PCS: NE0137634
ILS: 84069
mpL

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

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

Enclosures

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

NELAP ACCREDITED TNI LABORATORY

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Alten LLC Digestor 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

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SAMPLE SUMMARY

Project: Alten LLC Digestor 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

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SAMPLE ANALYTE COUNT

Project: Alten LLC Digestor 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

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PROJECT NARRATIVE

Project: Allen 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)

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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.

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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	

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ANALYTICAL RESULTS

Project: Allen 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	

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ANALYTICAL RESULTS

Project: Allen 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	

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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	

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QUALITY CONTROL DATA

Project: Alten LLC Digestor 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			

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REPORT OF LABORATORY ANALYSIS

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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			

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QUALIFIERS

Project: Alten LLC Digestor 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).

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Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Alten LLC Digestor 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

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Sample Condition Upon Receipt

WO#: 60299511

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 2.1

Date and initials of person examining contents: 4/10/19 [illegible]

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses [illegible]	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: Wt + Sl	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☐Yes ☐No ☑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)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm)	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State: NE	☐Yes ☑No ☐N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑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: TDG Date: 4-11-19

ED_013286A_00000764-00015

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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.

Page: 1 of 1

Section A Required Client Information:

Company:	EA Eng Science and Technology
Address:	221 Sun Valley Blvd Suite D
	Lincoln, NE 68528
Email To:	dbigbee@eaest.com
Phone: 402-817-7612	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Dan Bigbee
Copy To:	Kent Dixon
Purchase Order No.:	LSO #
Project Name:	AltEn LLC
Project Number:	AltEn LLC Digestor Sampling

Section C Invoice Information:

Attention:	Accounts Payable, Dan Bigbee
Company Name:	EA Eng Science and Technology
Address:	
Pace Quote Reference:	58462 (JR)
Pace Project Manager:	Trudy Gipson 913-563-1405
Pace Profile #:	12849 Lines 1 & 2

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NE

Requested Analysis Filtered (Y/N)

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	TCLP - Pest*	TCLP - Herb*										Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 6099511
1	Pace Analyitcal																														
2	West Lagoon	WT		4/8	12:35				1	1									x	x		AGU									Liquid 001
3	~~[illegible]~~ Overflow Lagoon	WT		4/8	13:30				1	1									x	x		↓									Liquid 002
4	Wet cake	SL		4/8	11:00				1	1									x	x		WGKU									Cake 003
5	Seed Corn	SL		4/8	1330				1	1									x	x		↓									Corn 004
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*Sub Pace Dallas	[signature]	4/8/19	430	[signature]	4/8/19	1630				
	[signature] / EA	4.9.19	1630	[signature] / Pace	4/10/19	0945	2.1	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Daniel LeMaistre

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4/8/19

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: EA Eng Science and Technology	Report To: Dan Bigbee	Attention: Accounts Payable, Dan Bigbee
Address: 221 Sun Valley Blvd Suite D	Copy To: Kent Dixon	Company Name: EA Eng Science and Technology
Lincoln, NE 68528		Address:
Email To: dbigbee@esest.com	Purchase Order No.: LSO #	Pace Quote Reference: 58462 (JR)
Phone: 402-817-7612 Fax:	Project Name: AltEn LLC	Pace Project Manager: Trudy Gipson 913-563-1405
Requested Due Date/TAT:	Project Number: AltEn LLC Digestor Sampling	Pace Profile #: 12849 Lines 1 & 2

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NE

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	Mycotoxins (Full Screen)*	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Midwest Laboratories																				60299511
2	West Lagoon	WT		4/8/19	12:35				1	1									X		Liquid 001
3	Overflow Lagoon	WT		4/8/19	13:30				1	1									X		Liquid 002
4	Wet Cake	SL		4/8/19	11:00				1	1									X		Cake 003
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Sub Midwest Laboratories	[signature] / NDEQ	4/8/19	430	[signature]	4-8-19	1630	
	[signature] / EA	4-9-19	1630				

Direct Ship

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Daniel LeMaistre

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4/8/19

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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.06, 12-Oct-2007

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: / of /

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Copy To:	Kent Dixon
Purchase Order No.:	LSO #
Project Name:	AllEn LLC
Project Number:	AllEn LLC Digestor Sampling

Section C Invoice Information:

Attention:	Accounts Payable, Dan Bigbee
Company Name:	EA Eng Science and Technology
Address:	
Pace Quote Reference:	58462 (JR)
Pace Project Manager:	Trudy Gipson 913-563-1405
Pace Profile #:	12849 Lines 1 & 2

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NE

Section D Required Client Information: SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOLID SO; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

ITEM #	SAMPLE ID	MATRIX CODE (use valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Neonicotinoids Screen*	Strobilurin Screen*	Triazole Screen*	Pyrethroid Screen*	Organophosphate Screen*	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	South Dakota Agricultural Laboratories																								
2	West Lagoon	WT		4/8	12:35				2	2									x	x	x	x	x		Liquid 001
3	Overflow Lagoon	WT		4/8	13:54				2	2									x	x	x	x	x		Liquid 002
4	West Cake	SL		4/8	11:00				1	1									x	x	x	x	x		Cake 003
5	Seed Corn	SL		4/8	12:50				1	1										x	x				Corn 004
6																									
7																									
8																									
9																									
10																									
11																									
12																									

Requested Analysis Filtered (Y/N)

L0299511

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Sub South Dakota Agricultural Laboratories	[signature]	4/8/19	430	[signature]	4/9/19	1630	
	[signature]	4-9-19	1630				

Direct Ship

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Daniel LeMaistre

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): [illegible]

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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

Pace Analytical®	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

75106394

Client Name: Pace-TS Project Work order: ____

Courier: FedEx ☑ UPS ☐ USPS ☐ Client ☐ LSO ☐ PACE ☐ Other: ____

Tracking #: 4746 8245 2190

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 ☑ No ☐
Sampler name & signature on COC	Yes ☐ No ☑ (12-20)
Short HT analyses (<72 hrs)	Yes ☐ No ☑
Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips:____ Residual Chlorine Present Cl Strips:____ Sulfide Present Lead Acetate Strips:____	Yes ☐ No ☐ NA ☑ Yes ☐ No ☐ NA ☑ Yes ☐ No ☐ NA ☑
Are soil samples (volatiles, TPH) received in 5035A Kits	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☐ NA ☑
Project sampled in USDA Regulated Area: State Sampled: NE	Yes ☐ No ☑
Non-Conformance(s):	Yes ☐ No ☑

Chain of Custody

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☐ 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

Workorder: 60299511 **Workorder Name:** Alten LLC Digestor Sampling

Report To	Subcontract To
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

Requested Analysis

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved						8081 TCLP Pest	8151 TCLP 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																								

7506794

Transfers	Released By	Date/Time	Received By	Date/Time
1			Alyssa Thiller	4/10/2019
2				
3				

Comments

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
19-109-4178

REPORT DATE
Apr 19, 2019

SEND TO
12352

RECEIVED DATE
Apr 10, 2019

Midwest Laboratories®

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www.midwestlabs.com

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 As Received	Units	Reporting Limit	Method	Analyst-Date	Verified-Date
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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REPORT NUMBER
19-109-4178
REPORT DATE
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ISSUE DATE
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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 As Received	Units	Reporting Limit	Method	Analyst-Date	Verified-Date
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

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

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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 As Received	Units	Reporting Limit	Method	Analyst-Date	Verified-Date
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

The result(s) issued on this report only reflect the analysis of the sample(s) submitted.
Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any references be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

REPORT NUMBER
19-109-4178
REPORT DATE
Apr 19, 2019
SEND TO
12352
RECEIVED DATE
Apr 10, 2019

Midwest Laboratories®
13611 B Street • Omaha, Nebraska 68144-3693 • (402) 334-7770
www.midwestlabs.com

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

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 spectrometery and retention time.

Calculation

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

The result(s) issued on this report only reflect the analysis of the sample(s) submitted.
Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

Pace Analytical
www.pacelabs.com

8614775-777
Samples: 3 Page: 1/1
Edit E Schmidt 2019 04 10 12:01

CHAIN-OF-CUSTODY / Analytical Request Document

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

PAGE 5/5

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	EA Eng Science and Technology	Report To:	Dan Bigbee	Attention:	Accounts Payable, Dan Bigbee
Address:	221 Sun Valley Blvd Suite D	Copy To:	Kent Dixon	Company Name:	EA Eng Science and Technology
	Lincoln, NE 68528			Address:	
Email To:	dbigbee@eaest.com	Purchase Order No.:	LSO #	Pace Quote Reference:	58462 (JR)
Phone: 402-817-7512	Fax:	Project Name:	AltEn LLC	Pace Project Manager:	Trudy Gipson 913-563-1406
Requested Due Date/TAT:		Project Number:	AltEn LLC Digestor Sampling	Pace Profile #:	12849 Lines 1 & 2

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NE

Section D Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOILSOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE ENDGRAB DATE	COLLECTED COMPOSITE ENDGRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	Mycotoxins (Full Screen)*	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Midwest Laboratories																				
2	Waste Lagoon	WT		4/8/19	12:35				1	1									X		Liquid
3	Overflow Lagoon	WT		4/8/19	13:30				1	1									X		Liquid
4	Wet Cake	SL		4/8/19	11:00				1	1									X		Cake
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

8614775
8614776
8614777

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Sub Midwest Laboratories	[signature] / NDEQ	4/8/19	430	[signature]	4/9/19	1630	
	[signature] / EA	4-9-19	1630				
				AM 4/10/19			5.6° AM 1813

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Daniel LeMaistre
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4/8/19

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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

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	58.2 ppb
Uniconazole	ND ppb
Voriconazole	ND ppb

Comments:

ND: Not Detected

2019 0415 - 002

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A Required Client Information		Section B Required Project Information		Section C Invoice Information	
Company	EA Eng Science and Technology	Report To	Dan Bigbee	Attention	Accounts Payable: Dan Bigbee
Address	221 Sun Valley Blvd. Suite D	Copy To	Kent Dixon	Company Name	EA Eng Science and Technology
	Lincoln, NE 68528			Address	
Email To	dbigbee@eaest.com	Purchase Order No.	LSO #	Pace Quote Reference	58462 (JR)
Phone	402-817-7512 Fax	Project Name	AltEn LLC	Pace Project Manager	Trudy Gipson 913-563-1405
Requested Due Date/TAT		Project Number	AltEn LLC Digestor Sampling	Pace Profile #	12849 Lines 1 & 2

REGULATORY AGENCY

NPDES | GROUND WATER | DRINKING WATER

UST | RCRA | OTHER

Site Location STATE: NE

Section D Required Client Information

Valid Matrix Codes: MATRIX CODE; DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOILROCK SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

SAMPLE ID (A-Z, 0-9 / ,) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END DATE	COLLECTED COMPOSITE END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	Neonicotinoids Screen*	Strobilurin Screen*	Triazole Screen*	Pyrethroid Screen*	Organophosphae Screen*	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
1	South Dakota Agricultural Laboratories																								
2	[illegible]	WT		[illegible]	[illegible]				2	2									x	x	x	x	x	19 PE 0 0 1 9 9 5	Liquid
3	[illegible]	WT		[illegible]	[illegible]				2	2									x	x	x	x	x	1 9 9 6	Liquid
4	[illegible]	SL		[illegible]	[illegible]				1	1									x	x	x	x	x	1 9 9 7	Cake
5	[illegible]	SL		[illegible]	[illegible]				1	1										x	x			1 9 9 8	Corn
6																									
7																									
8																									
9																									
10																									
11																									
12																									

April 15th 2019

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Sub South Dakota Agricultural Laboratories	[signature]	4/8/19	430	[signature]	4/9/19	1630	
	[signature]	4/9/19	1630				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: [illegible]

SIGNATURE of SAMPLER: [illegible] DATE Signed (MM/DD/YY):

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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

Submitted by the customer:

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: 2019-04-29 **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	737 ppb
Uniconazole	ND ppb
Voriconazole	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:

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 :	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	1750 ppb
Uniconazole	ND ppb
Voriconazole	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:

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 :	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.

___ = Field Sample

Units: Specific units in which results are reported.

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.

Analysis **Comments About Results For This Analysis**

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.

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	

Tabatha Pilkins (OPA Pgm - Region 7) ~4/9/19

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII

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

CONTENTS OF SHIPMENT

ASR AND SAMPLE NUMBER	TYPE OF CONTAINERS: 1 L PLASTIC BOTTLE	1 L Glass BOTTLE	BOTTLE	BOTTLE	VOA SET (3 VIALS EA)	SAMPLED MEDIA: WATER	SOIL	SEDIMENT	AIR	OTHER	RECEIVING LABORATORY REMARKS OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)
	NUMBER(S) OF CONTAINERS PER SAMPLE NUMBER										
8288-1		2					X				
8289-2	1	1				X					
8290-3	1	1				X					Rec corrected RAL 5005
8291-4		2					X				PA #40 show 8289 not 8290 on COC + Hg @ SR ~4/9/19

Chr. Temp. Rec'd bet. 4.9-6.2°C

DESCRIPTION OF SHIPMENT	MODE OF SHIPMENT 4/9/19
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)	DATE	TIME	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
[signature] SEALED ___ UNSEALED X	4/8/19	1530	[signature] SEALED ___ UNSEALED X	4/8/19	1535	To ship samples
[signature] SEALED ___ UNSEALED ___	4/8/19	1730	[signature] SEALED ___ UNSEALED ___	4/9/19	1100A	Analy
RELINQUISHED BY (PM/SAMPLER) SEALED ___ UNSEALED ___	DATE	TIME	RECEIVED BY SEALED ___ UNSEALED ___	DATE	TIME	REASON FOR CHANGE OF CUSTODY
RELINQUISHED BY (PM/SAMPLER) SEALED ___ UNSEALED ___	DATE	TIME	RECEIVED BY SEALED ___ UNSEALED ___	DATE	TIME	REASON FOR CHANGE OF CUSTODY

7-EPA-9292 (REV 4/17) WHITE ORIGINAL - EPA LAB • YELLOW - EPA PROJECT MANAGER

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 HNO3/L to pH<2	28	Days	1 Mercury in Water
1 - 1 Liter plastic bottle	HNO3 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 HNO3/L to pH<2	28	Days	1 Mercury in Water
1 - 1 Liter plastic bottle	HNO3 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:** 4 **QC Code:** ___ **Matrix:** Solid **Tag ID:** 8209-4-___

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

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