

**RECEIVED**

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



# Government N #2 Battery

## REMEDIATION WORK PLAN

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API No. 30-025-23122

**APPROVED**

*Conditionally*

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

Release Date: February 28<sup>th</sup>, 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

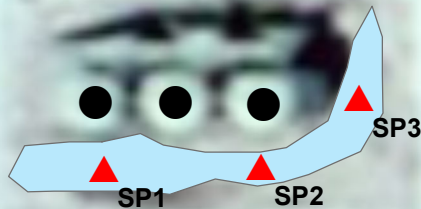
- Above Ground Line
- Buried Line

### 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](mailto:lcrenshaw@diversifiedfsi.com)

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



# Government N #2 Battery

## PHOTO PAGE

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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](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 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)**

BTX 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 BTX	<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)**

BTX 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 BTX	<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

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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)**

BTX 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 BTX	<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

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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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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



## Page 6 of 6

**(575) 393-2326 FAX (575) 393-2476**

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

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

Latitude 32.552971798298 Longitude -103.601948239229

**NATURE OF RELEASE**

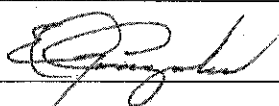
Type of Release	Oil	Volume of Release	15 bbls	Volume Recovered	13 bbls
Source of Release	Heater	Date and Hour of Occurrence	02/28/2015	Date and Hour of Discovery	02/28/2015 10:30am
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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 NMOC 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 NMOC 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, NMOC 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: 03/02/2015	Phone: 505-504-8002		

\* Attach Additional Sheets If Necessary