above the laboratory's method detection limits, but the concentrations of these chemicals are below the current regulatory action limits. TEH-diesel, TEH-waste oil and TEH-gasoline were detected above the laboratory's method detection limits, but no regulatory action limit exists for these chemicals.

Groundwater analytical results from B-1 indicate that benzene, ethyl benzene, and xylenes were detected above the laboratory's method detection limits, but the concentrations of these chemicals are below the current regulatory action limits. TEH-diesel and TEH-gasoline were detected above the laboratory's method detection limits, but no regulatory action limit exists for these chemicals.

Groundwater analytical results from B-2 indicate that benzene was identified above the Iowa DNR's action limits of 5 parts per billion. Ethyl benzene and xylenes were also detected above the laboratory's method detection limits, but the concentrations of these chemicals are below the current regulatory action limits. TEH-diesel, TEH-waste oil, and TEH-gasoline were detected above the laboratory's method detection limits, but no regulatory action limit exists for these chemicals.

Groundwater analytical results from B-3 indicate that benzene, toluene, ethyl benzene, and xylenes were detected above the laboratory's method detection limits, but the concentrations of these chemicals are below the current regulatory action limits. TEH-diesel, TEH-waste oil, and TEH-gasoline were also detected above the laboratory's method detection limits, but no regulatory action limit exists for these chemicals.



3.0 SUMMARY OF FINDINGS

ATC performed a Phase II ESA at Green Plains Grain Main Site in Spencer, Iowa, in an effort to determine if environmental impacts have resulted from past operations conducted on the property. ATC conducted the investigation on November 21, 2011.

Three soil borings were advanced to depths of approximately 15 feet below ground surface and temporary monitoring wells were installed in the borings. Soil samples were collected from the borings and groundwater samples were collected from the borings. The samples were sent to a state-certified laboratory for analysis of BTEX and TEH in accordance to State of Iowa methodologies.

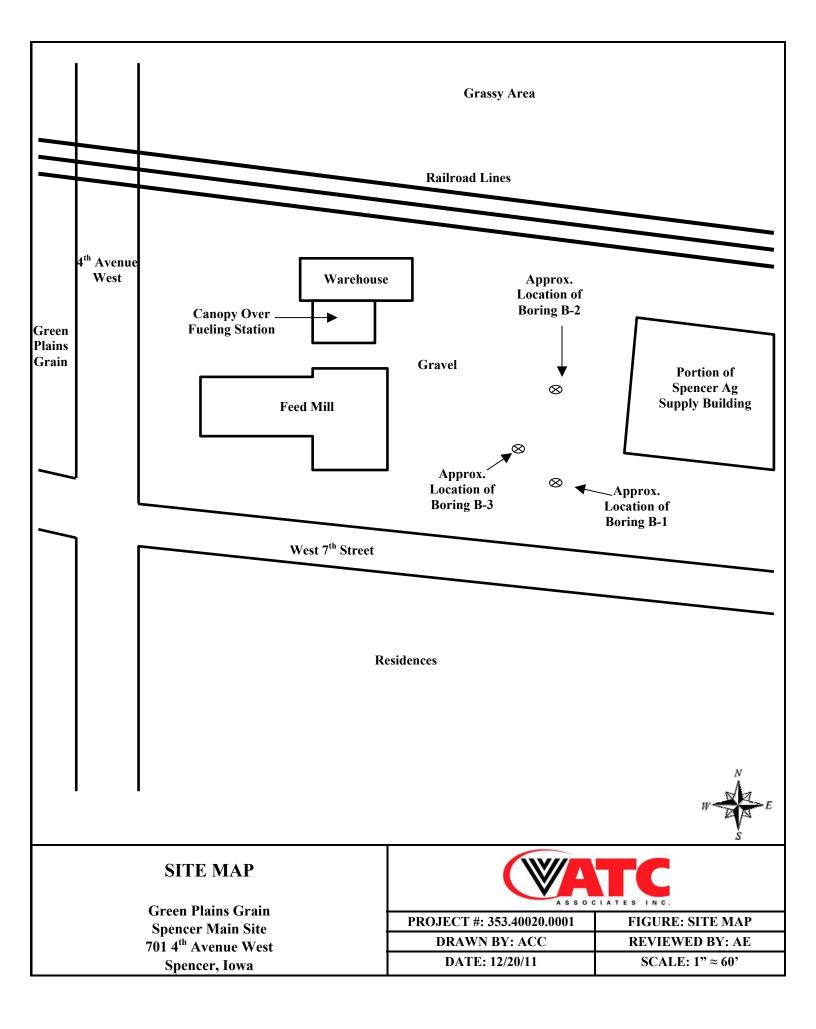
No chemicals of concern analyzed for in soil exceeded applicable Iowa DNR action levels. Groundwater concentrations indicate that benzene in boring B-2 exceeds applicable Iowa DNR action levels.

ATC recommends the owner of the property notify the Iowa DNR Contaminated Sites Section of the results of this limited assessment. Concentrations exceed the minimum action levels for groundwater contaminants and regulatory action is possible.

Please note that the laboratory analytical report included in Appendix C also includes results for Borings B-4 and B-5 which are not located at this site.



FIGURE 1





Appendix A Soil Boring Logs

SOIL E							ORI								101	N DIA	AGRA			
Boring/\ B-1		#	Facili Name		reen Plains (TC Job # 353		.0001		acility ddres				ve West Iowa							
Boring De	pth	(feet)) x Dian	neter	(inches) 1	5' x 8''		D	rilling	Metho	od	4.25	HSA							
Well Contr Registratio				Drillin Cooi	g ns # 1986			L	oggeo	d By A	Art (Curri	er							
Date & Time Start		11/21 10:47		Date Tim	e & 11/2 e End 11:1	21/11 5	Grou TOC		urface Ition							T# N/A # 1986	06210			
Depth	w	ell C	onstruct	ion	Blow Count/		Samplir	ng Dat	a	PID/F	-ID		Rock Formation, Soil Color and Classifications, Observations							
in Feet		etails			Penetromete	r N	o	Type*	Rec	Read			and Cla (moistu			s, Obser	vations			
-0			2" Temp	. Well		+	+			 0.2			SAND-fine grained, light brown with gravel (
- 1.25						+		SS		 0.1			SAND-fir	ne grain	ned, da	ark brown	with gravel (
- 2.5				oina				SS		2.0			with pie		brick					
- 3.75			Solid Ca	any		<u> </u>		SS 		4.5 			with pi	eces UI	DIICK					
- 5						+	+	SS 		9.7 — — —										
- 6.25	<u> </u>				+	+	SS SS		10.0 — — — 20.3			SAND-fir	ne grair	ned, lig	ht brown ((SP)				
- 7.5	-									+	 SS					SAND-fir	ne grair	ned, lig	ht brown	with gravel (
- 8.75								SS		 18.5	 5									
- 10			Slotted S							 41.3 	 3									
			Slotted S	screen		<u> </u>		SS		17.6 	6 									
- 11.25						+		SS 		61.3 										
- 12.5						+	+	SS SS		67.8 — — — 58.3					rained	, light brov	vn with grav			
- 13.75						+	+	 		50.3 122.			moist (SF SAND-cc moist (SF	barse g	rained	, light gray	with gravel			
15															of Bor	ing at 15	feet			
- 16.25																				
- 17.5																				
- 18.75																				
* SS (sp		-		hollo	w stem aug	ger) H	A (han	-				I								
OBSER								Date												
WATER					•			Level	-	50										
Static W	vate	r Lev	el Sym	bol -	<u> </u>			Time	:											

		NG L	OG	6 & MOI	VITO	ORIN	G١	WΕ	LL (CO)N(STRU	ICI		N DIA	AGRA	
Boring/\ B-2		Facilit Name	- · ·	reen Plains G TC Job # 353		.0001		acility ddres				Ave West Iowa					
Boring De	pth (feet	t) x Diam	neter	(inches) 15	5' x 8''		Dr	rilling	Metho	od 4	4.25	HSA					
Well Conti Registration		JC D John		g ns # 1986			Lo	oggeo	d By A	Art C	Curri	ier					
Date &	11/2		Date			Ground									T# N/A		
Time Start	t 11:2	0	Tim	e End 11:40	-	TOC El Sampling						Pock E	orma		# 1986		
Depth in Feet	Well C Details	Constructi	ion	Blow Count/ Penetrometer	No			a Rec		and Cla			Rock Formation, Soil Color and Classifications, Observations				
	Detail	5				J. Ty	Je	Rec	Reau	ing		(moisture, etc.)					
-0		2" Temp.	Well			s	s		0.3			SAND-fine grained, light brown with gravel				with gravel (S	
- 1.25						S	s		0.2			SAND-fine grained, dark brown with grave				with gravel (\$	
- 2.5						s	s		6.0								
- 3.75		[–] Solid Cas	sing			s	s		 7.8								
- 5					L	s	s		9.1							(22)	
					L	s	s 		10.7	7					ght brown (
- 6.25					 	S	s 		15.4	4		SAND-co (SP)	oarse (grained	, light brov	vn with grave	
- 7.5							s	s 		19.1 	1						
- 8.75						S	s 		15.7 — — —	7 — —							
- 10	<u>▼</u>	⁻ Slotted S	creen			+-	S 		20.3 	3 — —							
- 11.25						+-	S 		39.8 — — —								
10.5							s 		165 								
- 12.5					 		s 		140) — —		SAND-co		rained	light gray	with gravel	
- 13.75					<u> </u>		s 		183 	3 — —		(SP)			, iigin gidy	graver	
- 15						s	S	**	339)		moist	End	of Rov	ring at 15	feet	
- 16.25													_,,,,	2. 201			
- 17.5																	
- 18.75																	
			hollo	w stem auge	er) H	A (hand		T									
	VATION						ate:										
	R LEVEL		hel				evel:	-	.00								
Static V	vater Le	vel Syml	100	Ŧ			ime:										

		NG L	OG	6 & MO	NITO	ORIN	G	WE	LL CO	DN	STRU	JCT	ION	DIA	GRAM
Boring/V B-3		Facilit Name	-	reen Plains (TC Job # 353		.0001		acility ddres			Ave West Iowa				
Boring De	pth (feet	t) x Diam	eter	(inches) 1	5' x 8''		D	rilling	Method	4.25	HSA				
Well Contr Registratio		JC D John		g ns # 1986			L	ogged	By Art	Curr	ier				
Date & Time Start	11/2 11:5	-	Date Time	e & 11/2 e End 12:1		Groun TOC E							LUST# Reg #		6210
Depth	Well C	constructio	on	Blow Count/	5	Sampling	Dat	а	PID/FID		Rock F				
in Feet	Details		_	Penetrometer	N	о. Ту	′pe*	Rec	Reading		and Cla (moistu			Obser	ations
-0		2" Temp.	Well		+		 SS		0.1		SAND-fine grained, dark brown with gravel				with gravel (SP
- 1.25							SS		0.3						
- 2.5		[–] Solid Cas	ina				SS		0.8	_					
- 3.75			my		<u> </u>		SS 		1.1		SAND-fir	ne orair	ned. liaht	brown	vith gravel (SP)
- 5					+		SS 		3.7		SAND-fine grained, light brown with gravel (S SAND-fine grained, light brown (SP)				
- 6.25					+	+-	SS SS		4.1 						
- 7.5					+		 SS		5.0						
- 8.75					+		 SS		5.9	_	SAND-co (SP)	oarse g	rained, li	ight brov	n with gravel
					<u>+</u>		SS		10.1						
- 10		⁻ Slotted So	creen				SS		12.7						
- 11.25					<u> </u>		SS		15.3	_					
- 12.5					+	+-	SS 		21.7 				rained, li	ight gray	with gravel,
- 13.75					+		SS SS		23.4 	_	moist (SI	P)			
- 15								**	54.7			End o	of Borin	g at 15	feet
- 16.25															
- 17.5															
- 18.75															
* SS (sp	-		nollo	w stem aug	er) H	•			1				1		
OBSER							Date								
WATER				•			evel		.00						
Static W	vater Lev	vel Symb) ol -	<u>-</u>		T	ime	:							



Appendix B Tables

Sample	Boring	Sample	0.	A-1 (mg/K	(g)	OA-2	(mg/Kg))
ID	Location	Depth	Analyte	Result	Action	Analyte	Result	Action
		-			Limit			Limit
	In parking		Benzene	< 0.250	88	TEH as diesel	<11.7	NS
B-1	lot	14-15'	Toluene	< 0.500	6,100	TEH as motor oil	<11.7	NS
	between	(bgs)	Ethyl	< 0.500	7,600	TEH as gasoline	<11.7	NS
	feed mill		benzene					
	and		Xylenes	< 0.500	15,000			
	Spencer							
	Ag Center							
B-2	In parking		Benzene	< 0.250	88	TEH as diesel	1,560	NS
	lot	14-15'	Toluene	1.37	6,100	TEH as motor oil	20	NS
	between	(bgs)	Ethyl	0.864	7,600	TEH as gasoline	345	NS
	feed mill		benzene					
	and		Xylenes	1.76	15,000			
	Spencer							
	Ag Center							
B-3	In parking		Benzene	< 0.250	88	TEH as diesel	<11.9	NS
	lot	14-15'	Toluene	< 0.500	6,100	TEH as motor oil	<11.9	NS
	between	(bgs)	Ethyl	< 0.500	7,600	TEH as gasoline	<11.9	NS
	feed mill		benzene					
	and		Xylenes	< 0.500	15,000			
	Spencer							
	Ag Center							

Table 3-1: Soil Sample Analytical Results Summary

mg/Kg – milligrams per kilogram = parts per million Bold results indicate those that exceed the applicable regulatory limit NS – No statewide standard exists for analyte

Sample	Well	GW	()A-1 (ug/I	L)	OA-	2 (ug/L)	
ID	Location	Level	Analyte	Result	Action	Analyte	Result	Action
					Limit			Limit
B-1	In parking		Benzene	4.1	5	TEH as diesel	2,150	NS
	lot	6.50'	Toluene	<10	1,000	TEH as motor oil	<345	NS
	between	(bgs)	Ethyl	132	700	TEH as gasoline	4,020	NS
	feed mill		benzene					
	and		Xylenes	697	10,000			
	Spencer							
	Ag Center							
B-2	In parking		Benzene	14.8	5	TEH as diesel	67,800	NS
	lot	10.00'	Toluene	<10	1,000	TEH as motor oil	1,650	NS
	between	(bgs)	Ethyl	18.5	700	TEH as gasoline	45,000	NS
	feed mill		benzene					
	and		Xylenes	46.5	10,000			
	Spencer							
	Ag Center							
B-3	In parking		Benzene	3.79	5	TEH as diesel	18,100	NS
	lot	10.00'	Toluene	18.3	1,000	TEH as motor oil	1,380	NS
	between	(bgs)	Ethyl	61.0	700	TEH as gasoline	7,200	NS
	feed mill		benzene					
	and		Xylenes	231	10,000			
	Spencer							
	Ag Center							

 Table 3-2:
 Groundwater Sample Analytical Results Summary

ug/L – micrograms per liter = parts per billion Bold results indicate those that exceed the applicable regulatory limit NS – No statewide standard exists for analyte



Appendix C Laboratory Analytical Report

December 20, 2011

11117 M	OCIATES - OMAHA	Work Order:	CUK1443
	ockingbird Drive	Project Name:	Green Plains Grain
	NE 68137	Project Number:	353.40020.0001
Attn:	Art Currier	Date Received:	11/23/11

The Chain(s) of Custody, 3 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
Spencer B-1 14-15	CUK1443-01	11/21/11 10:47
Spencer B-2 14-15	CUK1443-02	11/21/11 11:20
Spencer B-3 14-15	CUK1443-03	11/21/11 11:50
Spencer B-4 7-8	CUK1443-04	11/21/11 13:20
Spencer B-5 6-7	CUK1443-05	11/21/11 13:48
Spencer B-1	CUK1443-09	11/22/11 16:20
Spencer B-2	CUK1443-10	11/22/11 16:25
Spencer B-3	CUK1443-11	11/22/11 16:30
Spencer B-4	CUK1443-12	11/22/11 15:15
Spencer B-5	CUK1443-13	11/22/11 15:25

Samples were received into laboratory at a temperature of 0.40 °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:

haw Hayes

Iowa UST Lab Certification No. 007

TestAmerica Cedar Falls Shawn M. Hayes Project Manager

Page 1 of 16



THE LEADER IN ENVIRONMENTAL TESTING

CUK1443 ATC ASSOCIATES - OMAHA Work Order: 11117 Mockingbird Drive Omaha, NE 68137 Project: Art Currier Project Number: 353.40020.0001

Green Plains Grain

11/23/11 Received: 12/20/11 09:59 Reported:

		1							
Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUK1443-01 (Spenc	er B-1 14-15 - Soil)				Sampled:	11/21/11 10:47	Recy	vd: 11/23	/11 12:45
Sampled By:	Art Currier			Phone	(515	5) 554-1522			
UST Volatile Compounds by GC									
Benzene	< 0.250		mg/kg	0.250	249	12/01/11 18:18	cmm	11L0072	OA-1 - 8021B
Toluene	< 0.500		mg/kg	0.500	249	12/01/11 18:18	cmm	11L0072	OA-1 - 8021B
Ethylbenzene	< 0.500		mg/kg	0.500	249	12/01/11 18:18	cmm	11L0072	OA-1 - 8021B
Xylenes, total	< 0.500		mg/kg	0.500	249	12/01/11 18:18	cmm	11L0072	OA-1 - 8021B
Surr: 4-Bromofluorobenzene (40-150%)	87 %								
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	<11.7		mg/kg	11.7	1	12/01/11 18:45	mag	[CALC]	OA-2 - 8015B
Diesel	<11.7		mg/kg	11.7	1.17	12/01/11 18:45	mag	11K1416	OA-2 - 8015B
Gasoline	<11.7		mg/kg	11.7	1.17	12/01/11 18:45	mag	11K1416	OA-2 - 8015B
Motor Oil	<11.7		mg/kg	11.7	1.17	12/01/11 18:45	mag	11K1416	OA-2 - 8015B
Surr: Octacosane (50-150%)	99 %								



THE LEADER IN ENVIRONMENTAL TESTING

ATC ASSOCIATES - OMAHA Work Order: 11117 Mockingbird Drive Omaha, NE 68137 Project: Art Currier Project Number:

Green Plains Grain

CUK1443

11/23/11 Received: 12/20/11 09:59 Reported:

353.40020.0001

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUK1443-02 (Spen	cer B-2 14-15 - Soil)				Sampled:	11/21/11 11:20	Rec	vd: 11/23	/11 12:45
Sampled By:	Art Currier			Phone	(515	5) 554-1522			
UST Volatile Compounds by GC									
Benzene	< 0.250		mg/kg	0.250	249	12/01/11 18:55	cmm	11L0072	OA-1 - 8021B
Toluene	1.37		mg/kg	0.500	249	12/01/11 18:55	cmm	11L0072	OA-1 - 8021B
Ethylbenzene	0.864		mg/kg	0.500	249	12/01/11 18:55	cmm	11L0072	OA-1 - 8021B
Xylenes, total	1.76		mg/kg	0.500	249	12/01/11 18:55	cmm	11L0072	OA-1 - 8021B
Surr: 4-Bromofluorobenzene (40-150%)	91 %								
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	1920		mg/kg	35.1	3	12/02/11 12:33	mag	[CALC]	OA-2 - 8015B
Diesel	1560		mg/kg	35.1	3.51	12/02/11 12:33	mag	11K1416	OA-2 - 8015B
Gasoline	345	Q	mg/kg	11.7	1.17	12/01/11 19:26	mag	11K1416	OA-2 - 8015B
Motor Oil	20.0		mg/kg	11.7	1.17	12/01/11 19:26	mag	11K1416	OA-2 - 8015B
Surr: Octacosane (50-150%)	129 %								



THE LEADER IN ENVIRONMENTAL TESTING

CUK1443 ATC ASSOCIATES - OMAHA Work Order: 11117 Mockingbird Drive Omaha, NE 68137 Project: Art Currier Project Number:

Green Plains Grain

11/23/11 Received: 12/20/11 09:59 Reported:

353.40020.0001

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUK1443-03 (Spen	cer B-3 14-15 - Soil)				Sampled:	11/21/11 11:50	Rec	vd: 11/23	/11 12:45
Sampled By:	Art Currier			Phone	(51	5) 554-1522			
UST Volatile Compounds by GC									
Benzene	< 0.250		mg/kg	0.250	233	12/01/11 19:31	cmm	11L0072	OA-1 - 8021B
Toluene	< 0.500		mg/kg	0.500	233	12/01/11 19:31	cmm	11L0072	OA-1 - 8021B
Ethylbenzene	< 0.500		mg/kg	0.500	233	12/01/11 19:31	cmm	11L0072	OA-1 - 8021B
Xylenes, total	< 0.500		mg/kg	0.500	233	12/01/11 19:31	cmm	11L0072	OA-1 - 8021B
Surr: 4-Bromofluorobenzene (40-150%)	88 %								
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	<11.9		mg/kg	11.9	1	12/01/11 20:07	mag	[CALC]	OA-2 - 8015B
Diesel	<11.9		mg/kg	11.9	1.19	12/01/11 20:07	mag	11K1416	OA-2 - 8015B
Gasoline	<11.9		mg/kg	11.9	1.19	12/01/11 20:07	mag	11K1416	OA-2 - 8015B
Motor Oil	<11.9		mg/kg	11.9	1.19	12/01/11 20:07	mag	11K1416	OA-2 - 8015B
Surr: Octacosane (50-150%)	100 %								



THE LEADER IN ENVIRONMENTAL TESTING

CUK1443 ATC ASSOCIATES - OMAHA Work Order: 11117 Mockingbird Drive Omaha, NE 68137 Green Plains Grain Project: Art Currier Project Number: 353.40020.0001

11/23/11 Received: 12/20/11 09:59 Reported:

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUK1443-04 (Spenc	er B-4 7-8 - Soil)				Sampled:	11/21/11 13:20	Rec	vd: 11/23	/11 12:45
Sampled By: A	Art Currier			Phone	(51	5) 554-1522			
UST Volatile Compounds by GC									
Benzene	< 0.250		mg/kg	0.250	242	12/01/11 20:08	cmm	11L0072	OA-1 - 8021B
Toluene	< 0.500		mg/kg	0.500	242	12/01/11 20:08	cmm	11L0072	OA-1 - 8021B
Ethylbenzene	< 0.500		mg/kg	0.500	242	12/01/11 20:08	cmm	11L0072	OA-1 - 8021B
Xylenes, total	1.28		mg/kg	0.500	242	12/01/11 20:08	cmm	11L0072	OA-1 - 8021B
Surr: 4-Bromofluorobenzene (40-150%)	86 %								
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	575		mg/kg	11.8	1	12/01/11 20:48	mag	[CALC]	OA-2 - 8015B
Diesel	437		mg/kg	11.8	1.18	12/01/11 20:48	mag	11K1416	OA-2 - 8015B
Gasoline	97.7	Q	mg/kg	11.8	1.18	12/01/11 20:48	mag	11K1416	OA-2 - 8015B
Motor Oil	39.9	Q	mg/kg	11.8	1.18	12/01/11 20:48	mag	11K1416	OA-2 - 8015B
Surr: Octacosane (50-150%)	101 %								



THE LEADER IN ENVIRONMENTAL TESTING

CUK1443 ATC ASSOCIATES - OMAHA Work Order: Received: 11117 Mockingbird Drive Reported: Omaha, NE 68137 Green Plains Grain Project: Art Currier Project Number: 353.40020.0001

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	nit Dilution Date Factor Analyzed		Analyst	Seq/ Batch	Method
Sample ID: CUK1443-05 (Spence	er B-5 6-7 - Soil)				Sampled:	11/21/11 13:48	Rec	vd: 11/23	/11 12:45
Sampled By: A	Art Currier			Phone	(515	5) 554-1522			
UST Volatile Compounds by GC									
Benzene	< 0.250		mg/kg	0.250	243	12/01/11 20:45	cmm	11L0072	OA-1 - 8021B
Toluene	< 0.500		mg/kg	0.500	243	12/01/11 20:45	cmm	11L0072	OA-1 - 8021B
Ethylbenzene	< 0.500		mg/kg	0.500	243	12/01/11 20:45	cmm	11L0072	OA-1 - 8021B
Xylenes, total	< 0.500		mg/kg	0.500	243	12/01/11 20:45	cmm	11L0072	OA-1 - 8021B
Surr: 4-Bromofluorobenzene (40-150%)	88 %								
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	2350		mg/kg	59.3	5	12/02/11 13:15	mag	[CALC]	OA-2 - 8015B
Diesel	2020		mg/kg	59.3	5.93	12/02/11 13:15	mag	11K1416	OA-2 - 8015B
Gasoline	198		mg/kg	11.9	1.19	12/01/11 21:29	mag	11K1416	OA-2 - 8015B
Motor Oil	129		mg/kg	11.9	1.19	12/01/11 21:29	mag	11K1416	OA-2 - 8015B
Surr: Octacosane (50-150%)	131 %								

11/23/11

12/20/11 09:59



704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

ATC ASSOCIATES - OMAHAWork Order:CUK1443Received:11/23/1111117 Mockingbird DriveProject:Green Plains Grain12/20/11 09:59Omaha, NE 68137Project Number:353.40020.0001EVENTION

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUK1443-09 (Spencer H	3-1 - Ground W	ater)			Sampled:	11/22/11 16:20	Rec	vd: 11/23	/11 12:45
Sampled By: Art	Currier			Phone	(51	5) 554-1522			
UST Volatile Compounds by GC									
Benzene	4.10	J, MDL	ug/L	0.900	5	12/02/11 08:33	cmm	11L0087	OA-1 - 8021B
Toluene	<10.0		ug/L	10.0	5	12/02/11 08:33	cmm	11L0087	OA-1 - 8021B
Ethylbenzene	132		ug/L	10.0	5	12/02/11 08:33	cmm	11L0087	OA-1 - 8021B
Xylenes, total	697		ug/L	15.0	5	12/02/11 08:33	cmm	11L0087	OA-1 - 8021B
Surr: 4-Bromofluorobenzene (55-130%)	88 %								
VOC Preservation Check									
рН	>2	Р	units	2.00	1	12/01/11 16:42	ztb	11L0049	SW 9041
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	6170		ug/L	345	1	11/29/11 21:12	mag	[CALC]	OA-2 - 8015B
Diesel	2150		ug/L	345	1.15	11/29/11 21:12	mag	11K1294	OA-2 - 8015B
Gasoline	4020		ug/L	345	1.15	11/29/11 21:12	mag	11K1294	OA-2 - 8015B
Motor Oil	<345		ug/L	345	1.15	11/29/11 21:12	mag	11K1294	OA-2 - 8015B
Surr: Octacosane (55-150%)	93 %								



THE LEADER IN ENVIRONMENTAL TESTING

ATC ASSOCIATES - OMAHAWork Order:CUK1443Received:11117 Mockingbird DriveReported:Reported:Omaha, NE 68137Project:Green Plains GrainArt CurrierProject Number:353.40020.0001

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUK1443-10 (Spencer E	8-2 - Ground W	ater)			Sampled:	11/22/11 16:25	Rec	vd: 11/23	/11 12:45
Sampled By: Art (Currier			Phone	(515	5) 554-1522			
UST Volatile Compounds by GC									
Benzene	14.8		ug/L	10.0	5	12/03/11 02:45	cmm	11L0165	OA-1 - 8021B
Toluene	<10.0	RL1	ug/L	10.0	5	12/03/11 02:45	cmm	11L0165	OA-1 - 8021B
Ethylbenzene	18.5		ug/L	10.0	5	12/03/11 02:45	cmm	11L0165	OA-1 - 8021B
Xylenes, total	46.5		ug/L	15.0	5	12/03/11 02:45	cmm	11L0165	OA-1 - 8021B
Surr: 4-Bromofluorobenzene (55-130%)	88 %								
VOC Preservation Check									
рН	>2	Р	units	2.00	1	12/01/11 16:42	ztb	11L0049	SW 9041
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	114000		ug/L	3490	10	11/30/11 08:52	mag	[CALC]	OA-2 - 8015B
Diesel	67800		ug/L	3490	11.6	11/30/11 08:52	mag	11K1294	OA-2 - 8015B
Gasoline	45000	Q	ug/L	349	1.16	11/29/11 21:53	mag	11K1294	OA-2 - 8015B
Motor Oil	1650	Q	ug/L	349	1.16	11/29/11 21:53	mag	11K1294	OA-2 - 8015B
Surr: Octacosane (55-150%)	107 %								

11/23/11

12/20/11 09:59



704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

ATC ASSOCIATES - OMAHAWork Order:CUK1443Received:11/23/1111117 Mockingbird Drivereported:12/20/11 09:59Omaha, NE 68137Project:Green Plains Grain12/20/11 09:59Art CurrierProject Number:353.40020.000112/20/11 09:59

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUK1443-11 (Spencer		L				11/22/11 16:30			/11 12:45
Sampled By: Art	Currier			Phone	•	5) 554-1522			
UST Volatile Compounds by GC									
Benzene	3.79		ug/L	2.00	1	12/02/11 04:15	cmm	11L0087	OA-1 - 8021B
Toluene	18.3		ug/L	2.00	1	12/02/11 04:15	cmm	11L0087	OA-1 - 8021B
Ethylbenzene	61.0		ug/L	2.00	1	12/02/11 04:15	cmm	11L0087	OA-1 - 8021B
Xylenes, total	231		ug/L	3.00	1	12/02/11 04:15	cmm	11L0087	OA-1 - 8021B
Surr: 4-Bromofluorobenzene (55-130%)	91 %								
VOC Preservation Check									
рН	<2.00		units	2.00	1	12/02/11 16:03	fmk	11L0105	SW 9041
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	26700		ug/L	300	1	11/29/11 22:34	mag	[CALC]	OA-2 - 8015B
Diesel	18100		ug/L	300	1.08	11/29/11 22:34	mag	11K1294	OA-2 - 8015B
Gasoline	7200	Q	ug/L	300	1.08	11/29/11 22:34	mag	11K1294	OA-2 - 8015B
Motor Oil	1380	Q	ug/L	300	1.08	11/29/11 22:34	mag	11K1294	OA-2 - 8015B
Surr: Octacosane (55-150%)	133 %								



704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

ATC ASSOCIATES - OMAHAWork Order:CUK1443Received:11/23/1111117 Mockingbird DriveProject:Green Plains Grain12/20/11 09:59Omaha, NE 68137Project Number:353.40020.00011

Analyte	Sample Result	Data Qualifiers	Units	Quan. Limit	Dilution Factor			Seq/ Batch	Method
Sample ID: CUK1443-12 (Spencer B	-4 - Ground Wa	iter)			Sampled:	11/22/11 15:15	Rec	vd: 11/23	/11 12:45
Sampled By: Art C	Currier			Phone	(51	5) 554-1522			
UST Volatile Compounds by GC									
Benzene	22.8		ug/L	2.00	1	12/02/11 03:01	cmm	11L0087	OA-1 - 8021B
Toluene	39.5		ug/L	2.00	1	12/02/11 03:01	cmm	11L0087	OA-1 - 8021B
Ethylbenzene	8.76		ug/L	2.00	1	12/02/11 03:01	cmm	11L0087	OA-1 - 8021B
Xylenes, total	52.8		ug/L	3.00	1	12/02/11 03:01	cmm	11L0087	OA-1 - 8021B
Surr: 4-Bromofluorobenzene (55-130%)	90 %								
VOC Preservation Check									
pH	<2.00		units	2.00	1	12/02/11 16:03	fmk	11L0105	SW 9041
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	<337		ug/L	337	1	11/29/11 23:15	mag	[CALC]	OA-2 - 8015B
Diesel	<337		ug/L	337	1.12	11/29/11 23:15	mag	11K1294	OA-2 - 8015B
Gasoline	<337		ug/L	337	1.12	11/29/11 23:15	mag	11K1294	OA-2 - 8015B
Motor Oil	<337		ug/L	337	1.12	11/29/11 23:15	mag	11K1294	OA-2 - 8015B
Surr: Octacosane (55-150%)	73 %								



704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

ATC ASSOCIATES - OMAHAWork Order:CUK1443Received:11/23/1111117 Mockingbird DriveProject:Green Plains Grain12/20/11 09:59Omaha, NE 68137Project Number:353.40020.000114/20/11

Analyte	Sample Result	Data Oualifiers	Units	Quan. Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CUK1443-13 (Spencer			c mus			11/22/11 15:25			/11 12:45
Sampled By: Art	Currier	,		Phone	•	5) 554-1522			
UST Volatile Compounds by GC									
Benzene	6.78		ug/L	2.00	1	12/02/11 05:29	cmm	11L0087	OA-1 - 8021B
Toluene	<2.00		ug/L	2.00	1	12/02/11 05:29	cmm	11L0087	OA-1 - 8021B
Ethylbenzene	<2.00		ug/L	2.00	1	12/02/11 05:29	cmm	11L0087	OA-1 - 8021B
Xylenes, total	8.55		ug/L	3.00	1	12/02/11 05:29	cmm	11L0087	OA-1 - 8021B
Surr: 4-Bromofluorobenzene (55-130%)	89 %								
VOC Preservation Check									
рН	<2.00		units	2.00	1	12/02/11 16:03	fmk	11L0105	SW 9041
UST ANALYSIS PARAMETERS									
Total Extractable Hydrocarbons	1070		ug/L	349	1	11/29/11 23:56	mag	[CALC]	OA-2 - 8015B
Diesel	509	Q	ug/L	349	1.16	11/29/11 23:56	mag	11K1294	OA-2 - 8015B
Gasoline	566	Q	ug/L	349	1.16	11/29/11 23:56	mag	11K1294	OA-2 - 8015B
Motor Oil	<349		ug/L	349	1.16	11/29/11 23:56	mag	11K1294	OA-2 - 8015B
Surr: Octacosane (55-150%)	88 %								



704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

ATC ASSOCIATES - OMAHA 11117 Mockingbird Drive Omaha, NE 68137 Art Currier CUK1443

Received: 11/23/11 Reported: 12/20/11 09:59

Green Plains Grain

Project Number: 353.40020.0001

SAMPLE EXTRACTION DATA

Work Order:

Project:

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
UST ANALYSIS PARAMETERS							
OA-2 - 8015B	[CALC]	CUK1443-01	1.00	1.00	11/30/11 12:46		[CALC]
OA-2 - 8015B	11K1416	CUK1443-01	25.63	1.50	11/30/11 12:46	EEE	SW 3546 GC
OA-2 - 8015B	[CALC]	CUK1443-02	1.00	1.00	11/30/11 12:46		[CALC]
OA-2 - 8015B	11K1416	CUK1443-02	25.64	1.50	11/30/11 12:46	EEE	SW 3546 GC
OA-2 - 8015B	11K1416	CUK1443-02RE1	25.64	1.50	11/30/11 12:46	EEE	SW 3546 GC
OA-2 - 8015B	[CALC]	CUK1443-03	1.00	1.00	11/30/11 12:46		[CALC]
OA-2 - 8015B	11K1416	CUK1443-03	25.12	1.50	11/30/11 12:46	EEE	SW 3546 GC
OA-2 - 8015B	[CALC]	CUK1443-04	1.00	1.00	11/30/11 12:46		[CALC]
OA-2 - 8015B	11K1416	CUK1443-04	25.53	1.50	11/30/11 12:46	EEE	SW 3546 GC
OA-2 - 8015B	[CALC]	CUK1443-05	1.00	1.00	11/30/11 12:46		[CALC]
OA-2 - 8015B	11K1416	CUK1443-05	25.28	1.50	11/30/11 12:46	EEE	SW 3546 GC
OA-2 - 8015B	11K1416	CUK1443-05RE1	25.28	1.50	11/30/11 12:46	EEE	SW 3546 GC
OA-2 - 8015B	[CALC]	CUK1443-09	1.00	1.00	11/28/11 12:36		[CALC]
OA-2 - 8015B	11K1294	CUK1443-09	870.00	1.00	11/28/11 12:36	EEE	SW 3510C GC
OA-2 - 8015B	[CALC]	CUK1443-10	1.00	1.00	11/28/11 12:36		[CALC]
OA-2 - 8015B	11K1294	CUK1443-10	860.00	1.00	11/28/11 12:36	EEE	SW 3510C GC
OA-2 - 8015B	11K1294	CUK1443-10RE1	860.00	1.00	11/28/11 12:36	EEE	SW 3510C GC
OA-2 - 8015B	[CALC]	CUK1443-11	1.00	1.00	11/28/11 12:36		[CALC]
OA-2 - 8015B	11K1294	CUK1443-11	930.00	1.00	11/28/11 12:36	EEE	SW 3510C GC
OA-2 - 8015B	[CALC]	CUK1443-12	1.00	1.00	11/28/11 12:36		[CALC]
OA-2 - 8015B	11K1294	CUK1443-12	890.00	1.00	11/28/11 12:36	EEE	SW 3510C GC
OA-2 - 8015B	[CALC]	CUK1443-13	1.00	1.00	11/28/11 12:36		[CALC]
OA-2 - 8015B	11K1294	CUK1443-13	860.00	1.00	11/28/11 12:36	EEE	SW 3510C GC



704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

ATC ASSOCIATES - OMAHA 11117 Mockingbird Drive Omaha, NE 68137 Art Currier

Project: Project Number: Received: Reported:

11/23/11 12/20/11 09:59

Green Plains Grain 353.40020.0001

CUK1443

LABORATORY BLANK QC DATA

Work Order:

	Seq/	Source	Spike					Dup	%	Dup	% REC		RPD	
Analyte	Batch	Result	Level	Units	MDL	MRL	Result	Result	REC	%REC	Limits	RPD	Limit	Q
UST Volatile Compounds by GC														
Benzene	11L0072			mg/kg	N/A	0.250	< 0.250							
Toluene	11L0072			mg/kg	N/A	0.500	< 0.500							
Ethylbenzene	11L0072			mg/kg	N/A	0.500	< 0.500							
Xylenes, total	11L0072			mg/kg	N/A	0.500	< 0.500							
Surrogate: 4-Bromofluorobenzene	11L0072			ug/L					85		40-150			
Benzene	11L0087			ug/L	N/A	2.00	<2.00							
Toluene	11L0087			ug/L	N/A	2.00	<2.00							
Ethylbenzene	11L0087			ug/L	N/A	2.00	<2.00							
Xylenes, total	11L0087			ug/L	N/A	3.00	<3.00							
Surrogate: 4-Bromofluorobenzene	11L0087			ug/L					89		55-130			
Benzene	11L0165			ug/L	N/A	2.00	<2.00							
Toluene	11L0165			ug/L	N/A	2.00	<2.00							
Ethylbenzene	11L0165			ug/L	N/A	2.00	<2.00							
Xylenes, total	11L0165			ug/L	N/A	3.00	<3.00							
Surrogate: 4-Bromofluorobenzene	11L0165			ug/L					87		55-130			
UST ANALYSIS PARAMETERS														
Diesel	11K1294			ug/L	N/A	300	<300							
Gasoline	11K1294			ug/L	N/A	300	<300							
Motor Oil	11K1294			ug/L	N/A	300	<300							
Surrogate: Octacosane	11K1294			ug/L					106		55-150			
Diesel	11K1416			mg/kg	N/A	12.0	<12.0							
Gasoline	11K1416			mg/kg	N/A	12.0	<12.0							
Motor Oil	11K1416			mg/kg	N/A	12.0	<12.0							
Surrogate: Octacosane	11K1416			mg/kg					113		50-150			



704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

ATC ASSOCIATES - OMAHAWork Order:CUK1443Received:11/23/1111117 Mockingbird DriveProject:Green Plains GrainReported:12/20/11 09:59Omaha, NE 68137Project:Green Plains GrainProject Number:353.40020.0001

LCS/LCS DUPLICATE QC DATA

	Seq/	Source	Spike					Dup	%	Dup	% REC		RPD	
Analyte	Batch	Result	Level	Units	MDL	MRL	Result	Result	REC	%REC	Limits	RPD	Limit	Q
UST Volatile Compounds by GC														
Benzene	11L0072		11.5	mg/kg	N/A	0.250	15.1		131		95-150			
Toluene	11L0072		11.5	mg/kg	N/A	0.500	15.7		136		100-150			
Ethylbenzene	11L0072		11.5	mg/kg	N/A	0.500	15.9		138		100-150			
Xylenes, total	11L0072		34.5	mg/kg	N/A	0.500	46.0		133		100-150			
Surrogate: 4-Bromofluorobenzene	11L0072			ug/L					90		60-145			
Benzene	11L0087		50.0	ug/L	N/A	N/A	49.8		100		45-120			
Toluene	11L0087		50.0	ug/L	N/A	N/A	49.9		100		65-115			
Ethylbenzene	11L0087		50.0	ug/L	N/A	N/A	50.6		101		65-130			
Xylenes, total	11L0087		150	ug/L	N/A	N/A	148		99		65-130			
Surrogate: 4-Bromofluorobenzene	11L0087			ug/L					89		85-125			
Benzene	11L0165		50.0	ug/L	N/A	N/A	49.8		100		45-120			
Toluene	11L0165		50.0	ug/L	N/A	N/A	49.5		99		65-115			
Ethylbenzene	11L0165		50.0	ug/L	N/A	N/A	51.1		102		65-130			
Xylenes, total	11L0165		150	ug/L	N/A	N/A	149		99		65-130			
Surrogate: 4-Bromofluorobenzene	11L0165			ug/L					88		85-125			
UST ANALYSIS PARAMETERS														
Diesel	11K1294		2000	ug/L	N/A	300	1540	1650	77	83	60-130	7	30	
Surrogate: Octacosane	11K1294			ug/L					84	98	45-140			
Diesel	11K1416		80.0	mg/kg	N/A	12.0	72.9		91		65-125			
Surrogate: Octacosane	11K1416			mg/kg					107		65-150			



THE LEADER IN ENVIRONMENTAL TESTING

ATC ASSOCIATES - OMAHA 11117 Mockingbird Drive Omaha, NE 68137 Art Currier

Project:

Work Order:

Green Plains Grain

CUK1443

11/23/11 Received: 12/20/11 09:59 Reported:

353.40020.0001

Project Number:

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

	Seq/	Source	Spike					Dup	%	Dup	% REC		RPD	
Analyte	Batch	Result	Level	Units	MDL	MRL	Result	Result	REC	%REC	Limits	RPD	Limit	Q
UST Volatile Compounds by GC														
QC Source Sample: CUK1428-01														
Benzene	11L0072	< 0.250	11.8	mg/kg	N/A	0.250	12.9	13.7	109	115	80-150	6	40	
Toluene	11L0072	< 0.500	11.8	mg/kg	N/A	0.500	13.2	14.1	112	118	85-150	7	40	
Ethylbenzene	11L0072	< 0.500	11.8	mg/kg	N/A	0.500	13.7	14.6	115	122	85-150	7	40	
Xylenes, total	11L0072	< 0.500	35.5	mg/kg	N/A	0.500	39.6	42.2	111	118	85-150	7	40	
Surrogate: 4-Bromofluorobenzene	11L0072			ug/L					90	90	80-130			
QC Source Sample: CUK1460-03														
Benzene	11L0087	1.98	50.0	ug/L	N/A	N/A	44.2	44.1	84	84	40-120	0	15	
Toluene	11L0087	0.252	50.0	ug/L	N/A	N/A	42.7	42.4	85	84	65-120	1	10	
Ethylbenzene	11L0087	0.261	50.0	ug/L	N/A	N/A	42.7	42.7	85	85	65-125	0	10	
Xylenes, total	11L0087	0.736	150	ug/L	N/A	N/A	126	126	84	83	65-130	0	10	
Surrogate: 4-Bromofluorobenzene	11L0087			ug/L					88	91	85-125			
QC Source Sample: CUK1596-04														
Benzene	11L0165	6.34	50.0	ug/L	N/A	N/A	51.4	51.2	90	90	40-120	1	15	
Toluene	11L0165	0.512	50.0	ug/L	N/A	N/A	45.2	44.8	89	89	65-120	1	10	
Ethylbenzene	11L0165	0.909	50.0	ug/L	N/A	N/A	46.1	46.0	90	90	65-125	0	10	
Xylenes, total	11L0165	2.26	150	ug/L	N/A	N/A	135	134	88	88	65-130	1	10	
Surrogate: 4-Bromofluorobenzene	11L0165			ug/L					90	88	85-125			
				U										
UST ANALYSIS PARAMETERS														
QC Source Sample: CUK1428-01 Diesel	11K1416	4.58	78.7	mg/kg	N/A	11.8	68.4	70.2	81	83	45-130	3	30	
Surrogate: Octacosane	11K1416	4.50	70.7		1N/PA	11.0	00.4	70.2	96	100	45-150 55-150	5	50	
surrogue: Ociacosane	11K1410			mg/kg					90	100	55-150			



TestAmerica Cedar Falls

 ATC ASSOCIATES - OMAHA
 Work Order:
 CUK1443
 Received:
 11/23/11

 11117 Mockingbird Drive
 Project:
 Green Plains Grain
 12/20/11 09:59

 Omaha, NE 68137
 Project Number:
 353.40020.0001
 12/20/11 09:59

704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

CERTIFICATION SUMMARY

Method	Matrix	Nelac	Iowa
OA-1 - 8021B	Solid/Soil	Х	Х
OA-1 - 8021B	Water - NonPotable	Х	Х
OA-2 - 8015B	Solid/Soil	Х	Х
OA-2 - 8015B	Water - NonPotable	Х	Х
SW 9041	Water - NonPotable		

Any abnormalities or departures from sample acceptance policy shall be documented on the 'Sample Receipt and Termperature 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

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J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
MDL	Results calculated/entered to the method detection limit (MDL).
Р	The sample, as received, was not preserved in accordance to the referenced analytical method.
Q	Poor chromatographic match to standard.
RL1	Reporting limit raised due to sample matrix effects.

ADDITIONAL COMMENTS

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Sam	ple Receipt an	nd Temperature Log Form									
Client: ATC		Project: <u>Green Plain</u>									
City:			A	rciN							
Date:11-23-11 Re	ceiver's Initials:	$: \underline{CH}$ Time (Delivered): $\underline{12'45}$									
Temperature Record:	Thermomete	<u>r:</u>	<u>Courier:</u>								
Cooler ID# (If Applicable)	IR - 11153156	5 'D'		TA Courier							
	IR - 111531500	6 'E'	FedEx	TA Field Services							
	IR - 61854108	'Front'	FedEx Ground	Client							
0.4 C_{1} On Ice	 101681126		US Postal Service	Other							
			Spee-Dee								
Temp Blank											
Temperature out of con	npliance										
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		Exceptions Noted									
Custody seals present?		Sample(s) not received in a cooler.									
Custody seals intact?		Samples(s) received same day of sampling.									
Yes No		I	_								
			Evidence of a chilling process								
Non-Conformance re	port started		o Temp. Blank. Inside temperature of oler recorded.								
		Temperature not taken:									