

RECEIVED

By OCD; Dr. Oberding at 1:27 pm, Mar 12, 2015



Government N #2 Battery

REMEDIATION WORK PLAN

API No. 30-025-23122

APPROVED

Conditionally

By OCD; Dr. Oberding at 1:28 pm, Mar 12, 2015

Release Date: February 28th, 2015

Approval Stipulations:
1) Obtain concurrence
from BLM

Unit Letter N, Section 19, Township 20 South, Range 34 East

March 11, 2015

Prepared by:

Environmental Department
Diversified Field Service, Inc.
206 W. Snyder
Hobbs, NM 88240
Phone: (575)964-8394
Fax: (575)393-8396

Tomas Oberding, Phd.
1625 N. French Dr.
Hobbs, NM 88240

RE: Linn Energy Government N #2 Battery – Remediation Work Plan
UL/N, Section 33, T20S, R34E
API No. 30-025-23122

Dr. Oberding,

Linn Energy (Linn) has retained Diversified Field Service, Inc. (DFSI) to address environmental issues for the site detailed herein.

The site is located south of Maljamar, NM, in Lea County. The leak site resulted from the dumps not operating on the heater. A C-141 was submitted to the NMOCD on March 02, 2015.

Site Assessment and Delineation

On March 05, 2015 DFSI personnel delineated vertically in the leak area. Field samples were taken on three sample points, each sample was tested for chloride levels as well as BTEX. The BTEX samples were performed using a Mini Rae Photoionization Detector (PID). All clean field samples were taken to Cardinal Labs of Hobbs to obtain confirmation samples. The results are attached.

DFSI has conducted a groundwater study of the area and has determined that according to the New Mexico Office of the State Engineer the average depth to groundwater for this area is 240 foot below ground surface. Therefore, no eminent danger of groundwater impact or threat to life is anticipated.

Conclusion

After careful review, DFSI, on behalf of Linn Energy, would like to propose the following:

Remove the impacted soil in the area of SP #1 to 2' bgs. Remove the impacted soil in the area of SP #2 to 1' bgs. Remove the impacted soil in the area of SP #3 to 3' bgs.

Haul all contaminated soil to an approved disposal. Backfill with clean caliche and compact.

Following the approval of the above plan, and after work is completed DFSI will submit all proper closure documentation to the NMOCD and BLM in accordance to the State and Federal Guidelines.

Please feel free to contact me with any questions concerning this remediation plan request.

Sincerely,



Michael Burton
Environmental Operations Director
Diversified Field Service, Inc.
206 West Snyder
Hobbs, NM 88240
Office: (575)964-8394
Mobile: (575)390-5454
Fax: (575)964-8396
Email: Mburton@diversifiedfsi.com

cc Jeff Robertson BLM

Attachments: Initial Form C-141
Site/Sample Map
Sample Data
Lab Analytical Data

Site Diagram

**Linn, Government #2 Battery
UL/N, Sec. 19 T20S R34E
Lea County, NM
Drafted By: Lance Crenshaw, 3-10-15**

0 0.0025 0.005 0.01 Miles

Legend

Misc_points

Types

- Electrical Box
- Power Pole
- Headers
- Injection
- Pumpjacks
- Tanks
- Valves
- Other
- Soil Bores
- sample_pts
- Source

Pipeline

Type

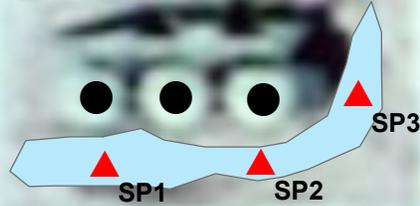
- Above Ground Line
- Buried Line

Spill

- <all other values>

Spill_Media

- Oil and Produced H2O
- Oil
- Other
- Produced Water



**Spill Area:
469 sq. ft.**

Lance Crenshaw
GIS Technician

Soil Remediation and Ground Water Remediation
Environmental Assessments
Regulatory Compliance



Environmental

DFS

Services

Office: 575-964-8394
Fax: 575-964-8396

Cell: 575-441-2359
Email: lcrenshaw@diversifiedfsi.com

Source: Esri, DigitalGlobe, GeoEye, IGN, swisstopo, and the GIS User Community



Government N #2 Battery

PHOTO PAGE

3/12/15



March 10, 2015

BOB AKEN

LINN ENERGY

RR1, BOX 24 B

KINGFISHER, OK 73750

RE: GOVERNMENT N #2 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/05/15 13:56.

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.

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 ENERGY
 BOB AKEN
 RR1, BOX 24 B
 KINGFISHER OK, 73750
 Fax To: (405) 375-6693

Received:	03/05/2015	Sampling Date:	03/05/2015
Reported:	03/10/2015	Sampling Type:	Soil
Project Name:	GOVERNMENT N #2 BATTERY	Sampling Condition:	** (See Notes)
Project Number:	NOT GIVEN	Sample Received By:	Celey D. Keene
Project Location:	NOT GIVEN		

Sample ID: SP1 @ 4' (H500613-01)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/09/2015	ND	1.96	97.8	2.00	10.5		
Toluene*	<0.050	0.050	03/09/2015	ND	1.84	91.9	2.00	6.52		
Ethylbenzene*	<0.050	0.050	03/09/2015	ND	2.09	105	2.00	7.91		
Total Xylenes*	<0.150	0.150	03/09/2015	ND	5.64	94.0	6.00	9.81		
Total BTEX	<0.300	0.300	03/09/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 116 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/09/2015	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/06/2015	ND	188	94.0	200	1.83		
DRO >C10-C28	<10.0	10.0	03/06/2015	ND	196	98.2	200	1.27		

Surrogate: 1-Chlorooctane 85.2 % 47.2-157
Surrogate: 1-Chlorooctadecane 91.2 % 52.1-176

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 ENERGY
 BOB AKEN
 RR1, BOX 24 B
 KINGFISHER OK, 73750
 Fax To: (405) 375-6693

Received:	03/05/2015	Sampling Date:	03/05/2015
Reported:	03/10/2015	Sampling Type:	Soil
Project Name:	GOVERNMENT N #2 BATTERY	Sampling Condition:	** (See Notes)
Project Number:	NOT GIVEN	Sample Received By:	Celey D. Keene
Project Location:	NOT GIVEN		

Sample ID: SP2 @ 4' (H500613-02)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/09/2015	ND	1.96	97.8	2.00	10.5		
Toluene*	<0.050	0.050	03/09/2015	ND	1.84	91.9	2.00	6.52		
Ethylbenzene*	<0.050	0.050	03/09/2015	ND	2.09	105	2.00	7.91		
Total Xylenes*	<0.150	0.150	03/09/2015	ND	5.64	94.0	6.00	9.81		
Total BTEX	<0.300	0.300	03/09/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 116 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/09/2015	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/06/2015	ND	188	94.0	200	1.83		
DRO >C10-C28	<10.0	10.0	03/06/2015	ND	196	98.2	200	1.27		

Surrogate: 1-Chlorooctane 82.7 % 47.2-157
Surrogate: 1-Chlorooctadecane 90.0 % 52.1-176

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 ENERGY
 BOB AKEN
 RR1, BOX 24 B
 KINGFISHER OK, 73750
 Fax To: (405) 375-6693

Received:	03/05/2015	Sampling Date:	03/05/2015
Reported:	03/10/2015	Sampling Type:	Soil
Project Name:	GOVERNMENT N #2 BATTERY	Sampling Condition:	** (See Notes)
Project Number:	NOT GIVEN	Sample Received By:	Celey D. Keene
Project Location:	NOT GIVEN		

Sample ID: SP3 @ 5' (H500613-03)

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/09/2015	ND	1.96	97.8	2.00	10.5	
Toluene*	<0.050	0.050	03/09/2015	ND	1.84	91.9	2.00	6.52	
Ethylbenzene*	<0.050	0.050	03/09/2015	ND	2.09	105	2.00	7.91	
Total Xylenes*	<0.150	0.150	03/09/2015	ND	5.64	94.0	6.00	9.81	
Total BTEX	<0.300	0.300	03/09/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/09/2015	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/06/2015	ND	188	94.0	200	1.83	
DRO >C10-C28	<10.0	10.0	03/06/2015	ND	196	98.2	200	1.27	

Surrogate: 1-Chlorooctane 85.4 % 47.2-157
Surrogate: 1-Chlorooctadecane 91.2 % 52.1-176

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

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



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: <u>Linn Energy</u> Project Manager: <u>Mike Burton</u>		BILL TO P.O. #:		ANALYSIS REQUEST	
Address: City: State: Zip:		Company: <u>Linn Energy</u> Attn: <u>Bob Aken</u>			
Phone #: Fax #:		Address: City:			
Project #: Project Owner:		State: Zip:			
Project Name:		Phone #:			
Project Location: <u>Government #2 Battery</u>		Fax #:			
Sampler Name: <u>Mike Burton</u>					
FOR LAB USE ONLY					
Lab I.D. <u>H500613-</u>	Sample I.D. <u>01 SP.1 @ 4'</u> <u>02 SP.2 @ 4'</u> <u>03 SP.3 @ 5'</u>	(G)RAB OR (C)OMP # CONTAINERS	MATRIX <input type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input checked="" type="checkbox"/> SOIL <input type="checkbox"/> OIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER	PRESERV <input type="checkbox"/> ACID/BASE <input type="checkbox"/> ICE / COOL <input type="checkbox"/> OTHER	SAMPLING DATE TIME
		9			25-15
		1	X		9:11
		1	X		3-5-15
		1	X		10:05
		1	X		3-5-15
		1	X		11:05
					CL
					TPH
					B-tex

PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising from this contract or for, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 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 services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: [Signature] **Date:** 3/5/15 **Received By:** [Signature] **Date:** 1-5-15

Relinquished By: [Signature] **Date:** 1-5-15 **Received By:** [Signature] **Date:** 1-5-15

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other: 6.8c Cool Intact Yes No No No COH

Sample Condition
 Cool Intact Yes No No No

CHECKED BY: (Initials) COH

REMARKS:
*Samples brought directly to lab. CL

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326 #57

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

Form C-141
Revised August 8, 2011

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 Government N #002 Battery	Facility Type Battery
Surface Owner Federal	Mineral Owner
API No. 30-025-23122	

LOCATION OF RELEASE

Unit Letter N	Section 19	Township 20S	Range 34E	Feet from the 590	North/South Line South	Feet from the 1913	East/West Line West	County Lea
------------------	---------------	-----------------	--------------	----------------------	---------------------------	-----------------------	------------------------	---------------

Latitude 32.552971798298 Longitude -103.601948239229

NATURE OF RELEASE

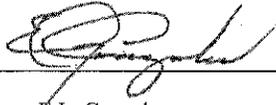
Type of Release Oil	Volume of Release 15 bbls	Volume Recovered 13 bbls
Source of Release Heater	Date and Hour of Occurrence 02/28/2015	Date and Hour of Discovery 02/28/2015 10:30am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Aaron Hickert	
By Whom?	Date and Hour	
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.* Arriving at location at 10:30, I noticed that oil had spilled out of gas line and onto ground and a little on tank. There was only gas coming out of line at that time. The pressure of heater was 30psi and both dumps were not operating. I opened the kimray 1/2 turn to try and release pressure on heater. Pressure dropped down to about 2 psi.

Describe Area Affected and Cleanup Action Taken.* Oil was in firewall at battery. Had vac truck suck up any standing fluid and return to tank.

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: 	OIL CONSERVATION DIVISION	
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: 03/02/2015 Phone: 505-504-8002		

* Attach Additional Sheets If Necessary