

ALTEN

IIS: 84069
PCS: DE013763410/8/2019
mp**Sample Collection Field Sheet**
US EPA Region 7
Kansas City, KS

ASR Number: 8209 Sample Number: 4 QC Code: Matrix: Solid Tag ID: 8209-4-__

Project ID: TJAAEEP4S
Project Desc: Alt-En Ethanol Plant - NDEQ ASR
City: Mead
Program: Water EnforcementProject Manager: Tabatha Adkins
State: Nebraska

Location Desc: Seed corn sample

Storet ID: _____

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) Date Time(24 hr)

Latitude: _____

Sample Collection: Start: 04/08/2019 13:30

Longitude: _____

End: __/__/__ __:__

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	28 Days	1 Mercury in Soil or Sediment
1 - 8 oz glass	4 Deg C	180 Days	1 Metals in Solids by ICP-AES
1 - 8 oz glass	4 Deg C	180 Days	1 TCLP Metals in Soil
1 - 8 oz glass	None	28 Days	1 TCLP Mercury in Soil
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Sample Collected By: NDEQ



Performed By:

South Dakota Agricultural Laboratories
 1335 Western Avenue
 Brookings, South Dakota 57006
 Phone: 605-692-7325
 E-Mail: regina.wixon@sdaglabs.com

Collected By:

EA Eng Science and Technology
 221 Sun Valley Blvd Suite D
 Accounts Payable, Dan Bigbee
 Lincoln, NE 68528
 Phone: 402-817-7612
 E-Mail: dbigbee@eaest.com

Report Date: 2019-04-25**Final Report****South Dakota Agricultural Laboratories has examined the sample of**

Limfinite Package Id : 20190415-002
 Lab Sample Id : 19PE001995
 Customer Sample Id : West Lagoon
 Sample Description : Liquid
 Date Collected : 2019-04-08
 Date Received : 2019-04-15

ANALYTE	RESULT
Acetamprid	ND ppb
Azoxystrobin	99.3 ppb
Bifenthrin	ND ppb
Brassinazole	ND ppb
Chlorpyrifos-ethyl	ND ppb
Chlorpyrifos-methyl	ND ppb
Clothianidin	58400 ppb
Cyfluthrin	ND ppb
Cypermethrin	ND ppb
Cyproconazole	ND ppb
Deltamethrin	<5 ppb
Dimoxystrobin	ND ppb
Epoxiconazole	ND ppb
Fluconazole	ND ppb
Glufosinate	ND ppb
Glyphosate	124 ppb
Imidacloprid	108 ppb
Isavuconazole	ND ppb
Lambda-cyhalothrin	ND ppb
Metconazole	ND ppb
Orysastrobin	ND ppb
Permethrin	ND ppb
Posaconazole	ND ppb
Propiconazole	ND ppb
Pyraclostrobin	ND ppb
Ravuconazole	ND ppb
Tebuconazole	213 ppb
Thiabendazole	8450 ppb
Thiacloprid	ND ppb
Thiamethoxam	35400 ppb

Trifloxystrobin
Uniconazole
Voriconazole

58.2 ppb
ND ppb
ND ppb

Comments:

ND: Not Detected

Performed By:

South Dakota Agricultural Laboratories
 1335 Western Avenue
 Brookings, South Dakota 57006
 Phone: 605-692-7325
 E-Mail: regina.wixon@sdaglabs.com

Collected By:

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 Accounts Payable, Dan Bigbee
 Lincoln, NE 68528
 Phone: 402-817-7612
 E-Mail: dbigbee@eaest.com

Report Date: 2019-04-29**Final Report****South Dakota Agricultural Laboratories has examined the sample of**

Limfinite Package Id : 20190415-002
 Lab Sample Id : 19PE001996
 Customer Sample Id : Overflow Lagoon
 Sample Description : Liquid
 Date Collected : 2019-04-08
 Date Received : 2019-04-15

ANALYTE	RESULT
Acetamprid	ND ppb
Azoxystrobin	581 ppb
Bifenthrin	ND ppb
Brassinazole	ND ppb
Chlorpyrifos-ethyl	ND ppb
Chlorpyrifos-methyl	ND ppb
Clothianidin	44.7 ppb
Cyfluthrin	ND ppb
Cypermethrin	ND ppb
Cyproconazole	ND ppb
Deltamethrin	<5 ppb
Dimoxystrobin	ND ppb
Epoxiconazole	ND ppb
Fluconazole	ND ppb
Glufosinate	86.7 ppb
Glyphosate	3850 ppb
Imidacloprid	ND ppb
Isavuconazole	ND ppb
Lambda-cyhalothrin	<5 ppb
Metconazole	ND ppb
Orysastrobin	ND ppb
Permethrin	ND ppb
Posaconazole	ND ppb
Propiconazole	726 ppb
Pyraclostrobin	ND ppb
Ravuconazole	ND ppb
Tebuconazole	2330 ppb
Thiabendazole	39700 ppb
Thiacloprid	ND ppb
Thiamethoxam	26.0 ppb

Trifloxystrobin
Uniconazole
Voriconazole

737 ppb
ND ppb
ND ppb

Comments:

ND: Not Detected

Performed By:

South Dakota Agricultural Laboratories
 1335 Western Avenue
 Brookings, South Dakota 57006
 Phone: 605-692-7325
 E-Mail: regina.wixon@sdaglabs.com

Collected By:

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 221 Sun Valley Blvd Suite D
 Accounts Payable, Dan Bigbee
 Lincoln, NE 68528
 Phone: 402-817-7612
 E-Mail: dbigbee@eaest.com

Report Date: 2019-04-25**Final Report****South Dakota Agricultural Laboratories has examined the sample of**

Limfinite Package Id : 20190415-002
 Lab Sample Id : 19PE001997
 Customer Sample Id : Wet Cake
 Sample Description : Cake
 Date Collected : 2019-04-08
 Date Received : 2019-04-15

ANALYTE	RESULT
Acetamprid	ND ppb
Azoxystrobin	1430 ppb
Bifenthrin	ND ppb
Brassinazole	ND ppb
Chlorpyrifos-ethyl	ND ppb
Chlorpyrifos-methyl	ND ppb
Clothianidin	112000 ppb
Cyfluthrin	ND ppb
Cypermethrin	ND ppb
Cyproconazole	ND ppb
Deltamethrin	ND ppb
Dimoxystrobin	ND ppb
Epoxiconazole	ND ppb
Fluconazole	ND ppb
Glufosinate	ND ppb
Glyphosate	ND ppb
Imidacloprid	485 ppb
Isavuconazole	ND ppb
Lambda-cyhalothrin	ND ppb
Metconazole	ND ppb
Orysastrobin	ND ppb
Permethrin	ND ppb
Posaconazole	ND ppb
Propiconazole	ND ppb
Pyraclostrobin	ND ppb
Ravuconazole	ND ppb
Tebuconazole	10400 ppb
Thiabendazole	55600 ppb
Thiacloprid	ND ppb
Thiamethoxam	30500 ppb

Trifloxystrobin
Uniconazole
Voriconazole

1750 ppb
ND ppb
ND ppb

Comments:

ND: Not Detected

Performed By:

South Dakota Agricultural Laboratories
1335 Western Avenue
Brookings, South Dakota 57006
Phone: 605-692-7325
E-Mail: regina.wixon@sdaglabs.com

Collected By:

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Accounts Payable, Dan Bigbee
Lincoln, NE 68528
Phone: 402-817-7612
E-Mail: dbigbee@eaest.com

Report Date: 2019-04-25**Final Report****South Dakota Agricultural Laboratories has examined the sample of**

Limfinite Package Id : 20190415-002
Lab Sample Id : 19PE001998
Customer Sample Id : Seed Corn
Sample Description : Corn
Date Collected : 2019-04-08
Date Received : 2019-04-15

ANALYTE	RESULT
Azoxystrobin	4830 ppb
Brassinazole	ND ppb
Cyproconazole	ND ppb
Dimoxystrobin	ND ppb
Epoxiconazole	ND ppb
Fluconazole	ND ppb
Isavuconazole	ND ppb
Metconazole	ND ppb
Orysastrobin	ND ppb
Posaconazole	ND ppb
Propiconazole	ND ppb
Pyraclostrobin	ND ppb
Ravuconazole	ND ppb
Tebuconazole	ND ppb
Thiabendazole	247000 ppb
Trifloxystrobin	ND ppb
Uniconazole	ND ppb
Voriconazole	ND ppb

Comments:

ND: Not Detected

**United States Environmental Protection Agency
Region 7
300 Minnesota Avenue
Kansas City, KS 66101**

Date: 04/24/2019

Subject: Transmittal of Sample Analysis Results for ASR #: 8209

Project ID: TJAAEEP4S

Project Description: Alt-En Ethanol Plant - NDEQ ASR

From: Margaret E.W. St. Germain, Chief
Laboratory Technology & Analysis Branch
Laboratory Services and Applied Sciences Division

**MARGARET
ST. GERMAIN**

Digitally signed by
MARGARET ST. GERMAIN
Date: 2019.04.24 17:00:48
-05'00'

To: Tabatha Adkins
ENST/LTAB

Enclosed are the analytical data for the above-referenced Analytical Services Request (ASR) and Project. These results are based on samples as received at the Science and Technology Center. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please ensure that you file this electronic (.pdf only) transmittal in your records management system. The Regional Laboratory will now retain all of the original hardcopy documentation (e.g. COC[s] and the R7LIMS field sheet[s], etc.) according to our ENST records management system.

Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. Please complete the Online ASR Sample/Data Disposition and Customer Survey for this ASR as soon as possible. The process of disposing of the samples for this ASR will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Online ASR Sample/Data Disposition and Customer Survey. It is critical that we receive your response in accordance to RCRA and the laboratory accreditation.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295.

Project Manager: Tabatha Adkins**Org:** ENST/LTAB**Phone:** 913-551-7128**Project ID:** TJAAEEP4S**QAPP Number:** NDEQ**Project Desc:** Alt-En Ethanol Plant - NDEQ ASR**Location:** Mead**State:** Nebraska**Program:** Water Enforcement**Purpose:** Site Characterization**GPRA PRC:** 000E50

This screening/characterization event is in response to recent complaints of odor and other concerns.

Additional field contact is: Wade Gregson, NDEQ (402-601-1011).

Per NDEQ submitted ASR on 4/4/2019: This ASR is not part of a litigation hold at this time.

Explanation of Codes, Units and Qualifiers used on this report

Sample QC Codes: QC Codes identify the type of sample for quality control purpose.

Units: Specific units in which results are reported.

___ = Field Sample

mg/L = Milligrams per Liter

% = Percent

ug/L = Micrograms per Liter

mg/kg = Milligrams per Kilogram

Data Qualifiers: Specific codes used in conjunction with data values to provide additional information on the quality of reported results, or used to explain the absence of a specific value.

(Blank)= Values have been reviewed and found acceptable for use.

J = The identification of the analyte is acceptable; the reported value is an estimate.

UJ = The analyte was not detected at or above the reporting limit. The reporting limit is an estimate.

U = The analyte was not detected at or above the reporting limit.

ASR Number: 8209

Sample Information Summary

04/24/2019

Project ID: TJAAEEP4S

Project Desc: Alt-En Ethanol Plant - NDEQ ASR

Sample No	QC Code	Matrix	Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
1 - ___		Solid	Wet cake sample		04/08/2019	11:00			04/09/2019
2 - ___		Water	West Lagoon water sample		04/08/2019	12:35			04/09/2019
3 - ___		Water	Overflow Lagoon water sample		04/08/2019	13:30			04/09/2019
4 - ___		Solid	Seed corn sample		04/08/2019	13:30			04/09/2019

Analysis Comments About Results For This Analysis

1 Mercury in Soil or Sediment

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3121.23E**Basis:** Dry**Samples:** 1-__ 4-__**Comments:**

(N/A)

1 Metals in Solids by ICP-AES

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3122.3G**Basis:** Dry**Samples:** 1-__ 4-__**Comments:**

Barium was J-coded in sample 1. Although the analyte in question has been positively identified in the sample, the quantitation is an estimate (J-coded) due to low recovery of this analyte in the laboratory matrix spike. The actual concentration for this analyte may be higher than the reported value.

1 Percent Solid

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3142.9H**Basis:** N/A**Samples:** 1-__ 4-__**Comments:**

(N/A)

1 TCLP Mercury in Soil

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3121.23E applied to TCLP extracts**Basis:** N/A**Samples:** 1-__ 4-__**Comments:**

1 TCLP Metals in Soil

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3122.3G TCLP

Analysis Comments About Results For This Analysis

Basis: N/A**Samples:** 1-__ 4-__**Comments:**

1 Mercury in Water

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3121.23E**Samples:** 2-__ 3-__**Comments:**

(N/A)

1 Metals in Water by ICP-AES

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3122.3G**Samples:** 2-__ 3-__**Comments:**

Aluminum was J-coded in sample 2. Although the analyte in question has been positively identified in the sample, the quantitation is an estimate (J-coded) due to high recovery of this analyte in the laboratory matrix spike. The actual concentration for this analyte may be lower than the reported value.

Nickel was J-coded in sample 2. Although the analyte in question has been positively identified in the sample, the quantitation is an estimate (J-coded) due to low recovery of this analyte in the laboratory matrix spike. The actual concentration for this analyte may be higher than the reported value.

Antimony, Cadmium, Lead, Molybdenum, Selenium, Silver, Thallium, Titanium was each UJ-coded in sample 2. This analyte was not found in the sample at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to low recovery of this analyte in the laboratory matrix spike. The actual reporting limit for this analyte may be higher than the reported value.

1 TCLP Mercury in Water

Lab: Region 7 EPA Laboratory - Kansas City, Ks.**Method:** EPA Region 7 RLAB Method 3121.23E applied to TCLP extracts**Samples:** 2-__ 3-__**Comments:**

1 TCLP Metals in Water

Lab: Region 7 EPA Laboratory - Kansas City, Ks.

ASR Number: 8209

RLAB Approved Analysis Comments

04/24/2019

Project ID: TJAAEEP4S

Project Desc Alt-En Ethanol Plant - NDEQ ASR

Analysis	Comments About Results For This Analysis
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Method: EPA Region 7 RLAB Method 3122.3G TCLP

Samples: 2-__ 3-__

Comments:

Lead was UJ-coded in sample 2. This analyte was not found in the sample at or above the reporting limit, however, the reporting limit is an estimate (UJ-coded) due to low recovery of this analyte in the laboratory matrix spike. The actual reporting limit for this analyte may be higher than the reported value.

ASR Number: 8209

RLAB Approved Sample Analysis Results

04/24/2019

Project ID: TJAAEEP4S

Project Desc: Alt-En Ethanol Plant - NDEQ ASR

Analysis/ Analyte	Units	1-__	2-__	3-__	4-__
1 Mercury in Soil or Sediment					
Mercury	mg/kg	0.0112			0.00179
1 Metals in Solids by ICP-AES					
Aluminum	mg/kg	2420			7.5
Antimony	mg/kg	1.9 U			2.0 U
Arsenic	mg/kg	4.8 U			5.0 U
Barium	mg/kg	42.3 J			2.0 U
Beryllium	mg/kg	1.0 U			1.0 U
Cadmium	mg/kg	1.0 U			1.0 U
Calcium	mg/kg	2640			49.6 U
Chromium	mg/kg	3.4			2.0 U
Cobalt	mg/kg	1.7			1.0 U
Copper	mg/kg	13.6			2.4
Iron	mg/kg	3270			19.3
Lead	mg/kg	4.8 U			5.0 U
Magnesium	mg/kg	1610			991
Manganese	mg/kg	124			5.0 U
Molybdenum	mg/kg	1.9 U			2.0 U
Nickel	mg/kg	4.2			2.0 U
Potassium	mg/kg	3960			3730
Selenium	mg/kg	9.7 U			9.9 U
Silver	mg/kg	1.9 U			2.0 U
Sodium	mg/kg	694			49.6 U
Thallium	mg/kg	9.7 U			9.9 U
Vanadium	mg/kg	5.9			5.0 U
Zinc	mg/kg	262			18.4
1 Percent Solid					
Solids, percent	%	39.2			89.8
1 TCLP Mercury in Soil					
Mercury	mg/L	0.000440			0.000350
1 TCLP Metals in Soil					
Arsenic	mg/L	0.050 U			0.050 U
Barium	mg/L	0.674			0.016 U
Cadmium	mg/L	0.010			0.005 U
Chromium	mg/L	0.078			0.015 U
Lead	mg/L	0.050 U			0.050 U
Selenium	mg/L	0.066			0.050 U
Silver	mg/L	0.025 U			0.025 U
1 Mercury in Water					
Mercury	ug/L		0.250 U	0.250 U	
1 Metals in Water by ICP-AES					
Aluminum	ug/L		1580 J	60200	
Antimony	ug/L		50 UJ	50 U	
Arsenic	ug/L		25 U	25 U	
Barium	ug/L		164	727	
Beryllium	ug/L		3 U	3 U	

ASR Number: 8209

RLAB Approved Sample Analysis Results

04/24/2019

Project ID: TJAAEEP4S

Project Desc: Alt-En Ethanol Plant - NDEQ ASR

Analysis/ Analyte	Units	1-__	2-__	3-__	4-__
Cadmium	ug/L		3 UJ	3 U	
Calcium	mg/L		97.6	616	
Chromium	ug/L		37	96	
Cobalt	ug/L		10 U	18	
Copper	ug/L		77	1660	
Iron	ug/L		6640	67700	
Lead	ug/L		50 UJ	97.2	
Magnesium	mg/L		246	150	
Manganese	ug/L		1130	2080	
Molybdenum	ug/L		15 UJ	24	
Nickel	ug/L		39 J	130	
Potassium	mg/L		848	320	
Selenium	ug/L		50 UJ	111	
Silver	ug/L		25 UJ	25 U	
Sodium	mg/L		414	256	
Thallium	ug/L		50 UJ	50 U	
Titanium	ug/L		20 UJ	105	
Vanadium	ug/L		10 U	127	
Zinc	ug/L		3060	14900	
1 TCLP Mercury in Water					
Mercury	mg/L		0.000250 U	0.000530	
1 TCLP Metals in Water					
Arsenic	mg/L		0.050 U	0.050 U	
Barium	mg/L		0.122	0.070	
Cadmium	mg/L		0.005 U	0.005 U	
Chromium	mg/L		0.091	0.087	
Lead	mg/L		0.050 UJ	0.050 U	
Selenium	mg/L		0.050 U	0.050 U	
Silver	mg/L		0.025 U	0.025 U	

4/9/19

Tabatha Atkins (EPA PM - Region 7)

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII

EPA PROJECT MANAGER (Print) Daniel LeMaistre	SITE OR SAMPLING EVENT Alt-En Ethanol Plant	DATE OF SAMPLE COLLECTION(S) MONTH 4 DAY 8 YEAR 2019	SHEET 1 of 1
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CONTENTS OF SHIPMENT

ASR AND SAMPLE NUMBER	TYPE OF CONTAINERS					SAMPLED MEDIA				RECEIVING LABORATORY REMARKS OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)
	1 L PLASTIC BOTTLE	1 L GLASS BOTTLE	BOTTLE	BOTTLE	VOA SET (3 VIALS EA)	WATER	SOLID	HAZ WASTE	OTHER	
	NUMBER(S) OF CONTAINERS PER SAMPLE NUMBER									
8290-1		2					X			
8290-2	1	1				X				
8290-3	1	1				X				RSCC corrected RFLim 5
829-4		2					X			AR #1 to show 8290 not 8290 on coc + tag @ SR ~4/9/19
<div>AR #</div> <div>8290 = Complete</div> <div>4/9/19</div> <div>Chr. Temp. Rec'd bet. 4.9-6.2 °C</div>										

DESCRIPTION OF SHIPMENT	MODE OF SHIPMENT
8 CONTAINER(S) CONSISTING OF _____ CRATE(S)	COMMERCIAL CARRIER UPS
1 ICE CHEST(S) OTHER _____	SAMPLER CONVEYED _____ (SHIPPING AIRBILL NUMBER)

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (PM/SAMPLER) Wade Orger	DATE 4/8/19	TIME 1530	RECEIVED BY Keith Dix	DATE 4/8/19	TIME 1535	REASON FOR CHANGE OF CUSTODY To ship samples
SEALING SEALING			SEALING SEALING			
RELINQUISHED BY (PM/SAMPLER) Keith Dix	DATE 4/9/19	TIME 1720	RECEIVED BY Michelle Roper	DATE 4/9/19	TIME 1100A	REASON FOR CHANGE OF CUSTODY Analys
SEALING SEALING			SEALING SEALING			
RELINQUISHED BY (PM/SAMPLER)	DATE	TIME	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
SEALING SEALING			SEALING SEALING			
RELINQUISHED BY (PM/SAMPLER)	DATE	TIME	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
SEALING SEALING			SEALING SEALING			

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8209 **Sample Number:** 1 **QC Code:** ____ **Matrix:** Solid **Tag ID:** 8209-1-____

Project ID: TJAAEEP4S **Project Manager:** Tabatha Adkins
Project Desc: Alt-En Ethanol Plant - NDEQ ASR
City: Mead **State:** Nebraska
Program: Water Enforcement

Location Desc: Wet cake sample

Storet ID: _____ **External Sample Number:** _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: _____ **Sample Collection: Start:** 04/08/2019 11:00

Longitude: _____ **End:** ____/____/____ ____:____

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 8 oz glass	4 Deg C	28 Days	1 Mercury in Soil or Sediment
1 - 8 oz glass	4 Deg C	180 Days	1 Metals in Solids by ICP-AES
1 - 8 oz glass	4 Deg C	180 Days	1 TCLP Metals in Soil
1 - 8 oz glass	None	28 Days	1 TCLP Mercury in Soil
0 -	4 Deg C	0 Days	1 Percent Solid

Sample Comments:

(N/A)

Sample Collected By: NDEQ

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8209 **Sample Number:** 2 **QC Code:** ____ **Matrix:** Water **Tag ID:** 8209-2-____

Project ID: TJAAEEP4S **Project Manager:** Tabatha Adkins
Project Desc: Alt-En Ethanol Plant - NDEQ ASR
City: Mead **State:** Nebraska
Program: Water Enforcement

Location Desc: West Lagoon water sample

Storet ID: _____ **External Sample Number:** _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: _____ **Sample Collection: Start:** 04/08/2019 12:35

Longitude: _____ **End:** ____/____/____ ____:____

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 1 Liter plastic bottle	5 mL of HNO ₃ /L to pH<2	28 Days	1 Mercury in Water
1 - 1 Liter plastic bottle	HNO ₃ acidify, 4 Deg C	180 Days	1 Metals in Water by ICP-AES
1 - 1 Liter plastic bottle	None	28 Days	1 TCLP Mercury in Water
1 - 8 oz glass	4 Deg C	180 Days	1 TCLP Metals in Water

Sample Comments:

(N/A)

Sample Collected By: NDEQ

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 8209 **Sample Number:** 3 **QC Code:** ____ **Matrix:** Water **Tag ID:** 8209-3-____

Project ID: TJAAEEP4S **Project Manager:** Tabatha Adkins
Project Desc: Alt-En Ethanol Plant - NDEQ ASR
City: Mead **State:** Nebraska
Program: Water Enforcement

Location Desc: Overflow Lagoon water sample

Storet ID: _____ **External Sample Number:** _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**

Latitude: ____ ____ ____ **Sample Collection: Start:** 04/08/2019 13:30

Longitude: ____ ____ ____ **End:** ____/____/____ ____:____

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
1 - 1 Liter plastic bottle	5 mL of HNO ₃ /L to pH<2	28 Days	1 Mercury in Water
1 - 1 Liter plastic bottle	HNO ₃ acidify, 4 Deg C	180 Days	1 Metals in Water by ICP-AES
1 - 1 Liter plastic bottle	None	28 Days	1 TCLP Mercury in Water
1 - 8 oz glass	4 Deg C	180 Days	1 TCLP Metals in Water

Sample Comments:

(N/A)

Sample Collected By: NDEQ

April 29, 2019

Mr. Dan Bigbee
EA Engineering, Science, and Technology
221 Sun Valley Blvd
Suite D
Lincoln, NE 68528

RE: Project: Alten LLC Digestor Sampling
Pace Project No.: 60299511

Dear Mr. Bigbee:

Enclosed are the analytical results for sample(s) received by the laboratory on April 10, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Trudy Gipson
trudy.gipson@pacelabs.com
1(913)563-1405
Project Manager

Enclosures

cc: Mr. Kent Dixon, EA Engineering, Science, and Technology



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: Alten LLC Digester Sampling
Pace Project No.: 60299511

Dallas Certification IDs:

400 West Bethany Dr Suite 190, Allen, TX 75013
Florida Certification #: E871118
Texas T104704232-18-26
EPA# TX00074
Texas Certification #: T104704232-18-26

Kansas Certification #: E-10388
Arkansas Certification #: 88-0647
Oklahoma Certification #: 8727
Louisiana Certification #: 30686
Iowa Certification #: 408

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Alten LLC Digester Sampling
Pace Project No.: 60299511

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60299511001	WEST LAGOON	Water	04/08/19 12:35	04/10/19 09:45
60299511002	OVERFLOW LAGOON	Water	04/08/19 13:30	04/10/19 09:45
60299511003	WET CAKE	Solid	04/08/19 11:00	04/10/19 09:45
60299511004	SEED CORN	Solid	04/08/19 13:30	04/10/19 09:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Alten LLC Digester Sampling
Pace Project No.: 60299511

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60299511001	WEST LAGOON	EPA 8081	JL	9	PASI-D
		EPA 8151	DAT	3	PASI-D
60299511002	OVERFLOW LAGOON	EPA 8081	JL	9	PASI-D
		EPA 8151	DAT	3	PASI-D
60299511003	WET CAKE	EPA 8081	JL	9	PASI-D
		EPA 8151	DAT	3	PASI-D
60299511004	SEED CORN	EPA 8081	JL	9	PASI-D
		EPA 8151	DAT	3	PASI-D

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Alten LLC Digestor Sampling

Pace Project No.: 60299511

Method: EPA 8081

Description: 8081 GCS Pesticides, TCLP

Client: EA Engineering, Science, and Technology

Date: April 29, 2019

General Information:

4 samples were analyzed for EPA 8081. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 116453

S1: Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

- WEST LAGOON (Lab ID: 60299511001)
- Tetrachloro-m-xylene (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 116453

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- WEST LAGOON (Lab ID: 60299511001)
- Decachlorobiphenyl (S)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Alten LLC Digestor Sampling
Pace Project No.: 60299511

Method: EPA 8151
Description: 8151 Chlorinate Herbicide TCLP
Client: EA Engineering, Science, and Technology
Date: April 29, 2019

General Information:

4 samples were analyzed for EPA 8151. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 8151 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 116456

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60299511002

R1: RPD value was outside control limits.

- MSD (Lab ID: 524640)
- 2,4,5-TP (Silvex)

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Alten LLC Digestor Sampling
Pace Project No.: 60299511

Sample: WEST LAGOON		Lab ID: 60299511001		Collected: 04/08/19 12:35		Received: 04/10/19 09:45		Matrix: Water		
Parameters	Results	Units	Report Limit	MDL	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides, TCLP		Analytical Method: EPA 8081 Preparation Method: EPA 3510 Leachate Method/Date: EPA 1311; 04/22/19 09:37								
gamma-BHC (Lindane)	ND	mg/L	0.0025	0.00025	.4	5	04/23/19 10:30	04/23/19 17:03	58-89-9	
Chlordane (Technical)	ND	mg/L	0.010	0.0020	.03	5	04/23/19 10:30	04/23/19 17:03	57-74-9	
Endrin	ND	mg/L	0.0010	0.00020	.02	5	04/23/19 10:30	04/23/19 17:03	72-20-8	
Heptachlor	ND	mg/L	0.00050	0.00030	.008	5	04/23/19 10:30	04/23/19 17:03	76-44-8	
Heptachlor epoxide	ND	mg/L	0.00050	0.00020	.008	5	04/23/19 10:30	04/23/19 17:03	1024-57-3	
Methoxychlor	ND	mg/L	0.0050	0.00025	10	5	04/23/19 10:30	04/23/19 17:03	72-43-5	
Toxaphene	ND	mg/L	0.015	0.010	.5	5	04/23/19 10:30	04/23/19 17:03	8001-35-2	
Surrogates										
Decachlorobiphenyl (S)	42	%.	12-162			5	04/23/19 10:30	04/23/19 17:03	2051-24-3	D3
Tetrachloro-m-xylene (S)	49	%.	54-127			5	04/23/19 10:30	04/23/19 17:03	877-09-8	S1
8151 Chlorinate Herbicide TCLP		Analytical Method: EPA 8151 Preparation Method: EPA 8151 Leachate Method/Date: EPA 1311; 04/22/19 09:37								
2,4-D	ND	mg/L	0.010	0.0031	10	1	04/23/19 10:30	04/24/19 04:31	94-75-7	
2,4,5-TP (Silvex)	ND	mg/L	0.010	0.0023	1	1	04/23/19 10:30	04/24/19 04:31	93-72-1	
Surrogates										
2,4-DCAA (S)	32	%.	10-171			1	04/23/19 10:30	04/24/19 04:31	19719-28-9	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Alten LLC Digestor Sampling
Pace Project No.: 60299511

Sample: OVERFLOW LAGOON		Lab ID: 60299511002		Collected: 04/08/19 13:30		Received: 04/10/19 09:45		Matrix: Water		
Parameters	Results	Units	Report Limit	MDL	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides, TCLP		Analytical Method: EPA 8081 Preparation Method: EPA 3510 Leachate Method/Date: EPA 1311; 04/22/19 11:16								
gamma-BHC (Lindane)	ND	mg/L	0.00050	0.000050	.4	1	04/23/19 10:30	04/23/19 15:34	58-89-9	
Chlordane (Technical)	ND	mg/L	0.0020	0.00041	.03	1	04/23/19 10:30	04/23/19 15:34	57-74-9	
Endrin	ND	mg/L	0.00020	0.000040	.02	1	04/23/19 10:30	04/23/19 15:34	72-20-8	
Heptachlor	ND	mg/L	0.00010	0.000060	.008	1	04/23/19 10:30	04/23/19 15:34	76-44-8	
Heptachlor epoxide	ND	mg/L	0.00010	0.000040	.008	1	04/23/19 10:30	04/23/19 15:34	1024-57-3	
Methoxychlor	ND	mg/L	0.0010	0.000050	10	1	04/23/19 10:30	04/23/19 15:34	72-43-5	
Toxaphene	ND	mg/L	0.0030	0.0021	.5	1	04/23/19 10:30	04/23/19 15:34	8001-35-2	
Surrogates										
Decachlorobiphenyl (S)	67	%	12-162			1	04/23/19 10:30	04/23/19 15:34	2051-24-3	
Tetrachloro-m-xylene (S)	72	%	54-127			1	04/23/19 10:30	04/23/19 15:34	877-09-8	
8151 Chlorinate Herbicide TCLP		Analytical Method: EPA 8151 Preparation Method: EPA 8151 Leachate Method/Date: EPA 1311; 04/22/19 11:16								
2,4-D	ND	mg/L	0.010	0.0031	10	1	04/23/19 10:30	04/24/19 04:09	94-75-7	
2,4,5-TP (Silvex)	ND	mg/L	0.010	0.0023	1	1	04/23/19 10:30	04/24/19 04:09	93-72-1	R1
Surrogates										
2,4-DCAA (S)	53	%	10-171			1	04/23/19 10:30	04/24/19 04:09	19719-28-9	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Alten LLC Digestor Sampling
Pace Project No.: 60299511

Sample: WET CAKE Lab ID: 60299511003 Collected: 04/08/19 11:00 Received: 04/10/19 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	MDL	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides, TCLP			Analytical Method: EPA 8081 Preparation Method: EPA 3510 Leachate Method/Date: EPA 1311; 04/22/19 11:16							
gamma-BHC (Lindane)	ND	mg/L	0.00050	0.000050	.4	1	04/23/19 10:30	04/23/19 15:48	58-89-9	
Chlordane (Technical)	ND	mg/L	0.0020	0.00041	.03	1	04/23/19 10:30	04/23/19 15:48	57-74-9	
Endrin	ND	mg/L	0.00020	0.000040	.02	1	04/23/19 10:30	04/23/19 15:48	72-20-8	
Heptachlor	ND	mg/L	0.00010	0.000060	.008	1	04/23/19 10:30	04/23/19 15:48	76-44-8	
Heptachlor epoxide	ND	mg/L	0.00010	0.000040	.008	1	04/23/19 10:30	04/23/19 15:48	1024-57-3	
Methoxychlor	ND	mg/L	0.0010	0.000050	10	1	04/23/19 10:30	04/23/19 15:48	72-43-5	
Toxaphene	ND	mg/L	0.0030	0.0021	.5	1	04/23/19 10:30	04/23/19 15:48	8001-35-2	
Surrogates										
Decachlorobiphenyl (S)	50	%	12-162			1	04/23/19 10:30	04/23/19 15:48	2051-24-3	
Tetrachloro-m-xylene (S)	76	%	54-127			1	04/23/19 10:30	04/23/19 15:48	877-09-8	
8151 Chlorinate Herbicide TCLP			Analytical Method: EPA 8151 Preparation Method: EPA 8151 Leachate Method/Date: EPA 1311; 04/22/19 11:16							
2,4-D	ND	mg/L	0.010	0.0031	10	1	04/23/19 10:30	04/24/19 04:52	94-75-7	
2,4,5-TP (Silvex)	ND	mg/L	0.010	0.0023	1	1	04/23/19 10:30	04/24/19 04:52	93-72-1	
Surrogates										
2,4-DCAA (S)	62	%	10-171			1	04/23/19 10:30	04/24/19 04:52	19719-28-9	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Alten LLC Digestor Sampling

Pace Project No.: 60299511

Sample: SEED CORN Lab ID: 60299511004 Collected: 04/08/19 13:30 Received: 04/10/19 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	MDL	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides, TCLP			Analytical Method: EPA 8081 Preparation Method: EPA 3510 Leachate Method/Date: EPA 1311; 04/22/19 11:16							
gamma-BHC (Lindane)	ND	mg/L	0.00050	0.000050	.4	1	04/23/19 10:30	04/23/19 16:02	58-89-9	
Chlordane (Technical)	ND	mg/L	0.0020	0.00041	.03	1	04/23/19 10:30	04/23/19 16:02	57-74-9	
Endrin	ND	mg/L	0.00020	0.000040	.02	1	04/23/19 10:30	04/23/19 16:02	72-20-8	
Heptachlor	ND	mg/L	0.00010	0.000060	.008	1	04/23/19 10:30	04/23/19 16:02	76-44-8	
Heptachlor epoxide	ND	mg/L	0.00010	0.000040	.008	1	04/23/19 10:30	04/23/19 16:02	1024-57-3	
Methoxychlor	ND	mg/L	0.0010	0.000050	10	1	04/23/19 10:30	04/23/19 16:02	72-43-5	
Toxaphene	ND	mg/L	0.0030	0.0021	.5	1	04/23/19 10:30	04/23/19 16:02	8001-35-2	
Surrogates										
Decachlorobiphenyl (S)	57	%	12-162			1	04/23/19 10:30	04/23/19 16:02	2051-24-3	
Tetrachloro-m-xylene (S)	60	%	54-127			1	04/23/19 10:30	04/23/19 16:02	877-09-8	
8151 Chlorinate Herbicide TCLP			Analytical Method: EPA 8151 Preparation Method: EPA 8151 Leachate Method/Date: EPA 1311; 04/22/19 11:16							
2,4-D	ND	mg/L	0.010	0.0031	10	1	04/23/19 10:30	04/24/19 05:13	94-75-7	
2,4,5-TP (Silvex)	ND	mg/L	0.010	0.0023	1	1	04/23/19 10:30	04/24/19 05:13	93-72-1	
Surrogates										
2,4-DCAA (S)	53	%	10-171			1	04/23/19 10:30	04/24/19 05:13	19719-28-9	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Alten LLC Digester Sampling

Pace Project No.: 60299511

QC Batch: 116453 Analysis Method: EPA 8081
QC Batch Method: EPA 3510 Analysis Description: 8081 GCS TCLP Pesticides
Associated Lab Samples: 60299511001, 60299511002, 60299511003, 60299511004

METHOD BLANK: 524630 Matrix: Water
Associated Lab Samples: 60299511001, 60299511002, 60299511003, 60299511004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlordane (Technical)	mg/L	ND	0.0020	0.00041	04/23/19 14:36	
Endrin	mg/L	ND	0.00020	0.000040	04/23/19 14:36	
gamma-BHC (Lindane)	mg/L	ND	0.00050	0.000050	04/23/19 14:36	
Heptachlor	mg/L	ND	0.00010	0.000060	04/23/19 14:36	
Heptachlor epoxide	mg/L	ND	0.00010	0.000040	04/23/19 14:36	
Methoxychlor	mg/L	ND	0.0010	0.000050	04/23/19 14:36	
Toxaphene	mg/L	ND	0.0030	0.0021	04/23/19 14:36	
Decachlorobiphenyl (S)	%	69	12-162		04/23/19 14:36	
Tetrachloro-m-xylene (S)	%	80	54-127		04/23/19 14:36	

LABORATORY CONTROL SAMPLE: 524631

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endrin	mg/L	0.005	0.0039	77	56-152	
gamma-BHC (Lindane)	mg/L	0.005	0.0044	88	70-135	
Heptachlor	mg/L	0.005	0.0042	84	59-139	
Heptachlor epoxide	mg/L	0.005	0.0040	79	65-138	
Methoxychlor	mg/L	0.005	0.0040	80	39-160	
Decachlorobiphenyl (S)	%			64	12-162	
Tetrachloro-m-xylene (S)	%			73	54-127	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524633 524634

Parameter	Units	60299511002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Endrin	mg/L	ND	0.005	0.005	0.0044	0.0041	88	83	39-173	6	40	
gamma-BHC (Lindane)	mg/L	ND	0.005	0.005	0.0056	0.0053	111	106	69-139	5	40	
Heptachlor	mg/L	ND	0.005	0.005	0.0046	0.0042	92	84	48-141	9	40	
Heptachlor epoxide	mg/L	ND	0.005	0.005	0.0059	0.0056	119	112	28-164	6	40	
Methoxychlor	mg/L	ND	0.005	0.005	0.0043	0.0041	86	82	20-178	5	40	
Decachlorobiphenyl (S)	%						69	61	12-162			
Tetrachloro-m-xylene (S)	%						69	64	54-127			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: Alten LLC Digestor Sampling
Pace Project No.: 60299511

QC Batch: 116456 Analysis Method: EPA 8151
QC Batch Method: EPA 8151 Analysis Description: 8151 GCS TCLP Herbicides
Associated Lab Samples: 60299511001, 60299511002, 60299511003, 60299511004

METHOD BLANK: 524637 Matrix: Water
Associated Lab Samples: 60299511001, 60299511002, 60299511003, 60299511004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
2,4,5-TP (Silvex)	mg/L	ND	0.010	0.0023	04/24/19 02:44	
2,4-D	mg/L	ND	0.010	0.0031	04/24/19 02:44	
2,4-DCAA (S)	%	61	10-171		04/24/19 02:44	

LABORATORY CONTROL SAMPLE: 524638

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-TP (Silvex)	mg/L	0.03	0.018	61	28-145	
2,4-D	mg/L	0.03	0.018	59	28-145	
2,4-DCAA (S)	%			52	10-171	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524639 524640

Parameter	Units	60299511002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2,4,5-TP (Silvex)	mg/L	ND	0.03	0.03	0.014	0.019	48	62	20-129	25	20	R1
2,4-D	mg/L	ND	0.03	0.03	0.019	0.023	59	73	12-162	20	20	
2,4-DCAA (S)	%						48	61	10-171			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Alten LLC Digester Sampling

Pace Project No.: 60299511

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-D Pace Analytical Services - Dallas

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

R1 RPD value was outside control limits.

S1 Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Alten LLC Digester Sampling
Pace Project No.: 60299511

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60299511001	WEST LAGOON	EPA 3510	116453	EPA 8081	116504
60299511002	OVERFLOW LAGOON	EPA 3510	116453	EPA 8081	116504
60299511003	WET CAKE	EPA 3510	116453	EPA 8081	116504
60299511004	SEED CORN	EPA 3510	116453	EPA 8081	116504
60299511001	WEST LAGOON	EPA 8151	116456	EPA 8151	116528
60299511002	OVERFLOW LAGOON	EPA 8151	116456	EPA 8151	116528
60299511003	WET CAKE	EPA 8151	116456	EPA 8151	116528
60299511004	SEED CORN	EPA 8151	116456	EPA 8151	116528

REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt****WO#: 60299511**

Client Name:

EA Eng.Courier: FedEx ☐ UPS ☒ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐Tracking #: 12 635 804 01 9576 4765 Pace Shipping Label Used? Yes ☒ No ☐Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐Packing Material: Bubble Wrap ☐ Bubble Bags ☒ Foam ☐ None ☐ Other ☐Thermometer Used: T-298 Type of Ice: Wet Blue ☐ None ☐Cooler Temperature (°C): As-read 2.2 Corr. Factor -0.1 Corrected 2.1Date and initials of person
examining contents: 4/13/19 JY

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses <u>4/11/19</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>Wt + S&L</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State: <u>NE</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

Client Notification/ Resolution:


Copy COC to Client? Y / N

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: TDGDate: 4-11-19

	Document Name: Sample Condition Upon Receipt	Document Revised: 03-14-19 Page 1 of 1
	Document No.: F-DAL-C-001-rev.9	Issuing Authority: Pace Dallas Quality Office

Sample Condition Upon Receipt

☒ Dallas ☐ Ft Worth

WO#: 75106394



Client Name: Pace-TS Project Work order: _____

Courier: FedEX ☒ UPS ☐ USPS ☐ Client ☐ LSO ☐ PACE ☐ Other: _____

Tracking #: 4746 8745 2890

Custody Seal on Cooler/Box: Yes ☒ No ☐ Packing Material: Bubble Wrap/Bags ☒ Foam ☐ None ☐ Other ☐

Received on ice: Yes ☒ No ☐ Type of Ice: Wet ☒ Blue ☐

Thermometer Used: 17-11 Cooler Temp °C: 5.7 (Recorded) 0.0 (Correction Factor) 5.7 (Actual)

Temperature should be above freezing to 6°C

Chain of Custody relinquished	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Sampler name & signature on COC	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <u>12WD</u>
Short HT analyses (<72 hrs)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Sufficient Volume received	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Correct Container used	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Container Intact	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Sample pH Acceptable pH Strips: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Residual Chlorine Present Cl Strips: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Sulfide Present Lead Acetate Strips: _____	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Are soil samples (volatiles, TPH) received in 5035A Kits	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Unpreserved 5035A soil frozen within 48 hrs	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Headspace in VOA (>6mm)	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Project sampled in USDA Regulated Area: State Sampled: <u>NE</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Non-Conformance(s):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: NE

Cert. Needed: ☐ Yes ☒ No

Owner Received Date: 4/10/2019 Results Requested By: 4/24/2019



Pace Analytical
www.pacelabs.com

Workorder: 60299511

Workorder Name: Alten LLC Digester Sampling

Owner Received Date: 4/10/2019 Results Requested By: 4/24/2019

Report To						Subcontract To						Requested Analysis															
Trudy Gipson Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 1(913)563-1405						Pace Analytical Dallas 400 West Bethany Drive Suite 190 Allen, TX 75013 Phone (972)727-1123																					
						Preserved Containers																					
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unpreserved							8081 TCLLP Pest	8151 TCLLP Herb													LAB USE ONLY
1	WEST LAGOON	PS	4/8/2019 12:35	60299511001	Water	1							X	X											-001		
2	OVERFLOW LAGOON	PS	4/8/2019 13:30	60299511002	Water	1							X	X											-002		
3	WET CAKE	PS	4/8/2019 11:00	60299511003	Solid	1							X	X											-003		
4	SEED CORN	PS	4/8/2019 13:30	60299511004	Solid	1							X	X											-004		
5																											
													Comments														
Transfers		Released By		Date/Time		Received By		Date/Time																			
1						Allyce E. Miller		4/17/19 09:26																			
2																											
3																											
Cooler Temperature on Receipt 5.7 °C				Custody Seal (Y) or N				Received on Ice (Y) or N				Samples Intact (Y) or N															

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

REPORT NUMBER

19-109-4178REPORT DATE
Apr 19, 2019RECEIVED DATE
Apr 10, 2019SEND TO
1235213611 B Street • Omaha, Nebraska 68144-3693 • (402) 334-7770
www.midwestlabs.com**PAGE 1/5**ISSUE DATE
Apr 19, 2019

PACE ANALYTICAL SERVICES
PACE ANALYTICAL SERVICES
9608 LOIRET BLVD
LENEXA KS 66219-

REPORT OF ANALYSIS

For: (12352) PACE ANALYTICAL SERVICES
 liquid
 60299511 Sub 9852

Analysis	Level Found	Units	Reporting		Analyst- Date	Verified- Date
	As Received		Limit	Method		
Sample ID: West Lagoon 60299511001 Lab Number: 8614775 Date Sampled: 2019-04-08 1235						
Aflatoxin B1	n.d.	ppb	1.00	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Aflatoxin B2	n.d.	ppb	1.00	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Aflatoxin G1	n.d.	ppb	1.00	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Aflatoxin G2	n.d.	ppb	1.00	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Aflatoxin summation	n.d.	ppb	1.00	Calculation	Auto-2019/04/17	Auto-2019/04/19
DON (Vomitoxin)	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Fumonisin B1	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Fumonisin B2	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Fumonisin B3	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Fumonisin summation	n.d.	ppm	0.10	Calculation	Auto-2019/04/17	Auto-2019/04/19
Ochratoxin	n.d.	ppb	1.0	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
T-2 toxin	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/19
Zearalenone	n.d.	ppb	50	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Sample ID: Overflow Lagoon 60299511002 Lab Number: 8614776 Date Sampled: 2019-04-08 1330						
Aflatoxin B1	n.d.	ppb	1.00	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Aflatoxin B2	n.d.	ppb	1.00	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Aflatoxin G1	n.d.	ppb	1.00	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Aflatoxin G2	n.d.	ppb	1.00	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Aflatoxin summation	n.d.	ppb	1.00	Calculation	Auto-2019/04/17	Auto-2019/04/19

The result(s) issued on this report only reflect the analysis of the sample(s) submitted.

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PACE ANALYTICAL SERVICES
PACE ANALYTICAL SERVICES
9608 LOIRET BLVD
LENEXA KS 66219-

REPORT OF ANALYSIS

For: (12352) PACE ANALYTICAL SERVICES
 liquid
 60299511 Sub 9852

Analysis	Level Found		Reporting		Analyst- Date	Verified- Date	
	As Received	Units	Limit	Method			
Sample ID: Overflow Lagoon 60299511002		Lab Number: 8614776 (con't)					
DON (Vomitoxin)	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17	
Fumonisin B1	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17	
Fumonisin B2	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17	
Fumonisin B3	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17	
Fumonisin summation	n.d.	ppm	0.10	Calculation	Auto-2019/04/17	Auto-2019/04/19	
Ochratoxin	n.d.	ppb	1.0	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17	
T-2 toxin	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/19	
Zearalenone	n.d.	ppb	50	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17	
Sample ID: Wet Cake 6029951003		Lab Number: 8614777	Date Sampled: 2019-04-08 1100				
Aflatoxin B1	n.d.	ppb	1.00	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17	
Aflatoxin B2	n.d.	ppb	1.00	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17	
Aflatoxin G1	n.d.	ppb	1.00	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17	
Aflatoxin G2	n.d.	ppb	1.00	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17	
Aflatoxin summation	n.d.	ppb	1.00	Calculation	Auto-2019/04/17	Auto-2019/04/19	
DON (Vomitoxin)	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/19	tjp8-2019/04/19	
Fumonisin B1	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/19	
Fumonisin B2	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/19	
Fumonisin B3	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/19	
Fumonisin summation	n.d.	ppm	0.10	Calculation	Auto-2019/04/19	Auto-2019/04/19	

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**PACE ANALYTICAL SERVICES
PACE ANALYTICAL SERVICES
9608 LOIRET BLVD
LENEXA KS 66219-**

REPORT OF ANALYSIS

For: (12352) PACE ANALYTICAL SERVICES
liquid
60299511 Sub 9852

Analysis	Level Found	Units	Reporting		Analyst- Date	Verified- Date
	As Received		Limit	Method		
Sample ID: Wet Cake 6029951003		Lab Number: 8614777 (con't)				
Ochratoxin	n.d.	ppb	1.0	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
T-2 toxin	n.d.	ppm	0.1	AOAC 2008.02 (mod)	kmc4-2019/04/17	tjp8-2019/04/17
Zearalenone	n.d.	ppb	50	AOAC 2008.02 (mod)	kmc4-2019/04/19	tjp8-2019/04/19

All results are reported on an AS RECEIVED basis., n.d. = not detected , ppm = parts per million, ppm = mg/kg , ppb = parts per billion

cc: Account(s) 12352 PACE ANALYTICAL SERVICES

For questions please contact:

Heather Ramig
Heather Ramig
Account Manager
hramig@midwestlabs.com (402)829-9891

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**PACE ANALYTICAL SERVICES
PACE ANALYTICAL SERVICES
9608 LOIRET BLVD
LENEXA KS 66219-**

REPORT OF ANALYSIS

For: (12352) PACE ANALYTICAL SERVICES
liquid
60299511 Sub 9852

Detailed Method Description(s)

Mycotoxin extraction and analysis

Sample analysis follows MWL LCMS 020 which is based on AOAC 2008.02 (modified). Samples are ground to a homogenous consistency and placed in an extraction solution. The extract is allowed to equilibrate and then an aliquot passed through an immunoaffinity column which contains antibodies that are specific for the mycotoxins. The mycotoxins are released from the affinity column and then analyzed by either LC/MS and/or LC/MS/MS which allows identification of the mycotoxins using mass spectrometry and retention time.

Calculation

Analytical results are entered into applicable formulas to provide a calculated result which is reported.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

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Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Page: 1 of 1	
Company: EA Eng Science and Technology		Report To: Dan Bigbee		Attention: Accounts Payable, Dan Bigbee		REGULATORY AGENCY: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____	
Address: 221 Sun Valley Blvd Suite D Lincoln, NE 68528		Copy To: Kent Dixon		Company Name: EA Eng Science and Technology			
Email To: dbigbee@eaest.com		Purchase Order No.: LSO #		Address:		Site Location STATE: NE	
Phone: 402-817-7612 Fax:		Project Name: AltEn LLC		Place Quote Reference: 58462 (JR)			
Requested Due Date/TAT:		Project Number: AltEn LLC Digester Sampling		Place Project Manager: Trudy Gipson 913-563-1405			
				Place Profile #: 12649 Lines 1 & 2			

[illegible]

***Important Note:** By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.08, 12-Oct-2007 Page 25 of 34