From: <u>Bratcher, Mike, EMNRD</u>
To: <u>Patterson, Heather, EMNRD</u>

Subject:FW: Linn - State B #005 - Work PlanDate:Monday, May 02, 2016 7:13:16 AMAttachments:Linn - State B #005 - Work Plan.pdf

Linn - Skelly A Battery - Work Plan.msg

**From:** Gonzales, EL [mailto:ELgonzales@linnenergy.com]

Sent: Wednesday, April 27, 2016 3:28 PM

**To:** Bratcher, Mike, EMNRD; Tucker, Shelly (stucker@blm.gov) **Cc:** Michael Burton (mburton@diversifiedfsi.com); Laura Flores

Subject: FW: Linn - State B #005 - Work Plan

Here are work plans for your review and approval----- Thanks, EL

**From:** Laura Flores [mailto:lflores@diversifiedfsi.com]

Sent: Wednesday, April 27, 2016 2:46 PM

**To:** Gonzales, EL **Cc:** Michael Burton

Subject: Linn - State B #005 - Work Plan

Mr. Gonzales,

Attached is the work plan for the State B #005 for your review.

Please let me know if you have any changes or questions.

Thank you,

Laura Flores
Environmental Deparment
Diversified Field Service, Inc.
206 W Snyder | Hobbs, NM 88240

Phone: 575.964.8394 | Fax: 575.393.8396

This electronic message, together with any attachments, contains information from LINN Energy that may be confidential and intended solely for the use of the addressee only. If you are not the intended recipient, please note that any disclosure, dissemination, distribution or copying of this message, or any attachment, is strictly prohibited. Also, please notify the original sender by return e-mail and delete the message, along with any attachments, from your computer. Finally, the recipient should check this email and any attachments for the presence of viruses. The organization accepts no liability for any damage caused by any virus transmitted by this email.



# State B #005

## REMEDIATION WORK PLAN

Release Date: September 28, 2014

Unit Letter O, Section 16, Township 17 South, Range 31 East

API#: 30-015-32874

April 27, 2016

### Prepared by:

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

Phone: (575)964-8394 Fax: (575)393-8396 LINN ENERGY 04/27/2016

Mike Bratcher Environmental Specialist NM Oil Conservation District – Division 2 811 S. First St. Artesia, NM 88210

RE: Linn Energy – State B #005 – Remediation Work Plan

UL/O, Section 16, T17S, R31E

API#: 30-015-32874

Mr. Bratcher,

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

The site is located southwest of Maljamar, NM, in Eddy County. The non-reportable spill resulted from a ruptured flowline, releasing a total of 2 barrels of produced water and 2 barrels of oil, with none recovered. The impacted area is located on the pad.

### **Site Assessment and Delineation**

On October 10, 2014, DFSI personnel were on site to obtain samples within the leak area (Figure 1). Six samples were obtained and field sampled for chloride levels, as well as BTEX (Appendix II). The BTEX samples were performed using a Mini Rae Photoionization Detector (PID). Field samples were submitted for analysis at Cardinal Laboratories of Hobbs, NM to obtain confirmation (Appendix III), resulting in decreasing chloride concentrations to below NMOCD or BLM regulatory limits at all sample points, with the exception of SP1.

DFSI has conducted a groundwater study of the area and has determined, according to the New Mexico Office of the State Engineer, there is no groundwater beneath this site. Therefore, no eminent danger of groundwater impact or threat to life is anticipated (Appendix IV).

LINN ENERGY 04/27/2016

### Conclusion

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

Excavate the area around SP1 to 4' bgs. The remaining release area will be scraped 6". The entire excavation will be backfilled with clean, imported caliche to ground surface. Contaminated soil will be properly disposed of at a NMOCD approved facility. Seeding of the site is not warranted.

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

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

Sincerely,

Michael Burton

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

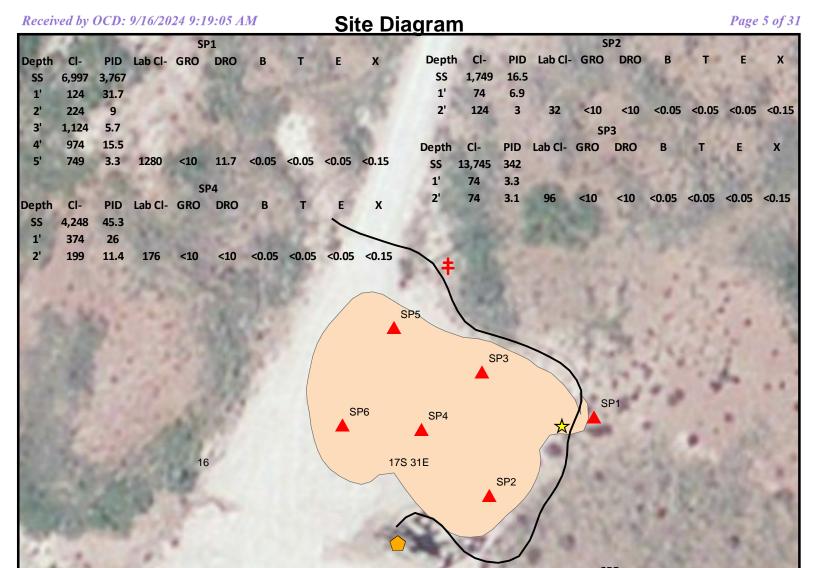
cc Shelly Tucker

Figure 1 – Site Map

Appendix I – Site Photos

Appendix II – Laboratory Analysis

Appendix III – Groundwater Study



Depth CI-PID Lab CI- GRO DRO SS 899 1' 99 35.1 <10 <10 < 0.05 < 0.05 < 0.05 < 0.15 <16 Lab CI- GRO Depth CI-DRO X SS 524 8.6 1' 49 <10 <10 < 0.05 <0.05 <0.05 <0.15

### Legend



Sample Points

Power Pole

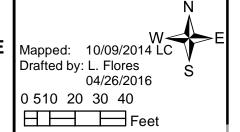
Pumpjacks
Above Ground Line

Oil and Produced Water (6,624 sq ft)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Linn
State B #005
Unit Letter O, Section 16, T17S, R31E
Eddy County, NM
API #: 30-015-32874



# Appendix I

**SITE PHOTOS** 

Diversified Field Service, Inc. 206 W. Snyder Hobbs, NM 88240 (575) 964-8394



# State B #005

# **PHOTO PAGE**









# Appendix II

**LABORATORY ANALYSIS** 

Diversified Field Service, Inc. 206 W. Snyder Hobbs, NM 88240 (575) 964-8394



October 16, 2014

**BRIAN WALL** 

LINN ENERGY

RR1, BOX 24 B

KINGFISHER, OK 73750

RE: STATE B #5

Enclosed are the results of analyses for samples received by the laboratory on 10/10/14 14:45.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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)

Celey D. Keine

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 BRIAN WALL RR1, BOX 24 B KINGFISHER OK, 73750

Fax To: (405) 375-6693

Received: 10/10/2014 Reported: 10/16/2014

Project Name: STATE B #5
Project Number: NOT GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/10/2014 Sampling Type: Soil

Sampling Condition: \*\* (See Notes)
Sample Received By: Celey D. Keene

Sample ID: SP 1 @ 5' (H403127-01)

BTEX 8021B	mg/kg		Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/15/2014	ND	1.81	90.4	2.00	4.62	
Toluene*	<0.050	0.050	10/15/2014	ND	1.72	85.8	2.00	4.10	
Ethylbenzene*	<0.050	0.050	10/15/2014	ND	1.62	81.0	2.00	3.96	
Total Xylenes*	<0.150	0.150	10/15/2014	ND	4.78	79.7	6.00	4.71	
Total BTEX	<0.300	0.300	10/15/2014	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	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	1280	16.0	10/14/2014	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	10/14/2014	ND	169	84.6	200	3.28	
DRO >C10-C28	11.7	10.0	10/14/2014	ND	178	89.2	200	3.46	
Surrogate: 1-Chlorooctane	81.2	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	90.3	% 52.1-170	6						

### 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 whistoever 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 related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keens



### Analytical Results For:

LINN ENERGY BRIAN WALL RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 10/10/2014

Reported: 10/16/2014 Project Name: STATE B #5

Project Number: NOT GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/10/2014

Sampling Type: Soil

Sampling Condition: \*\* (See Notes)
Sample Received By: Celey D. Keene

### Sample ID: SP 2 @ 2' (H403127-02)

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	10/15/2014	ND	1.81	90.4	2.00	4.62	
Toluene*	<0.050	0.050	10/15/2014	ND	1.72	85.8	2.00	4.10	
Ethylbenzene*	<0.050	0.050	10/15/2014	ND	1.62	81.0	2.00	3.96	
Total Xylenes*	<0.150	0.150	10/15/2014	ND	4.78	79.7	6.00	4.71	
Total BTEX	<0.300	0.300	10/15/2014	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 %	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	32.0	16.0	10/14/2014	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/14/2014	ND	169	84.6	200	3.28	
DRO >C10-C28	<10.0	10.0	10/14/2014	ND	178	89.2	200	3.46	
Surrogate: 1-Chlorooctane	76.1 9	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	84.4 9	52.1-17	6						

### 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 whistoever 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.

Celeg D. Freene



### Analytical Results For:

LINN ENERGY BRIAN WALL RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 10/10/2014 Reported: 10/16/2014

Reported: 10/16/2014
Project Name: STATE B #5
Project Number: NOT GIVEN

Project Location: NOT GIVEN

Sampling Date: 10/10/2014

Sampling Type: Soil

Sampling Condition: \*\* (See Notes)
Sample Received By: Celey D. Keene

### Sample ID: SP 3 @ 2' (H403127-03)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/15/2014	ND	1.77	88.5	2.00	9.77	
Toluene*	<0.050	0.050	10/15/2014	ND	1.67	83.6	2.00	10.1	
Ethylbenzene*	<0.050	0.050	10/15/2014	ND	1.59	79.7	2.00	10.0	
Total Xylenes*	<0.150	0.150	10/15/2014	ND	4.76	79.4	6.00	10.1	
Total BTEX	<0.300	0.300	10/15/2014	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	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	96.0	16.0	10/14/2014	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/14/2014	ND	169	84.6	200	3.28	
DRO >C10-C28	<10.0	10.0	10/14/2014	ND	178	89.2	200	3.46	
Surrogate: 1-Chlorooctane	79.9	% 47.2-15%	7						
Surrogate: 1-Chlorooctadecane	88.2 9	% 52.1-170	6						

### 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 whistoever 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 related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Freene



### Analytical Results For:

LINN ENERGY **BRIAN WALL** RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 10/10/2014

Reported: 10/16/2014 Project Name: STATE B #5

Project Number: NOT GIVEN Project Location: NOT GIVEN Sampling Date: 10/10/2014

Sampling Type: Soil

Sampling Condition: \*\* (See Notes) Sample Received By: Celey D. Keene

### Sample ID: SP 4 @ 2' (H403127-04)

BTEX 8021B	mg/kg		Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/15/2014	ND	1.77	88.5	2.00	9.77	
Toluene*	< 0.050	0.050	10/15/2014	ND	1.67	83.6	2.00	10.1	
Ethylbenzene*	< 0.050	0.050	10/15/2014	ND	1.59	79.7	2.00	10.0	
Total Xylenes*	<0.150	0.150	10/15/2014	ND	4.76	79.4	6.00	10.1	
Total BTEX	<0.300	0.300	10/15/2014	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.8 9	% 61-154							
Chloride, SM4500CI-B	mg/	mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	10/14/2014	ND	400	100	400	0.00	
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	10/14/2014	ND	169	84.6	200	3.28	
DRO >C10-C28	<10.0	10.0	10/14/2014	ND	178	89.2	200	3.46	
Surrogate: 1-Chlorooctane	80.5 9	<sup>2</sup> / <sub>6</sub> 47.2-15?	7						
Surrogate: 1-Chlorooctadecane	87.9 9	% 52.1-170	5						

### 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.

Celeg D. Freene



### Analytical Results For:

LINN ENERGY BRIAN WALL RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 10/10/2014

Reported: 10/16/2014
Project Name: STATE B #5
Project Number: NOT GIVEN

Project Location: NOT GIVEN

Sampling Date: 10/10/2014

Sampling Type: Soil

Sampling Condition: \*\* (See Notes)
Sample Received By: Celey D. Keene

### Sample ID: SP 5 @ 1' (H403127-05)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/15/2014	ND	1.77	88.5	2.00	9.77	
Toluene*	<0.050	0.050	10/15/2014	ND	1.67	83.6	2.00	10.1	
Ethylbenzene*	<0.050	0.050	10/15/2014	ND	1.59	79.7	2.00	10.0	
Total Xylenes*	<0.150	0.150	10/15/2014	ND	4.76	79.4	6.00	10.1	
Total BTEX	<0.300	0.300	10/15/2014	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 9	% 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	10/14/2014	ND	400	100	400	0.00	
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	10/14/2014	ND	169	84.6	200	3.28	
DRO >C10-C28	<10.0	10.0	10/14/2014	ND	178	89.2	200	3.46	
Surrogate: 1-Chlorooctane	76.7	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	83.2	% 52.1-17	6						

### 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 whistoever 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



### Analytical Results For:

LINN ENERGY BRIAN WALL RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 10/10/2014

Reported: 10/16/2014
Project Name: STATE B #5
Project Number: NOT GIVEN

Project Location: NOT GIVEN

Sampling Date: 10/10/2014

Sampling Type: Soil

Sampling Condition: \*\* (See Notes)
Sample Received By: Celey D. Keene

### Sample ID: SP 6 @ 1' (H403127-06)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/15/2014	ND	1.77	88.5	2.00	9.77	
Toluene*	<0.050	0.050	10/15/2014	ND	1.67	83.6	2.00	10.1	
Ethylbenzene*	<0.050	0.050	10/15/2014	ND	1.59	79.7	2.00	10.0	
Total Xylenes*	<0.150	0.150	10/15/2014	ND	4.76	79.4	6.00	10.1	
Total BTEX	<0.300	0.300	10/15/2014	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 9	% 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	10/14/2014	ND	400	100	400	0.00	
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	10/14/2014	ND	169	84.6	200	3.28	
DRO >C10-C28	<10.0	10.0	10/14/2014	ND	178	89.2	200	3.46	
Surrogate: 1-Chlorooctane	80.2	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	87.9	% 52.1-17	6						

### 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 whistoever 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



### **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

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 whistoever 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 related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene

Sampler - UPS - Bus - Other:

Cardinal cannot accent workel channes Blease for written channes to 16761 202.2226

Sumples just taken.



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

(575) 393-2326 FAX (575	575) 393-2326 FAX (575) 393-2476	
ompany Name: LINN	ENERGY	BILL TO ANALYSIS REQUEST
	2 WALL	
		COMPANY: LINN ENERGY
Sity:	State: Zip: Attn: B	Attn: BRIAN WALL
hone #:	Fax #: Address:	
roject #:	Project Owner: City:	
roject Name:	State:	Zip:
Project Name:	S #5 Phone #	10
	CESAREO Fai	R
Sampler Name: CDW AICH	MATRIX	SAMPLING
FOR LAB USE ONLY	ERS ATER TER	
	Sample I.D.  G)RAB OR  CONTAINI GROUNDW. VASTEWAT  GOIL  DIL  BLUDGE  DTHER: ACID/BASE	-
10031211 Sp. 1 (	- #   G   V   / S   C   S	10-10-14
300000000000000000000000000000000000000	200	11
2000	7.	1 / / / / / / / / / / / / / / / / / / /
06 50.00	1 2	
PLEASE NOTE: Liability and Dannayes. Cardina	PLEASE NOTE: Ludality and Damagles. Cardinal's tabelity and client's exclusive retiredy for any claim arraing whether based in contract or tort, shall be a mileted to the PLEASE NOTE: Ludality and Damagles. Cardinal's tabelity and client's exclusive retired by Gamma dependent within an extension of contract of profile and received by Cardinal walking.	toe Amilied to the amount paid by the claud for the County of the Applicable of th
survice. In no event shall Cardiny De leads to mechanical or con entrates or successors arraing 4d of or located to the performan Refinquished By:	coloridal of consequential diamages, incoming windown insured, or whole such claims to based upon any of the above stated reasons or otherwise, the performance of services hereunder by Cordinal regardings of whole such claims to based upon any of the above stated reasons or otherwise.  Phone Result:  Fax Result:	Phone Result: Yes No Add'l Fhone #:  Fax Result: Yes No Add'l Fax #:
College College	Date: 45p Received By	E-mail Results To:
Relinquished By:		Ngladden@diversifiedfsi.com
Delivered By: (Circle One)	Sample Condition Cool Intact	(mitials) E cesareo a diversified fsi. com

# Appendix III

**GROUNDWATER STUDY** 

Diversified Field Service, Inc. 206 W. Snyder Hobbs, NM 88240 (575) 964-8394



# New Mexico Office of the State Engineer Water Column/Average Depth to Water

No records found.

**PLSS Search:** 

**Section(s):** 8, 9, 10, 15, 16, **Township:** 17S **Range:** 31E

17, 20, 21, 22

From: <u>Bratcher, Mike, EMNRD</u>
To: <u>Patterson, Heather, EMNRD</u>

 Subject:
 FW: FW: Linn - State B #005 - Work Plan

 Date:
 Monday, May 02, 2016 7:13:32 AM

**From:** Tucker, Shelly [mailto:stucker@blm.gov]

Sent: Friday, April 29, 2016 12:52 PM

**To:** Gonzales, EL

Cc: Bratcher, Mike, EMNRD; Michael Burton (mburton@diversifiedfsi.com); Laura Flores

Subject: Re: FW: Linn - State B #005 - Work Plan

BLM accepts/approves your work plan for the State B #005.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker

Environmental Protection Specialist Bureau of Land Management

620 E. Greene St Carlsbad, NM 88220

575.234.5905 - Direct 575.361.0084 - Cellular

stucker@blm.gov

The <u>BLM acceptance/approval does not</u> relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

<u>Confidentiality Warning:</u> This message along with any attachments are intended only for use of the individual or entity to which it is addressed and may contain information that is privileged or confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this

communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately.

On Wed, Apr 27, 2016 at 3:27 PM, Gonzales, EL < <u>ELgonzales@linnenergy.com</u>> wrote:

Here are work plans for your review and approval----- Thanks, E L

From: Laura Flores [mailto:lflores@diversifiedfsi.com]

**Sent:** Wednesday, April 27, 2016 2:46 PM

**To:** Gonzales, EL **Cc:** Michael Burton

**Subject:** Linn - State B #005 - Work Plan

Mr. Gonzales,

Attached is the work plan for the State B #005 for your review.

Please let me know if you have any changes or questions.

Thank you,

Laura Flores
Environmental Deparment
Diversified Field Service, Inc.
206 W Snyder | Hobbs, NM 88240
Phone: 575.964.8394 | Fax: 575.393.8396

This electronic message, together with any attachments, contains information from LINN Energy that may be confidential and intended solely for the use of the addressee only. If you are not the intended recipient, please note that any disclosure, dissemination, distribution or copying of this message, or any attachment, is strictly prohibited. Also, please notify the original sender by return e-mail and delete the message, along with any attachments, from your computer. Finally, the recipient should check this email and any attachments for the presence of viruses. The organization accepts no liability for any damage caused by any virus transmitted by this email.

----- Forwarded message -----

From: Laura Flores < <a href="mailto:lflores@diversifiedfsi.com">lflores@diversifiedfsi.com</a>
To: "Gonzales, EL" < <a href="mailto:lflores@diversifiedfsi.com">lflores@diversifiedfsi.com</a>
Co: Michael Burton < <a href="mailto:lflores@diversifiedfsi.com">lflores@diversifiedfsi.com</a>

Date: Wed, 27 Apr 2016 20:43:26 +0000 Subject: Linn - Skelly A Battery - Work Plan

Mr. Gonzales,

Attached is the work plan for the Skelly A Battery for your review.

Please let me know if you have any questions or changes.

Thank you,

Laura Flores Environmental Deparment
Diversified Field Service, Inc.
206 W Snyder | Hobbs, NM 88240
Phone: 575.964.8394 | Fax: 575.393.8396

From: Patterson, Heather, EMNRD

To: <u>ELgonzales@linnenergy.com</u>

Cc: <u>Bratcher, Mike, EMNRD; Tucker, Shelly; mburton@diversifiedfsi.com</u>

 Subject:
 RE: FW: Linn - State B #005 - Work Plan

 Date:
 Monday, May 02, 2016 10:09:00 AM

RE: Linn \* State B #5 \* 30-015-32874 \* 2RP-3663

The OCD concurs with BLM approval.

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notification, please contact me.

Heather Patterson Environmental Specialist NMOCD District II Office (575)748-1283 ext.101 Cell (575)703-0228

From: Bratcher, Mike, EMNRD

**Sent:** Monday, May 02, 2016 7:14 AM **To:** Patterson, Heather, EMNRD

**Subject:** FW: FW: Linn - State B #005 - Work Plan

**From:** Tucker, Shelly [mailto:stucker@blm.gov]

**Sent:** Friday, April 29, 2016 12:52 PM

**To:** Gonzales, EL

Cc: Bratcher, Mike, EMNRD; Michael Burton (mburton@diversifiedfsi.com); Laura Flores

Subject: Re: FW: Linn - State B #005 - Work Plan

BLM accepts/approves your work plan for the State B #005.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker

Environmental Protection Specialist Bureau of Land Management

620 E. Greene St Carlsbad, NM 88220 575.234.5905 - Direct 575.361.0084 - Cellular

stucker@blm.gov

The <u>BLM acceptance/approval does not</u> relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

<u>Confidentiality Warning:</u> This message along with any attachments are intended only for use of the individual or entity to which it is addressed and may contain information that is privileged or confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately.

On Wed, Apr 27, 2016 at 3:27 PM, Gonzales, EL < <u>ELgonzales@linnenergy.com</u>> wrote:

Here are work plans for your review and approval----- Thanks, E L

**From:** Laura Flores [mailto:<u>lflores@diversifiedfsi.com</u>]

**Sent:** Wednesday, April 27, 2016 2:46 PM

**To:** Gonzales, EL **Cc:** Michael Burton

**Subject:** Linn - State B #005 - Work Plan

Mr. Gonzales,

Attached is the work plan for the State B #005 for your review.

Please let me know if you have any changes or questions.

Thank you,

Laura Flores
Environmental Deparment
Diversified Field Service, Inc.
206 W Snyder | Hobbs, NM 88240

Phone: 575.964.8394 | Fax: 575.393.8396

This electronic message, together with any attachments, contains information from LINN Energy that may be confidential and intended solely for the use of the addressee only. If you are not the intended recipient, please note that any disclosure, dissemination, distribution or copying of this message, or any attachment, is strictly prohibited. Also, please notify the original sender by return e-mail and delete the message, along with any attachments, from your computer. Finally, the recipient should check this email and any attachments for the presence of viruses. The organization accepts no liability for any damage caused by any virus transmitted by this email.

----- Forwarded message -----

From: Laura Flores < <a href="mailto:life">lflores@diversifiedfsi.com</a>
To: "Gonzales, EL" < <a href="mailto:ELgonzales@linnenergy.com">ELgonzales@linnenergy.com</a>
Co: Michael Burton < <a href="mailto:mburton@diversifiedfsi.com">mburton@diversifiedfsi.com</a>

Date: Wed, 27 Apr 2016 20:43:26 +0000 Subject: Linn - Skelly A Battery - Work Plan

Mr. Gonzales,

Attached is the work plan for the Skelly A Battery for your review.

Please let me know if you have any questions or changes.

Thank you,

Laura Flores Environmental Deparment Diversified Field Service, Inc. 206 W Snyder | Hobbs, NM 88240

Phone: 575.964.8394 | Fax: 575.393.8396

From: Tucker, Shelly
To: Laura Flores

Cc: <u>Bratcher, Mike, EMNRD</u>; <u>Patterson, Heather, EMNRD</u>; <u>mburton@diversifiedfsi.com</u>

Subject: Re: FW: Linn - State B #005 - Work Plan

Date: Friday, November 25, 2016 2:00:43 PM

BLM requires a status update by COB on December 2, 2016 for this release or an INC will be issued.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker

Environmental Protection Specialist O&G Spill/Release Coordinator

Bureau of Land Management 620 E. Greene St Carlsbad. NM 88220

575.234.5905 - Direct 575.361.0084 - Cellular 575.234.6235 - Emergency Spill Number

stucker@blm.gov

The **BLM acceptance/approval does not** relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

**Confidentiality Warning:** This message along with any attachments are intended only for use of the individual or entity to which it is addressed and may contain information that is privileged or confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately.

On Mon, May 2, 2016 at 10:09 AM, Patterson, Heather, EMNRD < Heather. Patterson@state.nm.us> wrote:

RE: Linn \* State B #5 \* 30-015-32874 \* 2RP-3663

The OCD concurs with BLM approval.

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notification, please contact me.

**Heather Patterson** 

**Environmental Specialist** 

**NMOCD District II** 

Office (575)748-1283 ext.101

Cell (575)703-0228

From: Bratcher, Mike, EMNRD

**Sent:** Monday, May 02, 2016 7:14 AM

**To:** Patterson, Heather, EMNRD

Subject: FW: FW: Linn - State B #005 - Work Plan

From: Tucker, Shelly [mailto:stucker@blm.gov]

**Sent:** Friday, April 29, 2016 12:52 PM

**To:** Gonzales, EL

Cc: Bratcher, Mike, EMNRD; Michael Burton (<a href="mailto:mburton@diversifiedfsi.com">mburton@diversifiedfsi.com</a>); Laura Flores

Subject: Re: FW: Linn - State B #005 - Work Plan

BLM accepts/approves your work plan for the State B #005.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,	
Shelly J'Tucker	
Environmental Protection Specialist	
Bureau of Land Management	
620 E. Greene St	
Carlsbad, NM 88220	
575.234.5905 - Direct	
575.361.0084 - Cellular	
stucker@blm.gov	
The DIM accompany for a more and actions the control of the contro	
The BLM acceptance/approval does not relieve the operator of liability should their operations have	1V€

The <u>BLM acceptance/approval does not</u> relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

<u>Confidentiality Warning:</u> This message along with any attachments are intended only for use of the individual or entity to which it is addressed and may contain information that is privileged or confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering this message to the

intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately.

On Wed, Apr 27, 2016 at 3:27 PM, Gonzales, EL < <u>ELgonzales@linnenergy.com</u>> wrote:

Here are work plans for your review and approval----- Thanks, E L

From: Laura Flores [mailto:lflores@diversifiedfsi.com]

**Sent:** Wednesday, April 27, 2016 2:46 PM

**To:** Gonzales, EL **Cc:** Michael Burton

**Subject:** Linn - State B #005 - Work Plan

Mr. Gonzales,

Attached is the work plan for the State B #005 for your review.

Please let me know if you have any changes or questions.

Thank you,

Laura Flores

**Environmental Deparment** 

Diversified Field Service, Inc.

206 W Snyder | Hobbs, NM 88240

Phone: 575.964.8394 | Fax: 575.393.8396

This electronic message, together with any attachments, contains information from LINN Energy that may be confidential and intended solely for the use of the addressee only. If you are not the intended recipient, please note that any disclosure, dissemination, distribution or copying of this message, or any attachment, is strictly prohibited. Also,

please notify the original sender by return e-mail and delete the message, along with any attachments, from your computer. Finally, the recipient should check this email and any attachments for the presence of viruses. The organization accepts no liability for any damage caused by any virus transmitted by this email.

----- Forwarded message -----

From: Laura Flores < <a href="mailto:liferes@diversifiedfsi.com">lflores@diversifiedfsi.com</a> To: "Gonzales, EL" < <a href="mailto:ELgonzales@linnenergy.com">ELgonzales@linnenergy.com</a> Co: Michael Burton <a href="mailto:mburton@diversifiedfsi.com">mburton@diversifiedfsi.com</a>>

Date: Wed, 27 Apr 2016 20:43:26 +0000 Subject: Linn - Skelly A Battery - Work Plan

Mr. Gonzales,

Attached is the work plan for the Skelly A Battery for your review.

Please let me know if you have any questions or changes.

Thank you,

Laura Flores

**Environmental Deparment** 

Diversified Field Service, Inc.

206 W Snyder | Hobbs, NM 88240

Phone: 575.964.8394 | Fax: 575.393.8396

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505** 

CONDITIONS

Action 383750

### **CONDITIONS**

Operator:	OGRID:
LH Operating, LLC	329319
3730 Kirby Drive	Action Number:
Houston, TX 77098	383750
	Action Type:
	[IM-SD] Incident File Support Doc (ENV) (IM-BNF)

### CONDITIONS

Created By		Condition Date
amaxwell	Historical document upload.	9/16/2024