

**RECEIVED**

*By OCD; Dr. Oberding at 7:59 am, Mar 06, 2015*

# **SECTION ONE**

## **SUMMARY OF ACTIVITIES**

The Caprock Maljamar Unit 152 site was delineated utilizing 5 sample points. (See Site Map) Deepest contamination of chlorides was located at Sample Point 5 and cleaned up at 35 feet. Attached analytical data confirms sampling activities. No Total Petroleum Hydrocarbons were reported to be released.

A polygon was excavated around the Sample Points to a depth of 20-26 inches. It was at those depths that the nearly impervious cap-rock was found. As per the request of the New Mexico Oil Conservation Division (OCD), the cap-rock was not removed or disturbed through excavation. (See Excavation Plan in Site Map Section)

Sidewall samples were taken at half the depth of excavation in numerous places in order to ensure no actionable levels of chlorides remained. No sidewall samples were taken near pump-jack due to the inability to excavate closer for fear of disturbing the integrity of the pump-jack foundation. (See Analytical Section)

Where the release ran onto the reserve pit, a 6-inch scrape was performed in order to remove as much contamination as possible without compromising the liner on top of the reserve pit.

Excavated area was backfilled with clean gypsum (caliche) and compacted in order to help shield the chlorides beneath from precipitation which could carry the chlorides further down. A berm was constructed out of caliche to separate the well pad from the reserve pit in order to prevent any future release that might occur from running on top of the reserve pit. (See Photo section)

Site was not seeded as entire release occurred on the pad.

# **SECTION TWO**

**C-141**

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-141  
Revised August 8, 2011

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company	Linn Operating Inc.	Contact	E.L. Gonzales
Address	2130 W Bender Blvd Hobbs, NM 88240	Telephone No.	575-738-1739
Facility Name	Caprock Maljamar Unit # 152	Facility Type	Oil producer
Surface Owner	State	Mineral Owner	API No. 30-025-32042

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	17	17S	33E	1355	South	1351	West	Lea

Latitude 32.8310476393633 Longitude -103.689563211149

**NATURE OF RELEASE**

Type of Release	Produced Water	Volume of Release	30 bbls	Volume Recovered	25 bbls
Source of Release	Stuffing box	Date and Hour of Occurrence		Date and Hour of Discovery	
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Jeff Robertson – BLM / Mike Bratcher- NM OCD / Tomas Oberding-OCD		
By Whom?	Brian Wall / Theresa McCracken	Date and Hour	08/25/2014 0700 / 08/26/2014 0958		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* As I was checking wells I pulled up to CMU 152, and realized the stuffing box was leaking, The well had a trapper on it, but water was running out of it and didn't shut well off. First thing I did was shut well in and got leak to stop, Then I notified my foreman. I got a vacuum truck to pick up water off of ground, he picked up 25bbls of produced water.

Describe Area Affected and Cleanup Action Taken.\* The area affected was to the south app. 25' long and 4' wide, and to the north it ran 35" long and was 3' wide. While I had the vacuum truck I changed the packing & greased well, then returned well to production.

Directions to site: Turn on dog lake road north off of 529, go 6/10 mile to stop sign, turn right onto mescalero rd, go to top of cap, turn left onto hummingbird rd, go 6miles to tomahawk rd, turn left onto tomahawk rd, follow tomahawk to y in rd, stay right on y go till you come to injection plant. Continue north till you come to a 3 way, continue north and cmu 152 1st well on right.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	<b>OIL CONSERVATION DIVISION</b>		
Printed Name: E.L. Gonzales	Approved by Environmental Specialist:		
Title: Production Supervisor	Approval Date:	Expiration Date:	
E-mail Address: elgonzales@linenergy.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 03/05/2015	Phone: 505-504-8002		

\* Attach Additional Sheets If Necessary

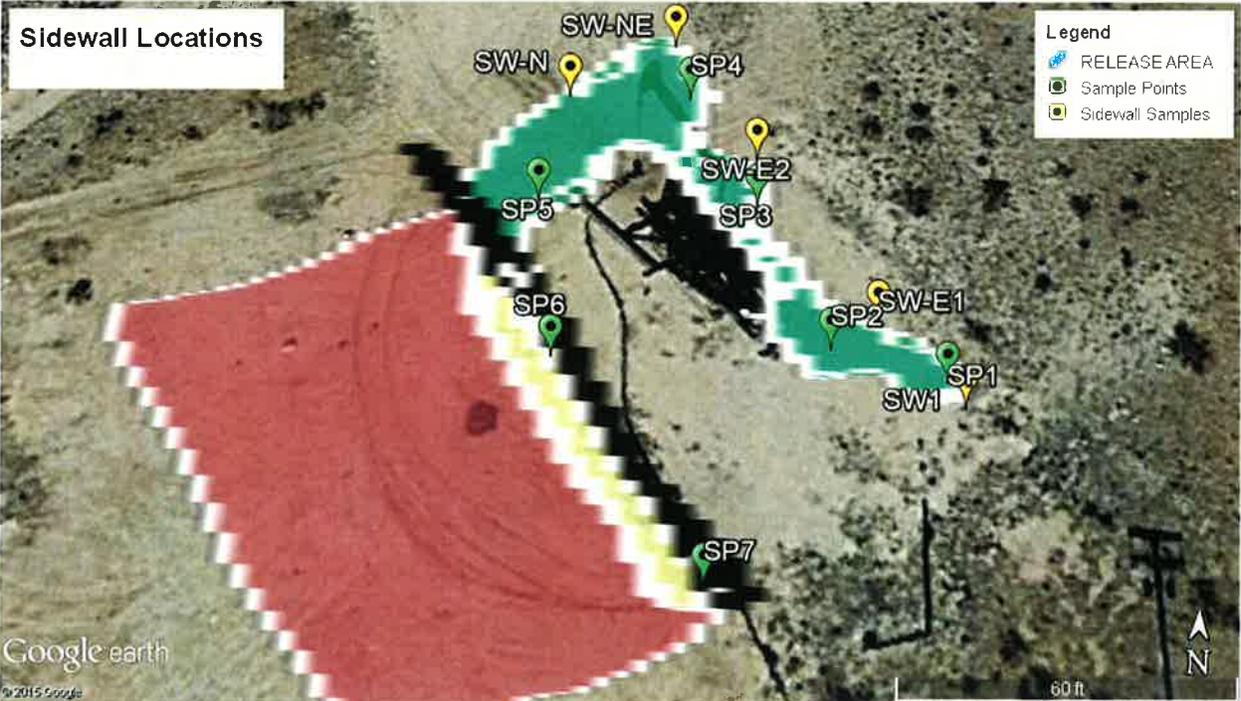
# **SECTION THREE**

## **SITE MAP**

# Release Area



# Excavation Plan



# **SECTION FOUR**

# **PHOTOS**

# Release







# Remediation







# Remediation Completed







# SECTION FIVE

## ANALYTICAL LABORATORY REPORTS

### Sample Summary

#### PROJECT

#### CMU 152

<u>Sample #</u>	<u>Depth/FT</u>	<u>CHLORIDES</u>	<u>TPH</u>
SP1	SURFACE	12300	N/A
SP1	3	768	N/A
SP1	20	96	N/A
SP2	SURFACE	40800	N/A
SP2	4	3160	N/A
SP2	15	304	N/A
SP3	SURFACE	39200	N/A
SP3	4	736	N/A
SP4	SURFACE	32000	N/A
SP4	2	848	N/A
SP5	SURFACE	35600	N/A
SP5	4	2080	N/A
SP5	35	80	N/A

September 09, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: CMU #152

Enclosed are the results of analyses for samples received by the laboratory on 09/02/14 16:50.

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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received:	09/02/2014	Sampling Date:	09/02/2014
Reported:	09/09/2014	Sampling Type:	Soil
Project Name:	CMU #152	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: SP 1 @ SURFACE (H402699-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	12300	16.0	09/09/2014	ND	416	104	400	0.00		

**Sample ID: SP 2 @ SURFACE (H402699-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	40800	16.0	09/09/2014	ND	416	104	400	0.00		

**Sample ID: SP 3 @ SURFACE (H402699-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	39200	16.0	09/09/2014	ND	416	104	400	0.00		

**Sample ID: SP 4 @ SURFACE (H402699-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32000	16.0	09/09/2014	ND	416	104	400	0.00		

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received:	09/02/2014	Sampling Date:	09/02/2014
Reported:	09/09/2014	Sampling Type:	Soil
Project Name:	CMU #152	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: SP 5 @ SURFACE (H402699-05)**

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>35600</b>	16.0	09/09/2014	ND	416	104	400	0.00	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

- 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: <u>Vinco Products &amp; Services</u> Project Manager: <u>Freddie Ramsey</u> Address: City: State: Zip: Phone #: Fax #: Project #: Project Owner: Project Location: <u>CIN 152</u> Sample Name: <u>Les County, Hobbs, NM</u>		P.O. #: Company: <u>LIPN</u> Attn: <u>Brian Wall</u> Address: City: State: Zip: Phone #: Fax #: Project #: Project Owner:																
FOR LAB USE ONLY																		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX	PRESERV	SAMPLING	DATE	TIME										
<u>H4026FH</u>	<u>SP1 Surface</u>		<u>6</u>	<input checked="" type="checkbox"/> SOIL			<u>9/2/14</u>	<u>0900</u>										
	<u>SP2 Surface</u>		<u>6</u>	<input checked="" type="checkbox"/> SOIL			<u>9/2/14</u>	<u>0913</u>										
	<u>SP3 Surface</u>		<u>6</u>	<input checked="" type="checkbox"/> SOIL			<u>9/2/14</u>	<u>0915</u>										
	<u>SP4 Surface</u>		<u>6</u>	<input checked="" type="checkbox"/> SOIL			<u>9/2/14</u>	<u>0917</u>										
	<u>SP5 Surface</u>		<u>6</u>	<input checked="" type="checkbox"/> SOIL			<u>9/2/14</u>	<u>0925</u>										

PLEASE NOTE: Under and Gravity, Cardinal Laboratories and clients maintain strict chain of custody control for all samples. Samples should be sealed in separate or dry pack for transport to the laboratory and by the client for the analysis. All data, including those for reference and any other data, will be provided to the client upon receipt of the sample. Samples should be sealed in separate or dry pack for transport to the laboratory and by the client for the analysis. All data, including those for reference and any other data, will be provided to the client upon receipt of the sample. Samples should be sealed in separate or dry pack for transport to the laboratory and by the client for the analysis.

Relinquished By: [Signature] Date: 9/2/14 Time: 9:50 Received By: [Signature] Date: 9/2/14 Time: 5:42

Delivered By: (Circle One) UPS - Bus - Other: 5.42 Sample Condition:  Cool  Intact  Yes  No

Checked By: [Signature] Phone Result:  Yes  No Add'l Phone #: [Signature] Fax Result:  Yes  No Add'l Fax #: [Signature]

Remarks: Turned in 27 @ gmail.com

September 15, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: CMU #152

Enclosed are the results of analyses for samples received by the laboratory on 09/09/14 16:43.

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).

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

Accreditation applies to public drinking water matrices.

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:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received:	09/09/2014	Sampling Date:	09/09/2014
Reported:	09/15/2014	Sampling Type:	Soil
Project Name:	CMU #152	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Kathy Perez
Project Location:	LEA COUNTY, NM		

**Sample ID: SP 1 @ 3 ' (H402801-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	768	16.0	09/11/2014	ND	400	100	400	0.00		

**Sample ID: SP 1 @ 20 ' (H402801-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	09/11/2014	ND	400	100	400	0.00		

**Sample ID: SP 2 @ 4 ' (H402801-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3160	16.0	09/11/2014	ND	400	100	400	0.00		

**Sample ID: SP 2 @ 15 ' (H402801-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	09/11/2014	ND	400	100	400	0.00		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 09/09/2014  
 Reported: 09/15/2014  
 Project Name: CMU #152  
 Project Number: NONE GIVEN  
 Project Location: LEA COUNTY, NM

 Sampling Date: 09/09/2014  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Kathy Perez

**Sample ID: SP 3 @ 4' (H402801-05)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	736	16.0	09/11/2014	ND	400	100	400	0.00		

**Sample ID: SP 4 @ 2' (H402801-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	848	16.0	09/11/2014	ND	400	100	400	0.00		

**Sample ID: SP 5 @ 4' (H402801-07)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2080	16.0	09/11/2014	ND	400	100	400	0.00		

**Sample ID: SP 5 @ 35' (H402801-08)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/11/2014	ND	400	100	400	0.00		

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

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- RPD Relative Percent Difference
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- \*\*\* 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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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



# CARDINAL Laboratories

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

### BILL TO

### ANALYSIS REQUEST

Company Name: *Per Products & Services*  
Project Manager: *Fred Kamsz*

P.O. #:

Company: *LENN*

Attn: *Brian Smith*

Address:

City:

State:

Phone #:

Fax #:

Address: State: ZIP:  
City: State: ZIP:  
Phone #: Fax #:  
Project #: Project Owner:

Project Name: *CMU 152*  
Project Location: *Let Canyon*

Sampler Name: *Robbie Kennedy*

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX							DATE	TIME							
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE									ICE / COOL
<i>H40801</i>	<i>SPR 3</i>		<i>1</i>			<input checked="" type="checkbox"/>						<i>9/14/14</i>	<i>8:30</i>	<input checked="" type="checkbox"/>					
<i>H40802</i>	<i>SPR 3</i>		<i>1</i>			<input checked="" type="checkbox"/>						<i>9/14/14</i>	<i>8:54</i>	<input checked="" type="checkbox"/>					
	<i>SPR 3</i>		<i>1</i>			<input checked="" type="checkbox"/>						<i>9/14/14</i>	<i>8:54</i>	<input checked="" type="checkbox"/>					
	<i>SPR 3</i>		<i>1</i>			<input checked="" type="checkbox"/>						<i>9/14/14</i>	<i>8:54</i>	<input checked="" type="checkbox"/>					
	<i>SPR 3</i>		<i>1</i>			<input checked="" type="checkbox"/>						<i>9/14/14</i>	<i>8:54</i>	<input checked="" type="checkbox"/>					
	<i>SPR 3</i>		<i>1</i>			<input checked="" type="checkbox"/>						<i>9/14/14</i>	<i>8:54</i>	<input checked="" type="checkbox"/>					
	<i>SPR 3</i>		<i>1</i>			<input checked="" type="checkbox"/>						<i>9/14/14</i>	<i>8:54</i>	<input checked="" type="checkbox"/>					

PLEASE NOTE: Analyte and sampler information is required for analysis and reporting. All samples must be analyzed within 30 days of collection. The appropriate analysis method must be indicated on the form. All samples must be analyzed within 30 days of collection. The appropriate analysis method must be indicated on the form. All samples must be analyzed within 30 days of collection. The appropriate analysis method must be indicated on the form.

Relinquished By: *[Signature]* Date: *9/9/14* Received By: *[Signature]* Date: *9/9/14*  
 Type: *430*  
 Relinquished By: *[Signature]* Received By: *[Signature]*

Delivered By: (Circle One) *UPS*  
 Sampler - UPS - Bus - Other: *326*  
 Sample Condition: Cool  Impact   
 Checked By: *[Signature]*

Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2327

November 12, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: CMU #152

Enclosed are the results of analyses for samples received by the laboratory on 11/07/14 13:05.

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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received:	11/07/2014	Sampling Date:	11/06/2014
Reported:	11/12/2014	Sampling Type:	Soil
Project Name:	CMU #152	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: SW1 - SOUTH (H403431-01)**

Chloride, SM4500CI-B	mg/kg	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	11/11/2014	ND	448	112	400	11.3	

**Sample ID: SW1 - EAST (H403431-02)**

Chloride, SM4500CI-B	mg/kg	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	11/11/2014	ND	448	112	400	11.3	

**Sample ID: SW2 - EAST (H403431-03)**

Chloride, SM4500CI-B	mg/kg	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	11/11/2014	ND	448	112	400	11.3	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

- 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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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**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: <i>Vic Polaris &amp; Sons</i> Project Manager: <i>Paul Brown</i>		P.O. #: Company: <i>Energy</i> Attn: <i>Paul Brown</i>																	
Address: City: State: Zip:		Address: City: State: Zip:																	
Phone #: Fax #: Project #: Project Owner:		Phone #: Fax #: Project #: Project Owner:																	
Project Name: <i>CMU #152</i> Project Location: <i>Lawrence</i>		State: Zip:																	
Sampler Name: <i>Paul Brown</i>		Fax #:																	
FOR LAB USE ONLY																			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	MATRIX	PRESERV	SAMPLING	DATE	TIME												
<i>A403431</i>	<i>501-5016 51-1-East 51-2-East</i>	<i>711</i>	<i>SOIL</i>		<i>11-2-14 2:56</i>	<i>11-6-14 2:57</i>	<i>11-6-14 2:58</i>	<i>11-2-14 2:56</i>											

PLEASE NOTE: Labels and Damages: Cardinal's Policy for detecting and reporting errors is to immediately advise the client of any errors. Analysis: Analysis results may be reported after 48 hours unless otherwise specified. Analysis results are not valid unless the analysis is performed by a certified analyst. Analysis results are not valid unless the analysis is performed by a certified analyst. Analysis results are not valid unless the analysis is performed by a certified analyst. Analysis results are not valid unless the analysis is performed by a certified analyst.

Relinquished By: *[Signature]* Date: *11/14* Received By: *[Signature]* Date: *11/14*  
 Relinquished By: *[Signature]* Date: *11/14* Received By: *[Signature]* Date: *11/14*  
 Time: *1:10* Time: *1:05*

Delivered By: (Circle One)  UPS  Bus  Other  
 Checked By: *[Signature]* Initials: *[Signature]*  
 Phone Result:  Yes  No Add'l Phone #: *101-1015 2705*  
 Fax Result:  Yes  No Add'l Fax #: *101-1015 2705*  
 REMARKS: *101-1015 2705*

November 14, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: CMU #152

Enclosed are the results of analyses for samples received by the laboratory on 11/13/14 13:35.

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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

Accreditation applies to public drinking water matrices.

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:**

 LINN OPERATING-HOBBS  
 BRIAN WALL  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received:	11/13/2014	Sampling Date:	11/13/2014
Reported:	11/14/2014	Sampling Type:	Soil
Project Name:	CMU #152	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: SW - NORTH EAST (H403491-01)**

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	944	16.0	11/14/2014	ND	400	100	400	3.92	

**Sample ID: SW - NORTH (H403491-02)**

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1760	16.0	11/14/2014	ND	400	100	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

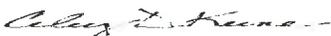
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**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: <i>Agri Products + Services</i> Project Manager: <i>Fred Ramsey</i> Address: City: State: Zip: Phone #: Fax #: Project #: Project Owner: Project Name: <i>CMH 152</i> Project Location: <i>Los County</i> Sampler Name: <i>Rebbi Rinnell</i>		P.O. #: Company: <i>LIUN</i> Attn: <i>S. L. Gonzales</i> Address: City: State: Zip: Phone #: Fax #: Project #: Project Owner:		
Lab I.D. <i>HH03491</i> Sample I.D. <i>1 SW - North</i>	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER ACID/BASE ICE / COOL OTHER	MATRIX PRESERV SAMPLING	DATE TIME <i>11/13/14 0930</i> <i>11/13/14 1045</i>	Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Fax #: REMARKS:

**PLEASE NOTE:** Liability and coverage regarding safety and health protection through proper chain of custody and sample handling is provided by the client for the analysis. All data should be used to inform and not to replace professional judgment. Samples should be analyzed within 30 days after completion of the analysis. In no event shall Cardinal be liable for incidental or consequential damages, including attorney's fees, arising out of or from the use of any of the data provided by the client. No liability shall be assumed by the provider of the data for any use of the data for purposes not intended by the client.

Relinquished By: *[Signature]* Date: *11/13/14* Received By: *[Signature]* Date: *11/13/14*  
 Relinquished By: *[Signature]* Date: *11/13/14* Received By: *[Signature]* Date: *11/13/14*

Delivered By: (Circle One) *2.42*  
 Sampler - UPS - Bus - Other: *2.42*  
 Sample Condition:  Intact  Cool  Yes  No  Yes  No  
 CHECKED BY: *[Signature]*

Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326 #154

November 20, 2014

E.L. GONZALES

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: CMU #152

Enclosed are the results of analyses for samples received by the laboratory on 11/17/14 15:00.

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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

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Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 E.L. GONZALES  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received:	11/17/2014	Sampling Date:	11/17/2014
Reported:	11/20/2014	Sampling Type:	Soil
Project Name:	CMU #152	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

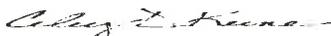
**Sample ID: SW - NORTH (H403532-01)**

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>784</b>	16.0	11/18/2014	ND	400	100	400	0.00	

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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- RPD Relative Percent Difference
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- \*\*\* 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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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

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

Company Name: *Labor Products & Services*  
 Project Manager: *Fred Ramsey*

P.O. #: *2170*  
 Company: *LPS*  
 Attn: *SL Gonzales*

ANALYSIS REQUEST

Address: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 City: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_  
 Project #: \_\_\_\_\_ Project Owner: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_  
 State: \_\_\_\_\_ Phone #: \_\_\_\_\_  
 Zip: \_\_\_\_\_ Fax #: \_\_\_\_\_

Project Name: *CMU 153*  
 Project Location: *Log, Gunth*  
 Sampler Name: *Robb & Kinnell*

Matrix: \_\_\_\_\_ PRESERV: \_\_\_\_\_ SAMPLING: \_\_\_\_\_

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME						
<i>H403532</i>	<i>Site - Newk</i>	<i>6</i>	<i>1</i>			<input checked="" type="checkbox"/>							<i>11/17/14</i>	<i>1030</i>	<i>✓</i>					

PLEASE NOTE: Liability and Damages: Cardinal Health and its agents exclude liability for any damage arising from the use of this Chain of Custody and Analysis Request form. The user of this form is responsible for the accuracy of the information provided. The user of this form is responsible for the accuracy of the information provided. The user of this form is responsible for the accuracy of the information provided.

Relinquished By: *[Signature]* Date: *11/17/14* Received By: *[Signature]*  
 Relinquished By: *[Signature]* Date: *3:00* Received By: *[Signature]*

Phone Result:  Yes  No Add'l Phone #: \_\_\_\_\_  
 Fax Result:  Yes  No Add'l Fax #: \_\_\_\_\_  
 REMARKS: *Frame 427 @ gmail.com*

Delivered By: (Circle One)  
 Sampler - UPS - Bus - Other: *5.6e*

Sample Condition:  Cool  Intact  
 Yes  No  
 CHECKED BY: *[Signature]*

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2426 #50