

**NM1 - \_\_\_\_34\_\_**

**MONITORING  
REPORT**

**YEAR(S):**

**\_\_\_\_2015-2016\_\_**

**DD LANDFARM  
BOX 36  
MONUMENT, NM 88265**

NMOCD Environmental  
ATTN: Brad Jones  
1220 South St. Francis Drive  
Santa Fe, NM 87505

RE: DD Landfarm

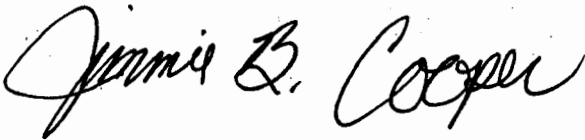
Mr. Jones:

Please find the attached request and/or information concerning DD Landfarm.

We appreciate your time and patience as we get everything together as you requested to get into compliance.

We appreciate your continued cooperation.

Thanks.

A handwritten signature in black ink, reading "Jimmie B. Cooper". The signature is written in a cursive, flowing style.

Jimmie B. Cooper  
Owner - Operator  
DD Landfarm  
1-254-493-9082

October 31, 2016

NMOCD Environmental  
1220 South ST. Francis Drive  
Santa FE, NM 87505

RE: DD Landfarm  
Sampling

Dear Sir:

Find enclosed the analytical for DD Landfarm, both treatment and vadose samples.

The test was compared to the background and PQL, and all were in compliance.

Should you have any questions, please call.

Thanks,

A handwritten signature in black ink, appearing to read "Eddie W. Seay". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Eddie Seay Consulting, Agent  
601 W. Illinois  
Hobbs, NM 88242  
575-392-2236  
[seay04@leaco.net](mailto:seay04@leaco.net)

cc: DD Landfarm



*Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)*

October 12, 2016

Jim Cooper  
DD Landfarm  
Box 36  
Monument, NM 88265  
TEL: (575) 390-2454  
FAX

RE: DD Landfarm

OrderNo.: 1609G92

Dear Jim Cooper:

Hall Environmental Analysis Laboratory received 15 sample(s) on 9/29/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 1609G92

Date Reported: 10/12/2016

CLIENT: DD Landfarm

Client Sample ID: Cell 1-T

Project: DD Landfarm

Collection Date: 9/27/2016 6:30:00 AM

Lab ID: 1609G92-001

Matrix: SOIL

Received Date: 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/4/2016 3:58:16 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/4/2016 3:58:16 PM
Surr: DNOP	81.9	70-130		%Rec	1	10/4/2016 3:58:16 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/3/2016 12:15:18 PM
Surr: BFB	87.7	68.3-144		%Rec	1	10/3/2016 12:15:18 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	10/3/2016 12:15:18 PM
Benzene	ND	0.025		mg/Kg	1	10/3/2016 12:15:18 PM
Toluene	ND	0.050		mg/Kg	1	10/3/2016 12:15:18 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/3/2016 12:15:18 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/3/2016 12:15:18 PM
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	10/3/2016 12:15:18 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: MRA
Chloride	13	1.5		mg/Kg	1	10/4/2016 1:32:43 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1609G92

Date Reported: 10/12/2016

**CLIENT:** DD Landfarm**Client Sample ID:** Cell 2-T**Project:** DD Landfarm**Collection Date:** 9/27/2016 6:50:00 AM**Lab ID:** 1609G92-002**Matrix:** SOIL**Received Date:** 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/4/2016 6:13:21 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/4/2016 6:13:21 PM
Surr: DNOP	79.8	70-130		%Rec	1	10/4/2016 6:13:21 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/3/2016 4:02:07 PM
Surr: BFB	81.4	68.3-144		%Rec	1	10/3/2016 4:02:07 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	10/3/2016 4:02:07 PM
Benzene	ND	0.025		mg/Kg	1	10/3/2016 4:02:07 PM
Toluene	ND	0.050		mg/Kg	1	10/3/2016 4:02:07 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/3/2016 4:02:07 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/3/2016 4:02:07 PM
Surr: 4-Bromofluorobenzene	94.1	80-120		%Rec	1	10/3/2016 4:02:07 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: MRA
Chloride	25	1.5		mg/Kg	1	10/4/2016 1:57:32 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1609G92

Date Reported: 10/12/2016

**CLIENT:** DD Landfarm**Client Sample ID:** Cell 3-T**Project:** DD Landfarm**Collection Date:** 9/27/2016 7:15:00 AM**Lab ID:** 1609G92-003**Matrix:** SOIL**Received Date:** 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/4/2016 6:58:56 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/4/2016 6:58:56 PM
Surr: DNOP	83.6	70-130		%Rec	1	10/4/2016 6:58:56 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/3/2016 5:12:32 PM
Surr: BFB	84.3	68.3-144		%Rec	1	10/3/2016 5:12:32 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	10/3/2016 5:12:32 PM
Benzene	ND	0.024		mg/Kg	1	10/3/2016 5:12:32 PM
Toluene	ND	0.048		mg/Kg	1	10/3/2016 5:12:32 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/3/2016 5:12:32 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/3/2016 5:12:32 PM
Surr: 4-Bromofluorobenzene	99.0	80-120		%Rec	1	10/3/2016 5:12:32 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: MRA
Chloride	66	30		mg/Kg	20	10/4/2016 2:34:45 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 1609G92

Date Reported: 10/12/2016

CLIENT: DD Landfarm

Client Sample ID: Cell 1-1V

Project: DD Landfarm

Collection Date: 9/27/2016 7:40:00 AM

Lab ID: 1609G92-004

Matrix: SOIL

Received Date: 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.095		mg/Kg	1	10/3/2016 5:35:58 PM
Benzene	ND	0.024		mg/Kg	1	10/3/2016 5:35:58 PM
Toluene	ND	0.048		mg/Kg	1	10/3/2016 5:35:58 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/3/2016 5:35:58 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/3/2016 5:35:58 PM
Surr. 4-Bromofluorobenzene	93.2	80-120		%Rec	1	10/3/2016 5:35:58 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: MRA
Chloride	ND	1.5		mg/Kg	1	10/4/2016 3:11:59 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: MAB
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	10/5/2016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 1609G92

Date Reported: 10/12/2016

CLIENT: DD Landfarm

Client Sample ID: Cell 1-2V

Project: DD Landfarm

Collection Date: 9/27/2016 8:00:00 AM

Lab ID: 1609G92-005

Matrix: SOIL

Received Date: 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.095		mg/Kg	1	10/3/2016 5:59:22 PM
Benzene	ND	0.024		mg/Kg	1	10/3/2016 5:59:22 PM
Toluene	ND	0.047		mg/Kg	1	10/3/2016 5:59:22 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/3/2016 5:59:22 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/3/2016 5:59:22 PM
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	1	10/3/2016 5:59:22 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: MRA
Chloride	ND	1.5		mg/Kg	1	10/4/2016 3:36:49 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: MAB
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	10/5/2016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 1609G92

Date Reported: 10/12/2016

**CLIENT:** DD Landfarm**Client Sample ID:** Cell 1-3V**Project:** DD Landfarm**Collection Date:** 9/27/2016 8:25:00 AM**Lab ID:** 1609G92-006**Matrix:** SOIL**Received Date:** 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	10/3/2016 6:22:44 PM
Benzene	ND	0.024		mg/Kg	1	10/3/2016 6:22:44 PM
Toluene	ND	0.048		mg/Kg	1	10/3/2016 6:22:44 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/3/2016 6:22:44 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/3/2016 6:22:44 PM
Surr: 4-Bromofluorobenzene	94.1	80-120		%Rec	1	10/3/2016 6:22:44 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: MRA
Chloride	ND	1.5		mg/Kg	1	10/4/2016 4:01:37 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: MAB
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	10/5/2016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1609G92

Date Reported: 10/12/2016

**CLIENT:** DD Landfarm**Client Sample ID:** Cell 1-4V**Project:** DD Landfarm**Collection Date:** 9/27/2016 9:05:00 AM**Lab ID:** 1609G92-007**Matrix:** SOIL**Received Date:** 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	10/3/2016 6:46:07 PM
Benzene	ND	0.024		mg/Kg	1	10/3/2016 6:46:07 PM
Toluene	ND	0.048		mg/Kg	1	10/3/2016 6:46:07 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/3/2016 6:46:07 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/3/2016 6:46:07 PM
Surr. 4-Bromofluorobenzene	94.6	80-120		%Rec	1	10/3/2016 6:46:07 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: MRA
Chloride	ND	1.5		mg/Kg	1	10/4/2016 4:26:26 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: MAB
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	10/5/2016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1609G92

Date Reported: 10/12/2016

**CLIENT:** DD Landfarm**Client Sample ID:** Cell 2-1V**Project:** DD Landfarm**Collection Date:** 9/27/2016 9:30:00 AM**Lab ID:** 1609G92-008**Matrix:** SOIL**Received Date:** 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	10/3/2016 7:09:27 PM
Benzene	ND	0.024		mg/Kg	1	10/3/2016 7:09:27 PM
Toluene	ND	0.048		mg/Kg	1	10/3/2016 7:09:27 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/3/2016 7:09:27 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/3/2016 7:09:27 PM
Surr: 4-Bromofluorobenzene	94.1	80-120		%Rec	1	10/3/2016 7:09:27 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: MRA
Chloride	ND	1.5		mg/Kg	1	10/4/2016 4:51:15 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: MAB
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	10/5/2016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1609G92

Date Reported: 10/12/2016

**CLIENT:** DD Landfarm**Client Sample ID:** Cell 2-2V**Project:** DD Landfarm**Collection Date:** 9/27/2016 9:55:00 AM**Lab ID:** 1609G92-009**Matrix:** SOIL**Received Date:** 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.093		mg/Kg	1	10/3/2016 9:07:03 PM
Benzene	ND	0.023		mg/Kg	1	10/3/2016 9:07:03 PM
Toluene	ND	0.046		mg/Kg	1	10/3/2016 9:07:03 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/3/2016 9:07:03 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/3/2016 9:07:03 PM
Surr: 4-Bromofluorobenzene	97.7	80-120		%Rec	1	10/3/2016 9:07:03 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: MRA
Chloride	ND	1.5		mg/Kg	1	10/4/2016 5:40:54 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: MAB
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	10/5/2016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1609G92

Date Reported: 10/12/2016

**CLIENT:** DD Landfarm**Client Sample ID:** Cell 2-3V**Project:** DD Landfarm**Collection Date:** 9/27/2016 10:35:00 AM**Lab ID:** 1609G92-010**Matrix:** SOIL**Received Date:** 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	10/3/2016 9:30:35 PM
Benzene	ND	0.024		mg/Kg	1	10/3/2016 9:30:35 PM
Toluene	ND	0.048		mg/Kg	1	10/3/2016 9:30:35 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/3/2016 9:30:35 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/3/2016 9:30:35 PM
Surr: 4-Bromofluorobenzene	94.9	80-120		%Rec	1	10/3/2016 9:30:35 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: MRA
Chloride	ND	1.5		mg/Kg	1	10/4/2016 6:05:42 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: MAB
Petroleum Hydrocarbons, TR	ND	18		mg/Kg	1	10/5/2016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1609G92

Date Reported: 10/12/2016

**CLIENT:** DD Landfarm**Client Sample ID:** Cell 2-4V**Project:** DD Landfarm**Collection Date:** 9/27/2016 11:10:00 AM**Lab ID:** 1609G92-011**Matrix:** SOIL**Received Date:** 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.098		mg/Kg	1	10/3/2016 9:54:10 PM
Benzene	ND	0.024		mg/Kg	1	10/3/2016 9:54:10 PM
Toluene	ND	0.049		mg/Kg	1	10/3/2016 9:54:10 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/3/2016 9:54:10 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/3/2016 9:54:10 PM
Surr: 4-Bromofluorobenzene	95.6	80-120		%Rec	1	10/3/2016 9:54:10 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: LGT
Chloride	ND	1.5		mg/Kg	1	10/5/2016 1:37:00 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: MAB
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	10/5/2016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1609G92

Date Reported: 10/12/2016

**CLIENT:** DD Landfarm**Client Sample ID:** Cell 3-1V**Project:** DD Landfarm**Collection Date:** 9/27/2016 11:45:00 AM**Lab ID:** 1609G92-012**Matrix:** SOIL**Received Date:** 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.093		mg/Kg	1	10/3/2016 10:17:41 PM
Benzene	ND	0.023		mg/Kg	1	10/3/2016 10:17:41 PM
Toluene	ND	0.047		mg/Kg	1	10/3/2016 10:17:41 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/3/2016 10:17:41 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/3/2016 10:17:41 PM
Surr: 4-Bromofluorobenzene	95.7	80-120		%Rec	1	10/3/2016 10:17:41 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: LGT
Chloride	ND	1.5		mg/Kg	1	10/5/2016 2:26:39 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: MAB
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	10/5/2016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1609G92

Date Reported: 10/12/2016

CLIENT: DD Landfarm

Client Sample ID: Cell 3-2V

Project: DD Landfarm

Collection Date: 9/27/2016 12:30:00 PM

Lab ID: 1609G92-013

Matrix: SOIL

Received Date: 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.098		mg/Kg	1	10/3/2016 10:41:15 PM
Benzene	ND	0.025		mg/Kg	1	10/3/2016 10:41:15 PM
Toluene	ND	0.049		mg/Kg	1	10/3/2016 10:41:15 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/3/2016 10:41:15 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/3/2016 10:41:15 PM
Surr: 4-Bromofluorobenzene	96.5	80-120		%Rec	1	10/3/2016 10:41:15 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: LGT
Chloride	ND	1.5		mg/Kg	1	10/5/2016 2:51:29 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: MAB
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	10/5/2016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 1609G92

Date Reported: 10/12/2016

CLIENT: DD Landfarm

Client Sample ID: Cell 3-3V

Project: DD Landfarm

Collection Date: 9/27/2016 1:05:00 PM

Lab ID: 1609G92-014

Matrix: SOIL

Received Date: 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.095		mg/Kg	1	10/3/2016 11:04:51 PM
Benzene	ND	0.024		mg/Kg	1	10/3/2016 11:04:51 PM
Toluene	ND	0.048		mg/Kg	1	10/3/2016 11:04:51 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/3/2016 11:04:51 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/3/2016 11:04:51 PM
Surr. 4-Bromofluorobenzene	97.2	80-120		%Rec	1	10/3/2016 11:04:51 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: LGT
Chloride	ND	1.5		mg/Kg	1	10/5/2016 3:41:07 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: MAB
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	10/5/2016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 1609G92

Date Reported: 10/12/2016

CLIENT: DD Landfarm

Client Sample ID: Cell 3-4V

Project: DD Landfarm

Collection Date: 9/27/2016 1:35:00 PM

Lab ID: 1609G92-015

Matrix: SOIL

Received Date: 9/29/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.099		mg/Kg	1	10/3/2016 11:28:19 PM
Benzene	ND	0.025		mg/Kg	1	10/3/2016 11:28:19 PM
Toluene	ND	0.049		mg/Kg	1	10/3/2016 11:28:19 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/3/2016 11:28:19 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/3/2016 11:28:19 PM
Surr. 4-Bromofluorobenzene	96.8	80-120		%Rec	1	10/3/2016 11:28:19 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: LGT
Chloride	ND	1.5		mg/Kg	1	10/5/2016 4:05:56 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: MAB
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	10/5/2016

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1609G92

12-Oct-16

Client: DD Landfarm

Project: DD Landfarm

Sample ID	MB-27890	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	27890	RunNo:	37687					
Prep Date:	10/4/2016	Analysis Date:	10/4/2016	SeqNo:	1173758	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-27890		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 27890		RunNo: 37687					
Prep Date:	10/4/2016		Analysis Date: 10/4/2016		SeqNo: 1173759		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.6	90	110			

Sample ID	MB-27916	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	27916	RunNo:	37727					
Prep Date:	10/5/2016	Analysis Date:	10/5/2016	SeqNo:	1175291	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-27916	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	27916	RunNo:	37727					
Prep Date:	10/5/2016	Analysis Date:	10/5/2016	SeqNo:	1175292	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.2	90	110			

Sample ID	1609G92-011AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	Cell 2-4V	Batch ID:	27916	RunNo:	37727					
Prep Date:	10/5/2016	Analysis Date:	10/5/2016	SeqNo:	1175306	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0.8366	92.2	70.8	119			

Sample ID	1609G92-011AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	Cell 2-4V	Batch ID:	27916	RunNo:	37727					
Prep Date:	10/5/2016	Analysis Date:	10/5/2016	SeqNo:	1175307	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0.8366	93.3	70.8	119	1.02	20	

### Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609G92

12-Oct-16

Client: DD Landfarm

Project: DD Landfarm

Sample ID	MB-27877	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	27877	RunNo:	37698					
Prep Date:	10/4/2016	Analysis Date:	10/5/2016	SeqNo:	1174135	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-27877	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	27877	RunNo:	37698					
Prep Date:	10/4/2016	Analysis Date:	10/5/2016	SeqNo:	1174138	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	111	80.7	121			

Sample ID	LCSD-27877	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	27877	RunNo:	37698					
Prep Date:	10/4/2016	Analysis Date:	10/5/2016	SeqNo:	1174140	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	107	80.7	121	3.75	20	

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609G92

12-Oct-16

Client: DD Landfarm

Project: DD Landfarm

Sample ID	LCS-27830	SampType:	LCS	TestCode:	EPA Method 8015MD: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	27830	RunNo:	37650					
Prep Date:	10/3/2016	Analysis Date:	10/4/2016	SeqNo:	1172881	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	86.9	62.6	124			
Surr: DNOP	4.0		5.000		81.0	70	130			

Sample ID	MB-27830	SampType:	MBLK	TestCode:	EPA Method 8015MD: Diesel Range Organics					
Client ID:	PBS	Batch ID:	27830	RunNo:	37650					
Prep Date:	10/3/2016	Analysis Date:	10/4/2016	SeqNo:	1172882	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.4		10.00		84.3	70	130			

Sample ID	1609G92-001AMS	SampType:	MS	TestCode:	EPA Method 8015MD: Diesel Range Organics					
Client ID:	Cell 1-T	Batch ID:	27830	RunNo:	37650					
Prep Date:	10/3/2016	Analysis Date:	10/4/2016	SeqNo:	1173746	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	36	9.7	48.73	7.833	58.2	33.9	141			
Surr: DNOP	4.0		4.873		81.2	70	130			

Sample ID	1609G92-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015MD: Diesel Range Organics					
Client ID:	Cell 1-T	Batch ID:	27830	RunNo:	37650					
Prep Date:	10/3/2016	Analysis Date:	10/4/2016	SeqNo:	1173747	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	9.6	48.08	7.833	65.8	33.9	141	8.65	20	
Surr: DNOP	3.9		4.808		81.8	70	130	0	0	

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1609G92

12-Oct-16

Client: DD Landfarm

Project: DD Landfarm

Sample ID	MB-27807	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	27807	RunNo:	37629					
Prep Date:	9/30/2016	Analysis Date:	10/3/2016	SeqNo:	1171959	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	830		1000		82.6	68.3	144			

Sample ID	LCS-27807	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	27807	RunNo:	37629					
Prep Date:	9/30/2016	Analysis Date:	10/3/2016	SeqNo:	1171960	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.8	74.6	123			
Surr: BFB	910		1000		90.9	68.3	144			

Sample ID	1609G92-002AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	Cell 2-T	Batch ID:	27807	RunNo:	37629					
Prep Date:	9/30/2016	Analysis Date:	10/3/2016	SeqNo:	1171967	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.6	23.17	0	101	59.3	143			
Surr: BFB	870		926.8		93.4	68.3	144			

Sample ID	1609G92-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	Cell 2-T	Batch ID:	27807	RunNo:	37629					
Prep Date:	9/30/2016	Analysis Date:	10/3/2016	SeqNo:	1171968	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.6	23.15	0	111	59.3	143	9.53	20	
Surr: BFB	870		925.9		94.3	68.3	144	0	0	

### Qualifiers:

- |  |   |
|--|---|
| * Value exceeds Maximum Contaminant Level.             | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                         | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded   | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                 | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                 | RL Reporting Detection Limit                                |
| S %Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1609G92

12-Oct-16

Client: DD Landfarm

Project: DD Landfarm

Sample ID	MB-27807	SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS	Batch ID:	27807		RunNo:	37629				
Prep Date:	9/30/2016	Analysis Date:	10/3/2016		SeqNo:	1171975	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		97.0	80	120			

Sample ID	LCS-27807	SampType: LCS			TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID: 27807			RunNo: 37629					
Prep Date:	9/30/2016	Analysis Date: 10/3/2016			SeqNo: 1171976		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.91	0.10	1.000	0	91.2	61	143			
Benzene	0.96	0.025	1.000	0	96.0	75.3	123			
Toluene	0.97	0.050	1.000	0	97.2	80	124			
Ethylbenzene	0.98	0.050	1.000	0	98.3	82.8	121			
Xylenes, Total	2.9	0.10	3.000	0	97.2	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID	1609G92-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	Cell 1-T	Batch ID:	27807	RunNo:	37629					
Prep Date:	9/30/2016	Analysis Date:	10/3/2016	SeqNo:	1171978					
				Units:	mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.87	0.10	0.9980	0	86.7	69.2	128			
Benzene	0.91	0.025	0.9980	0	91.2	71.5	122			
Toluene	0.96	0.050	0.9980	0	96.1	71.2	123			
Ethylbenzene	1.0	0.050	0.9980	0.01353	98.6	75.2	130			
Xylenes, Total	3.0	0.10	2.994	0.01755	98.5	72.4	131			
Surr: 4-Bromofluorobenzene	0.99		0.9980		99.4	80	120			

Sample ID	1609G92-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	Cell 1-T	Batch ID:	27807	RunNo:	37629					
Prep Date:	9/30/2016	Analysis Date:	10/3/2016	SeqNo:	1171979					
				Units:	mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.89	0.093	0.9259	0	95.7	69.2	128	2.31	20	
Benzene	0.91	0.023	0.9259	0	98.2	71.5	122	0.0635	20	
Toluene	0.93	0.046	0.9259	0	100	71.2	123	3.08	20	
Ethylbenzene	0.95	0.046	0.9259	0.01353	102	75.2	130	4.41	20	

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609G92

12-Oct-16

Client: DD Landfarm

Project: DD Landfarm

Sample ID	1609G92-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	Cell 1-T	Batch ID:	27807	RunNo:	37629					
Prep Date:	9/30/2016	Analysis Date:	10/3/2016	SeqNo:	1171979	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	2.9	0.093	2.778	0.01755	102	72.4	131	3.97	20	
Surr: 4-Bromofluorobenzene	0.93		0.9259		101	80	120	0	0	

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: DD LANDFARM

Work Order Number: 1609G82

RcptNo: 1

Received by/date:

Logged By: Ashley Gallegos

8/29/2016 9:40:00 AM

Completed By: Ashley Gallegos

8/29/2016 3:02:23 PM

Reviewed By:

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $8.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:  
( $<2$  or  $>12$  unless noted)  
Adjusted?  
Checked by:

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes			

# Chain-of-Custody Record

Client: DD Landforms

Mailing Address: Box 316  
Norman NM 88245

Phone #: 575-397-2860

Email or Fax#: seay04@leaco.net

QA/QC Package:  
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:  
☒ NELAP ☐ Other \_\_\_\_\_

☒ EDD (Type) \_\_\_\_\_

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

DD Landforms

Project #:

B1 Annual Sampling

Project Manager:

J. Cooper

Sampler: Eddie Seay

On Site: ☒ Yes ☐ No

Sample Temperature: 3-3



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8280B (VOA)	8270 (Semi-VOA)	Chloride	Air Bubbles (Y or N)
12/27	6:30	Soil	Cell 1 - T	1-403	100	1609G92-001	✓	✓										✓	
12/27	6:50	Soil	Cell 2 - T	1-403	100	-002	✓	✓										✓	
12/27	7:15	Soil	Cell 3 - T	1-403	100	-003	✓	✓										✓	
12/27	7:40	Soil	Cell 1 - 1 V	1-403	100	-004	✓		✓									✓	
12/27	8:00	Soil	Cell 1 - 2 V	1-403	100	-005	✓		✓									✓	
12/27	8:25	Soil	Cell 1 - 3 V	1-403	100	-006	✓		✓									✓	
12/27	8:45	Soil	Cell 1 - 4 V	1-403	100	-007	✓		✓									✓	

Date: 11/28	Time: 8:40	Relinquished by: <u>Eddie Seay</u>	Received by: <u>[Signature]</u>	Date: 9/29/16	Time: 0840	Remarks: Send results to T. Vazquez V. Vazquez seay04@leaco.net
Date: 5/16	Time: 190	Relinquished by: <u>[Signature]</u>	Received by: <u>Lindsey Coneha</u>	Date: 09/29/16	Time: 0940	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

# Chain-of-Custody Record

Client: DD Landfarm

Mailing Address: Box 36  
Monument NM 88265  
 Phone #: 575-392-2860  
 Email or Fax#: seay 04 @ leaco . net

QA/QC Package:  
☒ Standard ☐ Level 4 (Full Validation)

Accreditation  
☒ NELAP ☐ Other \_\_\_\_\_

☒ EDD (Type) \_\_\_\_\_

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

DD Landfarm

Project #:

B1 Annual Sampling

Project Manager:

J. Cooper

Sampler:

Edwin Seay

On Ice ☒ Yes ☐ No

Sample Temperature: 8.3

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
11/27	9:30	Soil	CDL 2-1V	1-403	ice	-008
11/27	9:55	Soil	CDL 2-2V	1-403	ice	-009
11/27	10:35	Soil	CDL 2-3V	1-403	ice	-010
11/27	11:00	Soil	CDL 2-4V	1-403	ice	-011
11/27	11:45	Soil	CDL 3-1V	1-403	ice	-012
11/27	12:30	Soil	CDL 3-2V	1-403	ice	-013
11/27	1:05	Soil	CDL 3-3V	1-403	ice	-014
11/27	1:35	Soil	CDL 3-4V	1-403	ice	-015

Date: 11/28	Time: 8:40	Relinquished by: <u>Edwin Seay</u>	Received by: <u>[Signature]</u>	Date: 11/28	Time: 0840
Date: 11/28	Time: 9:40	Relinquished by: <u>[Signature]</u>	Received by: <u>Ruby Cerna</u>	Date: 09/29/16	Time: 0940



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

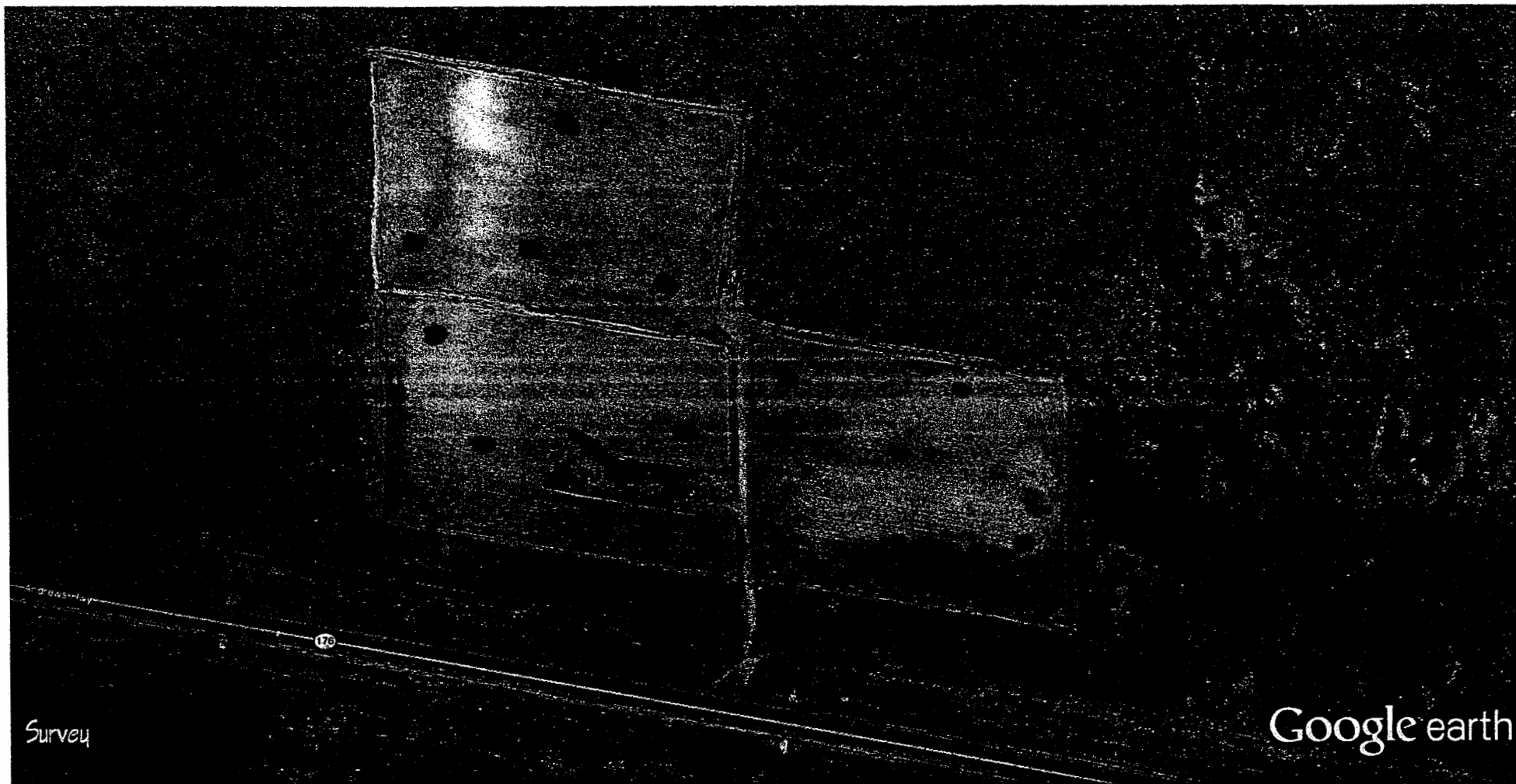
Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride	Air Bubbles (Y or N)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Remarks: Send results to T-Treatment  
Seay 04 @ leaco . net

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Google earth

feet  
meters

1000

400



Approx. Sampling locations ●  
DD Landform September 2016

State of New Mexico  
Energy, Minerals and Natural Resources Department

---

**Susana Martinez**  
Governor

**David Martin**  
Cabinet Secretary

**Brett F. Woods, Ph.D.**  
Deputy Cabinet Secretary

**David R. Catanach, Division Director**  
Oil Conservation Division



June 4, 2015

Mr. Jimmie B. Cooper  
DD Landfarm  
P.O. Box 36  
Monument, New Mexico 88265

**RE: Extension Request To Respond To OCD's 2014 Bi-Annual Sampling and Five Year Monitoring Report Review**  
**DD Landfarm**  
**Permit NM1-034**  
**Location: W/2 W/2 of Section 31, Township 21 South, Range 39 East, NMPM, Lea County, New Mexico**

Dear Mr. Cooper:

The Oil Conservation Division (OCD) has completed the review of DD Landfarm's (DD) request, received by OCD on June 2, 2015, for an extension to respond to OCD's request for additional information based upon OCD's May 18, 2015 written review of DD's May 2014 Annual Vadose Zone and Five Year Vadose Zone Monitoring Report; November 2014 Bi-Annual Treatment and Vadose Zone Monitoring Report; April 2015 Bi-Annual Treatment and Vadose Zone Monitoring Report; and the July 2014 Release Response Report for Cell 3. OCD hereby grants a 30-day extension to the original deadlines, as provided in OCD's May 18, 2015 review.

If there are any questions regarding this matter, please do not hesitate to contact me at (505) 476-3487 or [brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us).

Sincerely,

Brad A. Jones  
Environmental Engineer

BAJ/baj

cc: OCD District I Office, Hobbs  
Eddie Seay, Eddie Seay Consulting, Hobbs, NM 88242

Pursuant to 19.15.36.15.E NMAC, the operator is required to compare the vadose results “to the higher of the PQL [Practical Quantitative Limit] or the background soil concentrations to determine whether a release has occurred.” OCD’s review of the administrative files for the facility resulted in the discovery of the initial facility background data set from November 2000. The November 27, 2000 background data set provided results for the following 19 analytes: bromide, chloride, fluoride, nitrates, nitrites, ortho-phosphate, sulfate, arsenic, barium, cadmium, chromium, lead, selenium, silver, diesel range organics (DRO) , benzene, toluene, ethyl benzene, and total xylene, which was provided in the May 2014 Annual Vadose Zone and Five Year Vadose Zone Monitoring Report. The May 2014 report also included a sheet identified as “New Mexico Limits” and a regulatory reference of “Rule 53 G.(e).” The regulatory reference indicates that this was proposed landfarm closure language for Part 36 during the rulemaking hearing. This language was not adopted by the Oil Conservation Commission and is not effective or applicable for the comparison to vadose zone results. OCD has been unable to locate any additional background data that seemed to be used for the comparison for the 69 analytes from the five year vadose zone monitoring event and the 62 analytes from release response sampling event. Please provide OCD a copy of the laboratory data set used for the background/PQL data set, in order to establish an updated and revised facility background with OCD.

OCD compared the 2000 background data set to the May 2014 annual vadose zone and five year vadose zone monitoring results and determined common exceedances to all cells for arsenic, barium, chromium, lead, and a detection of TPH at 112 mg/kg in the annual vadose zone monitoring results and common exceedances to all cells for arsenic, barium, cadmium, chromium, lead, silver, and detections of methylene chloride and toluene (Cell 1 only) in the five year vadose zone monitoring results. Only the detection of TPH at 112 mg/kg in Cell 3 was recognized and pursued for compliance with 19.15.36.15.E.(5) NMAC. None of the exceedances in Cells 1 and 2 were recognized in the assessment or recommended for the release response sampling of 19.15.36.15.E.(5) NMAC. If a different facility background data set was utilized for the assessment, please provide OCD a copy of the laboratory data set in order to establish an updated and revised facility background with OCD. If not, please demonstrate compliance to 19.15.36.15.E.(5) NMAC.

OCD compared the 2000 background data set to the July 2014 release response results for Cell 3 and determined common exceedances for arsenic, barium, cadmium, chromium, and lead. None of these exceedances were recognized in the assessment nor was a response action plan of 19.15.36.15.E.(5) NMAC proposed. The assessment provided in the report’s cover letter stated “In comparing the analytical to the background and the lab PQL, the analytical was below the limits. I can’t explain why the TPH was elevated, but will monitor in future sampling.” If a different facility background data set was utilized for the assessment, please provide OCD a copy of the laboratory data set in order to establish an updated and revised facility background with OCD. If not, please demonstrate compliance to 19.15.36.15.E.(5) NMAC and provide a response action plan.

OCD compared the 2000 background data set to the April 2015 bi-annual treatment zone and vadose zone monitoring results and determined common exceedances to all cells for arsenic, barium, chromium, and lead. None of these exceedances recognized in the assessment or recommended for the release response sampling of 19.15.36.15.E.(5) NMAC. The assessment

State of New Mexico  
Energy, Minerals and Natural Resources Department

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Susana Martinez  
Governor

David Martin  
Cabinet Secretary

Brett F. Woods, Ph.D.  
Deputy Cabinet Secretary

David R. Catanach, Division Director  
Oil Conservation Division



May 18, 2015

Mr. Jimmy Cooper  
DD Landfarm  
P.O. Box 36  
Monument, New Mexico 88265

**RE: 2014 Bi-Annual Sampling and Five Year Monitoring Report Review  
DD Landfarm  
Permit NM1-034  
Location: W/2 W/2 of Section 31, Township 21 South, Range 39 East, NMPM,  
Lea County, New Mexico**

Dear Mr. Cooper:

The Oil Conservation Division (OCD) has completed the review of DD Landfarm's (DD) May 2014 Annual Vadose Zone and Five Year Vadose Zone Monitoring Report; November 2014 Bi-Annual Treatment and Vadose Zone Monitoring Report; April 2015 Bi-Annual Treatment and Vadose Zone Monitoring Report; and the July 2014 Release Response Report for Cell 3. OCD appreciates DD's efforts to implement changes to your monitoring protocols to comply with the requests in OCD's 2013 Bi-Annual Sampling and Five Year Monitoring Report Review, dated April 10, 2014. The review of the 2014 and 2015 monitoring data has resulted in the discovery of some issues that must be addressed in order for DD to remain compliant with Permit NM1-034 and 19.15.36 NMAC.

OCD has reviewed the administrative files for the facility and determined that the vadose zone monitoring frequency changed from the permit condition "The soil samples must be analyzed using EPA-approved methods for total petroleum hydrocarbons (TPH) and volatile aromatic organics (BTEX) quarterly and for major cations/anions and Water Quality Control Commission (WQCC) metals annually" to semi-annual in 2009. OCD has been unable to locate DD's modification request for the change in sampling frequency or OCD's approval for such a modification request. Please provide OCD a copy of DD's modification request and OCD approval in order to continue the semi-annual sampling frequency. If DD is unable to demonstrate the approval, DD shall revert back permitted vadose zone monitoring frequency. Please note that the transitional provisions of 19.15.36.20 NMAC must be considered. Please review OCD's letter dated June 30, 2011 and titled "*Compliance with the Transitional Provisions of the Surface Waste Management Facilities rule (Rule 36) and Treatment and Vadose Monitoring Requirements at Existing Landfarms*" for expectation of compliance.



DD Landfarm  
Box 36  
Monument, NM 88265

RECEIVED OCD  
2015 JUN -2 P 3: 17

NMOCD Environmental  
ATTN: Brad Jones  
1220 South St. Francis Drive  
Santa Fe, NM 87505

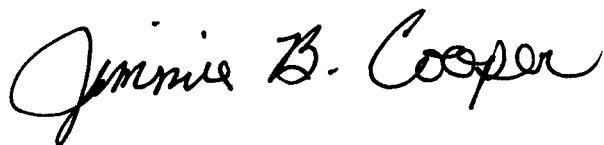
RE: C & C Landfarm

Mr. Jones:

As owner and operator of C & C Landfarm, we have received your recent request for additional information at our facility. Our consultant is going to be gone until June 13<sup>th</sup>, 2015. We are requesting an extension of time to prepare the information the OCD needs.

Your favor to an extension would be appreciated.

Thanks,

A handwritten signature in black ink that reads "Jimmie B. Cooper". The signature is written in a cursive, flowing style.

DD Landfarm  
Jimmie B. Cooper  
1-254-493-9082

State of New Mexico  
Energy, Minerals and Natural Resources Department

---

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Governor

**David Martin**  
Cabinet Secretary

**Brett F. Woods, Ph.D.**  
Deputy Cabinet Secretary

**David R. Catanach, Division Director**  
Oil Conservation Division



May 18, 2015

Mr. Jimmy Cooper  
DD Landfarm  
P.O. Box 36  
Monument, New Mexico 88265

**RE: 2014 Bi-Annual Sampling and Five Year Monitoring Report Review**  
**DD Landfarm**  
**Permit NM1-034**  
**Location: W/2 W/2 of Section 31, Township 21 South, Range 39 East, NMPM,**  
**Lea County, New Mexico**

Dear Mr. Cooper:

The Oil Conservation Division (OCD) has completed the review of DD Landfarm's (DD) May 2014 Annual Vadose Zone and Five Year Vadose Zone Monitoring Report; November 2014 Bi-Annual Treatment and Vadose Zone Monitoring Report; April 2015 Bi-Annual Treatment and Vadose Zone Monitoring Report; and the July 2014 Release Response Report for Cell 3. OCD appreciates DD's efforts to implement changes to your monitoring protocols to comply with the requests in OCD's 2013 Bi-Annual Sampling and Five Year Monitoring Report Review, dated April 10, 2014. The review of the 2014 and 2015 monitoring data has resulted in the discovery of some issues that must be addressed in order for DD to remain compliant with Permit NM1-034 and 19.15.36 NMAC.

OCD has reviewed the administrative files for the facility and determined that the vadose zone monitoring frequency changed from the permit condition "The soil samples must be analyzed using EPA-approved methods for total petroleum hydrocarbons (TPH) and volatile aromatic organics (BTEX) quarterly and for major cations/anions and Water Quality Control Commission (WQCC) metals annually" to semi-annual in 2009. OCD has been unable to locate DD's modification request for the change in sampling frequency or OCD's approval for such a modification request. Please provide OCD a copy of DD's modification request and OCD approval in order to continue the semi-annual sampling frequency. If DD is unable to demonstrate the approval, DD shall revert back permitted vadose zone monitoring frequency. Please note that the transitional provisions of 19.15.36.20 NMAC must be considered. Please review OCD's letter dated June 30, 2011 and titled "*Compliance with the Transitional Provisions of the Surface Waste Management Facilities rule (Rule 36) and Treatment and Vadose Monitoring Requirements at Existing Landfarms*" for expectation of compliance.

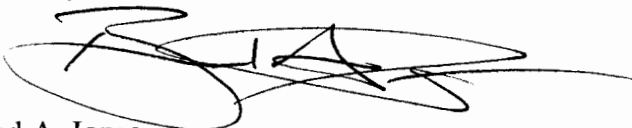
provided in the report's cover letter stated "The tests were compared to the background and the PQL, and all were within limits." If a different facility background data set was utilized for the assessment, please provide OCD a copy of the laboratory data set in order to establish an updated and revised facility background with OCD. If not, please demonstrate compliance to 19.15.36.15.E.(5) NMAC.

Please note that the submittal of treatment zone monitoring results alone does not constitute a request for a successive/additional lift. The permit condition specifies "Authorization from the OCD must be obtained prior to application of successive lifts and/or removal of remediated soils." OCD requires such request to be made under a separate cover from other reporting and include the supporting analytical results and an updated facility map that illustrates and identifies the individual landfarm cells within the facility boundary and indicate the approximate location within the landfarm cells in which the samples were obtained.

Please provide OCD a copy of DD's modification request and OCD approval in order to continue the semi-annual sampling frequency within 45 days of the date of this letter. Please provide OCD a copy of the laboratory data set used for the background/PQL data set, in order to establish an updated and revised facility background with OCD within 45 days of the date of this letter. If the 2000 background data set is the only background data for the comparison to determine whether a release has occurred in the vadose zone, please demonstrate compliance to 19.15.36.15.E.(5) NMAC by initiated the additional sampling for the landfarm cells that demonstrate exceedances in the May 2014 Annual Vadose Zone and Five Year Vadose Zone Monitoring Report and the April 2015 Bi-Annual Treatment and Vadose Zone Monitoring Report and submit a response action plan to address the exceedances July 2014 Release Response Report for Cell 3 within 90 days of the date of this letter.

OCD has implemented some new policies for submittal. For future submittals, please include a cover letter from the owner/operator, on the owner's/operator's company letterhead, that recognizes the owner/operator has reviewed the submittal, signed by the owner/operator. Also, please provide an updated facility map, for each individual sampling event, that identifies the individual landfarm cells within the facility boundary and indicate the approximate location within the landfarm cells in which the samples were obtained. If there are any questions regarding this matter, please do not hesitate to contact me at (505) 476-3487 or [brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us).

Sincerely,



Brad A. Jones  
Environmental Engineer

BAJ/baj

cc: OCD District I Office, Hobbs  
Eddie Seay, Eddie Seay Consulting, Hobbs, NM 88242

**DD LANDFARM  
(NM-01-0034)**

**SEMI-ANNUAL  
TEST**

**April 2015**



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 30, 2015

Eddie Seay

Eddie Seay Consulting

601 W. Illinois

Hobbs, NM 88242

RE: DD LANDFARM (NM-01-0034) BI-ANNUAL MONITORING

Enclosed are the results of analyses for samples received by the laboratory on 03/18/15 9:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

Eddie Seay Consulting 601 W. Illinois Hobbs NM, 88242	Project: DD LANDFARM (NM-01-0034) BI-A Project Number: DD LF Project Manager: Eddie Seay Fax To: (505) 392-6949	Reported: 30-Mar-15 16:34
---	--	------------------------------

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CELL 1 - T	H500731-01	Soil	17-Mar-15 08:45	18-Mar-15 09:35
CELL 2 - T	H500731-02	Soil	17-Mar-15 09:10	18-Mar-15 09:35
CELL 3 - T	H500731-03	Soil	17-Mar-15 09:30	18-Mar-15 09:35
CELL 1 - V	H500731-04	Soil	17-Mar-15 10:40	18-Mar-15 09:35
CELL 2 - V	H500731-05	Soil	17-Mar-15 11:15	18-Mar-15 09:35
CELL 3 - V	H500731-06	Soil	17-Mar-15 13:30	18-Mar-15 09:35

Cardinal Laboratories

\*=Accredited Analyte

THESE STATEMENTS, OPINIONS, AND CONCLUSIONS ARE BASED ON THE INFORMATION PROVIDED BY THE CLIENT. CARDINAL LABORATORIES DOES NOT GUARANTEE THE ACCURACY OF THE ANALYSIS. ALL RESULTS, INCLUDING THOSE FOR RESEARCH OR  
 ANY OTHER USES, WHATEVER SHALL BE DEEMED VALID ONLY IF THE CLIENT HAS PROVIDED THE APPROPRIATE INFORMATION. CARDINAL LABORATORIES DOES NOT GUARANTEE THE ACCURACY OF THE ANALYSIS. ALL RESULTS, INCLUDING THOSE FOR RESEARCH OR  
 INCLUDING, WITHOUT LIMITATION, BUSINESS OPERATIONS, ENVIRONMENTAL MONITORING, OR OTHER USES, SHALL BE DEEMED VALID ONLY IF THE CLIENT HAS PROVIDED THE APPROPRIATE INFORMATION. CARDINAL LABORATORIES DOES NOT GUARANTEE THE ACCURACY OF THE ANALYSIS. ALL RESULTS, INCLUDING THOSE FOR RESEARCH OR  
 THIS IS THE PROPERTY OF THE ANALYST. RESULTS ARE VALID ONLY FOR THE SAMPLES IDENTIFIED ABOVE. THIS REPORT SHALL NOT BE REPRODUCED OR COPIED IN FULL OR PART WITHOUT THE WRITTEN APPROVAL OF THE ANALYST.



Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34

### CELL 1 - T H500731-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
---------	--------	-----	-----------------	-------	----------	-------	---------	----------	--------	-------

#### Cardinal Laboratories

#### Inorganic Compounds

Chloride	ND		16.0	mg/kg	4	5031805	AP	18-Mar-15	4500-Cl-B	
----------	----	--	------	-------	---	---------	----	-----------	-----------	--

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	ND		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
DRO >C10-C28	39.1		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
EXT DRO >C28-C35	29.3		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
Surrogate: 1-Chlorooctane			88.7 %	47.2-157		5031802	MS	18-Mar-15	8015B	
Surrogate: 1-Chlorooctadecane			90.5 %	52.1-176		5031802	MS	18-Mar-15	8015B	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34

### CELL 2 - T H500731-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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### Cardinal Laboratories

#### Inorganic Compounds

Chloride	ND		16.0	mg/kg	4	5031805	AP	18-Mar-15	4500-Cl-B	
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#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	ND		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
DRO >C10-C28	121		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
EXT DRO >C28-C35	96.0		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
Surrogate: 1-Chlorooctane			96.6 %			5031802	MS	18-Mar-15	8015B	
Surrogate: 1-Chlorooctadecane			104 %			5031802	MS	18-Mar-15	8015B	

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 Eddie Seay Consulting  
 601 W. Illinois  
 Hobbs NM, 88242

 Project: DD LANDFARM (NM-01-0034) BI-A  
 Project Number: DD LF  
 Project Manager: Eddie Seay  
 Fax To: (505) 392-6949

 Reported:  
 30-Mar-15 16:34

**CELL 3 - T**  
**H500731-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

Chloride	ND		16.0	mg/kg	4	5031805	AP	18-Mar-15	4500-Cl-B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	ND		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
DRO >C10-C28	63.8		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
EXT DRO >C28-C35	49.1		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
Surrogate: 1-Chlorooctane			94.1 %	47.2-157		5031802	MS	18-Mar-15	8015B	
Surrogate: 1-Chlorooctadecane			102 %	52.1-176		5031802	MS	18-Mar-15	8015B	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34

**CELL 1 - V**  
**H500731-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Inorganic Compounds**

Alkalinity, Bicarbonate	97.6		20.0	mg/kg	4	5020506	AP	23-Mar-15	310.1	
Alkalinity, Carbonate	ND		4.00	mg/kg	4	5020506	AP	23-Mar-15	310.1	
Chloride	ND		16.0	mg/kg	4	5031805	AP	18-Mar-15	4500-CL-B	
Conductivity	112		0.250	uS/cm	1	5031807	AP	18-Mar-15	120.1	
pH*	8.17		0.100	pH Units	1	5031808	AP	18-Mar-15	9045	
Sulfate	ND		100	mg/kg	10	5032003	AP	20-Mar-15	375.4	
Alkalinity, Total*	80.0		16.0	mg/kg	4	5020506	AP	23-Mar-15	310.1	

**Volatile Organic Compounds by EPA Method 8021**

Benzene*	ND		0.050	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Toluene*	ND		0.050	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Total BTEX	ND		0.300	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			106 %	61-154		5032009	ms	20-Mar-15	8021B	

**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	ND		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
DRO >C10-C28	ND		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
EXT DRO >C28-C35	ND		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
Surrogate: 1-Chlorooctane			87.3 %	47.2-157		5031802	MS	18-Mar-15	8015B	
Surrogate: 1-Chlorooctadecane			97.1 %	52.1-176		5031802	MS	18-Mar-15	8015B	

**Green Analytical Laboratories**
**General Chemistry**

% Dry Solids	99.1		%	1	B503205	LLG	25-Mar-15	EPA160.3	H2	
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34

### CELL 1 - V II500731-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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### Green Analytical Laboratories

#### Total Metals by ICP

Calcium	685		100	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Copper	2.14	0.650	2.00	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Iron	2170		5.00	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Magnesium	307		100	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Potassium	462		200	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Sodium	ND		200	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Zinc	5.75	0.792	5.00	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	

#### Total Metals by ICPMS

Arsenic	0.657		0.500	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Barium	12.9		0.500	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Cadmium	ND		0.500	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Chromium	2.55		1.00	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Lead	2.20		0.500	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Manganese	28.7		1.00	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Selenium	ND		1.00	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Silver	ND		0.100	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	


#### Total Mercury by CVAA

Mercury	0.268		0.103	mg/kg dry	510	B503192	JGS	24-Mar-15	EPA7471	
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34

### CELL 2 - V H500731-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Inorganic Compounds

Alkalinity, Bicarbonate	39.0		20.0	mg/kg	4	5020506	AP	23-Mar-15	310.1	
Alkalinity, Carbonate	ND		4.00	mg/kg	4	5020506	AP	23-Mar-15	310.1	
Chloride	ND		16.0	mg/kg	4	5031805	AP	18-Mar-15	4500-Cl-B	
Conductivity	39.1		0.250	uS/cm	1	5031807	AP	18-Mar-15	120.1	
pH*	7.57		0.100	pH Units	1	5031808	AP	18-Mar-15	9045	
Sulfate	ND		100	mg/kg	10	5032003	AP	20-Mar-15	375.4	
Alkalinity, Total*	32.0		16.0	mg/kg	4	5020506	AP	23-Mar-15	310.1	

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	ND		0.050	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Toluene*	ND		0.050	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Total BTEX	ND		0.300	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			105 %	61-154		5032009	ms	20-Mar-15	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	ND		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
DRO >C10-C28	ND		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
EXT DRO >C28-C35	ND		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
Surrogate: 1-Chlorooctane			86.2 %	47.2-157		5031802	MS	18-Mar-15	8015B	
Surrogate: 1-Chlorooctadecane			90.8 %	52.1-176		5031802	MS	18-Mar-15	8015B	

#### Green Analytical Laboratories

#### General Chemistry

% Dry Solids	99.6			%	1	B503205	LLG	25-Mar-15	EPA160.3	H2
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34

### CELL 2 - V H500731-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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### Green Analytical Laboratories

#### Total Metals by ICP

Calcium	340		100	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Copper	1.79	0.650	2.00	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	J
Iron	2320		5.00	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Magnesium	269		100	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Potassium	430		200	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Sodium	ND		200	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Zinc	5.41	0.792	5.00	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	

#### Total Metals by ICPMS

Arsenic	ND		0.500	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Barium	9.17		0.500	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Cadmium	ND		0.500	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Chromium	2.33		1.00	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Lead	1.37		0.500	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Manganese	17.4		1.00	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Selenium	ND		1.00	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Silver	ND		0.100	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	


#### Total Mercury by CVAA

Mercury	0.216		0.0984	mg/kg dry	490	B503192	JGS	24-Mar-15	EPA7471	
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34

### CELL 3 - V H500731-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Inorganic Compounds

Alkalinity, Bicarbonate	78.0		20.0	mg/kg	4	5020506	AP	23-Mar-15	310.1	
Alkalinity, Carbonate	ND		4.00	mg/kg	4	5020506	AP	23-Mar-15	310.1	
Chloride	ND		16.0	mg/kg	4	5031805	AP	18-Mar-15	4500-Cl-B	
Conductivity	69.0		0.250	uS/cm	1	5031807	AP	18-Mar-15	120.1	
pH*	8.13		0.100	pH Units	1	5031808	AP	18-Mar-15	9045	
Sulfate	ND		100	mg/kg	10	5032003	AP	20-Mar-15	375.4	
Alkalinity, Total*	64.0		16.0	mg/kg	4	5020506	AP	23-Mar-15	310.1	

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	ND		0.050	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Toluene*	ND		0.050	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Total BTEX	ND		0.300	mg/kg	50	5032009	ms	20-Mar-15	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			106 %	61-154		5032009	ms	20-Mar-15	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	ND		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
DRO >C10-C28	ND		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
EXT DRO >C28-C35	ND		10.0	mg/kg	1	5031802	MS	18-Mar-15	8015B	
Surrogate: 1-Chlorooctane			89.0 %	47.2-157		5031802	MS	18-Mar-15	8015B	
Surrogate: 1-Chlorooctadecane			93.7 %	52.1-176		5031802	MS	18-Mar-15	8015B	

#### Green Analytical Laboratories

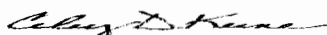
#### General Chemistry

% Dry Solids	99.5		%	1	B503205	LLG	25-Mar-15	EPA160.3	H2	
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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34

**CELL 3 - V**  
**H500731-06 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Green Analytical Laboratories**
**Total Metals by ICP**

Calcium	549		100	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Copper	1.67	0.650	2.00	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	J
Iron	2540		5.00	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Magnesium	320		100	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Potassium	562		200	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Sodium	ND		200	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	
Zinc	5.93	0.792	5.00	mg/kg dry	100	B503224	JGS	27-Mar-15	EPA6010 B	

**Total Metals by ICPMS**

Arsenic	0.518		0.500	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Barium	11.6		0.500	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Cadmium	ND		0.500	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Chromium	2.52		1.00	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Lead	2.02		0.500	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Manganese	24.6		1.00	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Selenium	ND		1.00	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	
Silver	ND		0.100	mg/kg dry	1000	B503225	JGS	27-Mar-15	6020 A	

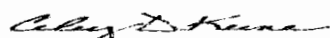
**Total Mercury by CVAA**

Mercury	0.307		0.0995	mg/kg dry	495	B503192	JGS	24-Mar-15	EPA7471	
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Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34

### Inorganic Compounds - Quality Control


#### Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 5020506 - General Prep - Wet Chem</b>										
<b>Blank (5020506-BLK1)</b>										
Prepared: 05-Feb-15 Analyzed: 06-Feb-15										
Alkalinity, Carbonate	ND	0.00	mg/kg							
Alkalinity, Bicarbonate	ND	5.00	mg/kg							
Alkalinity, Total	ND	4.00	mg/kg							
<b>LCS (5020506-BS1)</b>										
Prepared: 05-Feb-15 Analyzed: 06-Feb-15										
Alkalinity, Carbonate	ND	0.00	mg/kg				80-120			
Alkalinity, Bicarbonate	127	5.00	mg/kg				80-120			
Alkalinity, Total	104	4.00	mg/kg	100		104	80-120			
<b>LCS Dup (5020506-BSD1)</b>										
Prepared: 05-Feb-15 Analyzed: 06-Feb-15										
Alkalinity, Carbonate	ND	0.00	mg/kg				80-120		20	
Alkalinity, Bicarbonate	127	5.00	mg/kg				80-120	0.00	20	
Alkalinity, Total	104	4.00	mg/kg	100		104	80-120	0.00	20	
<b>Batch 5031805 - 1:4 DI Water</b>										
<b>Blank (5031805-BLK1)</b>										
Prepared & Analyzed: 18-Mar-15										
Chloride	ND	16.0	mg/kg							
<b>LCS (5031805-BS1)</b>										
Prepared & Analyzed: 18-Mar-15										
Chloride	416	16.0	mg/kg	400		104	80-120			
<b>LCS Dup (5031805-BSD1)</b>										
Prepared & Analyzed: 18-Mar-15										
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	
<b>Batch 5031807 - General Prep - Wet Chem</b>										
<b>LCS (5031807-BS1)</b>										
Prepared & Analyzed: 18-Mar-15										
Conductivity	484		uS/cm	500		96.8	80-120			

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34

**Inorganic Compounds - Quality Control**
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5031807 - General Prep - Wet Chem**
**Duplicate (5031807-DUP1)**

Source: H500731-04

Prepared &amp; Analyzed: 18-Mar-15

Conductivity	113	0.250	uS/cm		112			0.355	20	
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**Batch 5031808 - General Prep - Wet Chem**
**LCS (5031808-BS1)**

Prepared &amp; Analyzed: 18-Mar-15

pH	7.06		pH Units	7.00		101	90-110			
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**Duplicate (5031808-DUP1)**

Source: H500711-01

Prepared &amp; Analyzed: 18-Mar-15

pH	7.11	0.100	pH Units	7.11				0.00	20	
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**Batch 5032003 - General Prep - Wet Chem**
**Blank (5032003-BLK1)**

Prepared &amp; Analyzed: 20-Mar-15

Sulfate	ND	10.0	mg/kg							
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**LCS (5032003-BS1)**

Prepared &amp; Analyzed: 20-Mar-15

Sulfate	16.3	10.0	mg/kg	20.0		81.7	80-120			
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**LCS Dup (5032003-BSD1)**

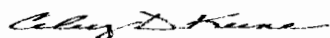
Prepared &amp; Analyzed: 20-Mar-15

Sulfate	18.4	10.0	mg/kg	20.0		91.8	80-120	11.7	20	
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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34


**Volatile Organic Compounds by EPA Method 8021 - Quality Control**
**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 5032009 - Volatiles</b>										
<b>Blank (5032009-BLK1)</b>										
Prepared & Analyzed: 20-Mar-15										
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0527		mg/kg	0.0500		105	61-154			
<b>LCS (5032009-BS1)</b>										
Prepared & Analyzed: 20-Mar-15										
Benzene	2.32	0.050	mg/kg	2.00		116	77.1-114			BS1
Toluene	2.10	0.050	mg/kg	2.00		105	67-114			
Ethylbenzene	2.08	0.050	mg/kg	2.00		104	63.5-121			
Total Xylenes	6.31	0.150	mg/kg	6.00		105	62.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.0491		mg/kg	0.0500		98.2	61-154			
<b>LCS Dup (5032009-BSD1)</b>										
Prepared & Analyzed: 20-Mar-15										
Benzene	2.40	0.050	mg/kg	2.00		120	77.1-114	3.59	16.4	BS1
Toluene	2.17	0.050	mg/kg	2.00		108	67-114	3.14	16.2	
Ethylbenzene	2.15	0.050	mg/kg	2.00		108	63.5-121	3.20	17	
Total Xylenes	6.54	0.150	mg/kg	6.00		109	62.4-125	3.52	17	
Surrogate: 4-Bromofluorobenzene (PID)	0.0488		mg/kg	0.0500		97.6	61-154			

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34

### Petroleum Hydrocarbons by GC FID - Quality Control

#### Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 5031802 - General Prep - Organics

##### Blank (5031802-BLK1)

Prepared &amp; Analyzed: 18-Mar-15

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	45.8		mg/kg	50.0		91.6	47.2-157			
Surrogate: 1-Chlorooctadecane	47.9		mg/kg	50.0		95.8	52.1-176			

##### LCS (5031802-BS1)

Prepared &amp; Analyzed: 18-Mar-15

GRO C6-C10	200	10.0	mg/kg	200		99.8	72.5-115			
DRO >C10-C28	213	10.0	mg/kg	200		106	81.3-118			
Total TPH C6-C28	412	10.0	mg/kg	400		103	80-113			
Surrogate: 1-Chlorooctane	50.2		mg/kg	50.0		100	47.2-157			
Surrogate: 1-Chlorooctadecane	52.4		mg/kg	50.0		105	52.1-176			

##### LCS Dup (5031802-BSD1)

Prepared &amp; Analyzed: 18-Mar-15

GRO C6-C10	209	10.0	mg/kg	200		105	72.5-115	4.57	10.1	
DRO >C10-C28	218	10.0	mg/kg	200		109	81.3-118	2.49	15.3	
Total TPH C6-C28	427	10.0	mg/kg	400		107	80-113	3.50	12.1	
Surrogate: 1-Chlorooctane	52.2		mg/kg	50.0		104	47.2-157			
Surrogate: 1-Chlorooctadecane	50.9		mg/kg	50.0		102	52.1-176			

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34

**Total Metals by ICP - Quality Control**
**Green Analytical Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B503224 - EPA 3050**
**Blank (B503224-BLK1)**

Prepared &amp; Analyzed: 27-Mar-15

Calcium	ND	1.00	mg/kg dry							
Magnesium	ND	1.00	mg/kg dry							
Zinc	ND	0.050	mg/kg dry							
Sodium	ND	2.00	mg/kg dry							
Copper	0.022	0.020	mg/kg dry							B1
Iron	ND	0.050	mg/kg dry							
Potassium	ND	2.00	mg/kg dry							

**LCS (B503224-BS1)**

Prepared &amp; Analyzed: 27-Mar-15

Magnesium	20.1	1.00	mg/kg dry	20.0		100	85-115			
Sodium	6.15	2.00	mg/kg dry	6.48		94.9	85-115			
Potassium	8.30	2.00	mg/kg dry	8.00		104	85-115			
Copper	4.00	0.020	mg/kg dry	4.00		99.9	85-115			
Calcium	3.87	1.00	mg/kg dry	4.00		96.9	85-115			
Iron	3.96	0.050	mg/kg dry	4.00		98.9	85-115			
Zinc	1.90	0.050	mg/kg dry	2.00		95.2	85-115			

**LCS Dup (B503224-BSD1)**

Prepared &amp; Analyzed: 27-Mar-15

Calcium	3.78	1.00	mg/kg dry	4.00		94.4	85-115	2.58	20	
Sodium	5.96	2.00	mg/kg dry	6.48		92.0	85-115	3.04	20	
Iron	3.98	0.050	mg/kg dry	4.00		99.5	85-115	0.590	20	
Zinc	1.90	0.050	mg/kg dry	2.00		94.9	85-115	0.336	20	
Magnesium	20.2	1.00	mg/kg dry	20.0		101	85-115	0.389	20	
Copper	4.00	0.020	mg/kg dry	4.00		99.9	85-115	0.0324	20	
Potassium	8.62	2.00	mg/kg dry	8.00		108	85-115	3.84	20	

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Eddie Seay Consulting  
601 W. Illinois  
Hobbs NM, 88242

Project: DD LANDFARM (NM-01-0034) BI-A  
Project Number: DD LF  
Project Manager: Eddie Seay  
Fax To: (505) 392-6949

Reported:  
30-Mar-15 16:34

### Total Metals by ICPMS - Quality Control

### Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch B503225 - EPA 3050M

##### Blank (B503225-BLK1)

Prepared &amp; Analyzed: 27-Mar-15

Cadmium	ND	0.0005	mg/kg dry							
Chromium	ND	0.0010	mg/kg dry							
Lead	ND	0.0005	mg/kg dry							
Selenium	ND	0.0010	mg/kg dry							
Barium	ND	0.0005	mg/kg dry							
Silver	ND	0.0001	mg/kg dry							
Arsenic	ND	0.0005	mg/kg dry							
Manganese	0.0025	0.0010	mg/kg dry							

BI

##### LCS (B503225-BS1)

Prepared &amp; Analyzed: 27-Mar-15

Lead	0.0469	0.0005	mg/kg dry	0.0500		93.8	85-115			
Cadmium	0.0465	0.0005	mg/kg dry	0.0500		92.9	85-115			
Manganese	0.0524	0.0010	mg/kg dry	0.0500		105	85-115			
Barium	0.0470	0.0005	mg/kg dry	0.0500		94.1	85-115			
Chromium	0.0496	0.0010	mg/kg dry	0.0500		99.1	85-115			
Silver	0.0467	0.0001	mg/kg dry	0.0500		93.5	85-115			
Selenium	0.237	0.0010	mg/kg dry	0.250		95.0	85-115			
Arsenic	0.0515	0.0005	mg/kg dry	0.0500		103	85-115			

##### LCS Dup (B503225-BSD1)

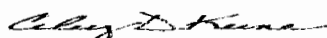
Prepared &amp; Analyzed: 27-Mar-15

Manganese	0.0546	0.0010	mg/kg dry	0.0500		109	85-115	4.11	20	
Silver	0.0489	0.0001	mg/kg dry	0.0500		97.9	85-115	4.60	20	
Barium	0.0499	0.0005	mg/kg dry	0.0500		99.7	85-115	5.85	20	
Chromium	0.0547	0.0010	mg/kg dry	0.0500		109	85-115	9.81	20	
Selenium	0.258	0.0010	mg/kg dry	0.250		103	85-115	8.24	20	
Lead	0.0517	0.0005	mg/kg dry	0.0500		103	85-115	9.69	20	
Arsenic	0.0559	0.0005	mg/kg dry	0.0500		112	85-115	8.08	20	
Cadmium	0.0502	0.0005	mg/kg dry	0.0500		100	85-115	7.78	20	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Eddie Seay Consulting  
 601 W. Illinois  
 Hobbs NM, 88242

 Project: DD LANDFARM (NM-01-0034) BI-A  
 Project Number: DD LF  
 Project Manager: Eddie Seay  
 Fax To: (505) 392-6949

 Reported:  
 30-Mar-15 16:34

**Total Mercury by CVAA - Quality Control**
**Green Analytical Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B503192 - EPA 7471</b>										
<b>Blank (B503192-BLK1)</b>										
Mercury	ND	0.0002	mg/kg wet							Prepared & Analyzed: 24-Mar-15
<b>LCS (B503192-BS1)</b>										
Mercury	0.0018	0.0002	mg/kg wet	0.00200		88.1	85-115			Prepared & Analyzed: 24-Mar-15
<b>LCS Dup (B503192-BSD1)</b>										
Mercury	0.0019	0.0002	mg/kg wet	0.00200		95.6	85-115	8.17	20	Prepared & Analyzed: 24-Mar-15

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

J	Estimated concentration. Analyte concentration between MDL and RL.
H2	Sample analysis performed past hold time specified by the method.
BS1	Blank spike recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
B1	Target analyte detected in method blank at or above method reporting limit. Sample concentration found to be 10 times above the concentration found in the method blank or less than the reporting limit.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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---

Celey D. Keene, Lab Director/Quality Manager



# CARDINAL Laboratories

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

### BILL TO

### ANALYSIS REQUEST

Company Name: **Edlin Gray Consulting**  
Project Manager: **Edlin Gray**  
Address: **601 W Illinois**  
City: **Walla**  
State: **NM** Zip: **86442**  
Phone #: **2-2236** Fax #: **2-6949**  
Project #: **DD LF** Project Owner: **J. Cooper**  
Project Name: **DD Landfarm (Am. 01. 0034)**  
Project Location: **E. Elmer Sub 31 T. 21 R. 38**  
Sample Name: **Edlin Gray (B. Annual take)**

P.O. #:

Company:

Attn:

Address:

City:

State:

Phone #:

Fax #:

Lab I.D.

Sample I.D.

MSD #31

1 Cell-1 T  
2 Cell-2 T  
3 Cell-3 T

4 Cell 1-V  
5 Cell 2-V  
6 Cell 3-V

(G)RAB OR (C)M

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER

ACID/BASE

ICE : COOL

OTHER

DATE TIME

3/17 8:45  
3/17 9:10  
3/17 9:30

3/17 10:40  
3/17 11:15  
3/17 1:30

BTEX

TPH 9015/m/Extended

Chloride

Cations

Anions

Trace metal

PLEASE NOTE: All samples must be analyzed within 30 days of collection. Samples must be analyzed within 30 days of collection. Samples must be analyzed within 30 days of collection.

Relinquished By:

*Edlin Gray*

Date:

Time:

Date:

Time:

Received By:

*Joe R*

Delivered By: (Circle One)

Sampler - UPS - Bus - Other: **2.0 #54**

Sample Condition:  
Cool ☒ Intact ☐  
Yes ☒ No ☐

CHECKED BY:  
(Initials)

*Joe R*

Phone Result: ☐ Yes ☐ No ☐ Add'l Phone #:

Fax Result: ☐ Yes ☐ No ☐ Add'l Fax #:

REMARKS:

T - Treatment zone  
V - Vadose zone  
Seepage @ base, not