



Electronic Correspondence

October 21, 2014

Dr. Tomas Oberding
State of New Mexico
Oil Conservation Division
1625 N. French Drive
Hobbs, NM 88240
tomas.oberding@state.nm.us

Re: Corrective Action Plan Amendment
LINN Energy, 7 Rivers Queen Unit 60
Legal: Unit L, Section 35 T22S R36E, 2605 FSL & 1280 FWL, Lea County, NM
API #: 30-025-28122
Lat-Long: 32.3482077157592, -103.257434938142
Event No. (OCD): 1RP-3213

Dear Tomas:

Etech Environmental & Safety Solutions, Inc. (Etech) submits the following amended corrective action plan on the aforementioned site for your review and approval.

Current Project Status

1. The status of the remediation of the site to date is as follows:
2. The impacted area is approximately 110' long 90' wide 6' deep.
3. There are lines within the confines of the excavation that are suspended approx. 6' while the excavation is open.
4. All side walls of the excavation below the regulatory threshold levels of 1,000 mg/kg chlorides, 5000 mg/kg TPH.
5. The bottom of the excavation still has elevated levels of chlorides ranging from 1800 to 5040 mg/kg. A map showing the sample locations and analytical results along with a copy of the analysis is attached.
6. The presence of the lines has restricted further excavation due to safety concerns. Two (2) soils borings via hand auger were advanced within the bottom of the excavation to attempt to delineate the vertical extent of the impact. SP2 400 mg/kg at 12', SP3 272

mg/kg at 18' The results of the laboratory analysis of samples collected from the bottom of the soil borings are attached.

A photograph of the site is provided below:



Proposed Corrective Action

LINN is proposing an amendment to the corrective action to this site. The factors used to determine this corrective action include first the safety of all persons related to performing additional excavation within the site. In addition, based upon available data, groundwater in the area is believed to be in excess of 125 feet. The corrective actions evaluated for the site (based upon the above) are presented as follows:

1. Backfill with clean compacted fill material.
2. Apply a calcium amendment to the bottom of the excavation (gypsum) then backfill with clean compacted fill material to within 1.5 – 2 feet of surface then complete the backfill with compatible soil which is conducive to growing vegetation.

3. Installation of a 20 mil polyethylene liner in the bottom of the excavation, then backfill with clean compacted fill material to within 1.5 – 2 feet of surface then complete the backfill with compatible soil which is conducive to growing vegetation

After review of the above options, LINN believes, the best approach is Option 2, utilizing the application of a calcium amendment to the bottom of the excavation (gypsum) then backfill with clean compacted fill material to within 1.5 – 2 feet of surface then complete the backfill with compatible soil which is conducive to growing vegetation. Using gypsum will effectively ensure that any residual chlorides in the bottom of the excavation will not migrate further vertically and not cause any adverse impact to the reclamation of the site.

Thank you for your assistance on this matter. Also, attached is the initial C-141 for your reference. Should you have any questions, require additional information, or have any additional stipulations for this site, please contact Mr. Brian Wall at (575) 738-1739 (Office) or via email at bwall@linnenergy.com or myself at (432) 563-2200 (office) or via email at kit@etechenv.com.

Respectfully:



Kit Prichard
Environmental Professional



7 Rivers Queen Unit 60 Chloride Analytical Results October 14, 2014			
Results			
Sample Date	Sample I.D.	Depth (Feet)	Chlorides (mg/kg)
10/14/2014	SP1 Bottom	6	1800
10/14/2014	SP1 West Wall	3	48
10/14/2014	SP1 South Wall	3	32
10/14/2014	SP1 North Wall	3	<16.0
10/14/2014	SP2 Bottom	6	3760
10/14/2014	SP2 South Wall	3	<16.0
10/14/2014	SP2 North Wall	3	16
10/14/2014	SP3 Bottom	6	5040
10/14/2014	SP3 East Wall	3	96
10/14/2014	SP3 South Wall	3	144
10/14/2014	SP3 North Wall	3	<16.0

7 Rivers Queen Unit 60 Analytical Results October 3, 2012								
Sample Information			TPH Results (mg/kg)		BTEX Results (mg/L)			
Date	Sample I.D.	Depth (ft)	GRO	DRO	Benzene	Toluene	Ethylbenzene	Total Xylenes
10/14/14	SP1 Bottom	6	<50.0	2350.0	<0.2	<0.2	<0.2	<0.6
10/14/14	SP1 West Wall	3	<10.0	701.0	<0.05	<0.05	<0.05	<0.150
10/14/14	SP1 South Wall	3	<10.0	<10.0	<0.05	<0.05	<0.05	<0.15
10/14/14	SP1 North Wall	3	<10.0	<10.0	<0.05	<0.05	<0.05	<0.15
10/14/14	SP2 Bottom	6	<10.0	764.0	<0.05	<0.05	<0.05	<0.15
10/14/14	SP2 South Wall	3	<10.0	<10.0	<0.05	<0.05	<0.05	<0.15
10/14/14	SP2 North Wall	3	<10.0	<10.0	<0.05	<0.05	<0.05	<0.15
10/14/14	SP3 Bottom	6	<10.0	<10.0	<0.05	<0.05	<0.05	<0.15
10/14/14	SP3 East Wall	3	<10.0	<10.0	<0.05	<0.05	<0.05	<0.15
10/14/14	SP3 South Wall	3	<10.0	<10.0	<0.05	<0.05	<0.05	<0.15
10/14/14	SP3 North Wall	3	<10.0	<10.0	<0.05	<0.05	<0.05	<0.15

Scale 1:450

0 14 28 42 56 70 ft

1" = 37.5 ft Data Zoom 17-7

LINN Energy
Seven Rivers Queen 60
Sample Points Map

MN (7.1° E)

Data use subject to license.

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www.delorme.com

October 15, 2014

KIT PRICHARD

ETECH Environmental & Safety Solutions, Inc.

P. O. BOX 8469

MIDLAND, TX 79708

RE: SRQU #60

Enclosed are the results of analyses for samples received by the laboratory on 10/14/14 16:55.

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:

ETECH Environmental & Safety Solutions, Inc.
KIT PRICHARD
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received: 10/14/2014
Reported: 10/15/2014
Project Name: SRQU #60
Project Number: 253-5377-000
Project Location: LEA COUNTY, NM

Sampling Date: 10/14/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: SP 1 BOTTOM 6' (H403154-01)

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	10/15/2014	ND	1.81	90.4	2.00	4.62	
Toluene*	<0.200	0.200	10/15/2014	ND	1.72	85.8	2.00	4.10	
Ethylbenzene*	<0.200	0.200	10/15/2014	ND	1.62	81.0	2.00	3.96	
Total Xylenes*	<0.600	0.600	10/15/2014	ND	4.78	79.7	6.00	4.71	
Total BTEX	<1.20	1.20	10/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	1800	16.0	10/15/2014	ND	416	104	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	<50.0	50.0	10/15/2014	ND	170	85.1	200	2.28	
DRO >C10-C28	2350	50.0	10/15/2014	ND	172	86.1	200	2.02	

Surrogate: 1-Chlorooctane 97.1 % 47.2-157

Surrogate: 1-Chlorooctadecane 132 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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 KIT PRICHARD
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 Fax To: (432) 563-2213

 Received: 10/14/2014
 Reported: 10/15/2014
 Project Name: SRQU #60
 Project Number: 253-5377-000
 Project Location: LEA COUNTY, NM

 Sampling Date: 10/14/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kathy Perez

Sample ID: SP 1 W. WALL 3' (H403154-02)

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	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 BTX	<0.300	0.300	10/15/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 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	48.0	16.0	10/15/2014	ND	416	104	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	10/15/2014	ND	170	85.1	200	2.28	
DRO >C10-C28	701	10.0	10/15/2014	ND	172	86.1	200	2.02	

Surrogate: 1-Chlorooctane 90.5 % 47.2-157

Surrogate: 1-Chlorooctadecane 110 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETECH Environmental & Safety Solutions, Inc.
KIT PRICHARD
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received: 10/14/2014
Reported: 10/15/2014
Project Name: SRQU #60
Project Number: 253-5377-000
Project Location: LEA COUNTY, NM

Sampling Date: 10/14/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: SP 1 S. WALL 3' (H403154-03)

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	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 % 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	10/15/2014	ND	416	104	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	10/15/2014	ND	170	85.1	200	2.28	
DRO >C10-C28	<10.0	10.0	10/15/2014	ND	172	86.1	200	2.02	

Surrogate: 1-Chlorooctane 86.7 % 47.2-157

Surrogate: 1-Chlorooctadecane 100 % 52.1-176

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KIT PRICHARD
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received: 10/14/2014
Reported: 10/15/2014
Project Name: SRQU #60
Project Number: 253-5377-000
Project Location: LEA COUNTY, NM

Sampling Date: 10/14/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: SP 1 N. WALL 3' (H403154-04)

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	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 BTX	<0.300	0.300	10/15/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	10/15/2014	ND	416	104	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	10/15/2014	ND	170	85.1	200	2.28	
DRO >C10-C28	<10.0	10.0	10/15/2014	ND	172	86.1	200	2.02	

Surrogate: 1-Chlorooctane 84.0 % 47.2-157

Surrogate: 1-Chlorooctadecane 95.1 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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KIT PRICHARD
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received: 10/14/2014
Reported: 10/15/2014
Project Name: SRQU #60
Project Number: 253-5377-000
Project Location: LEA COUNTY, NM

Sampling Date: 10/14/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: SP 2 BOTTOM 6' (H403154-05)

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	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 BTX	<0.300	0.300	10/15/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	3760	16.0	10/15/2014	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	10/15/2014	ND	170	85.1	200	2.28	
DRO >C10-C28	764	10.0	10/15/2014	ND	172	86.1	200	2.02	

Surrogate: 1-Chlorooctane 92.9 % 47.2-157

Surrogate: 1-Chlorooctadecane 114 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

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KIT PRICHARD
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received: 10/14/2014
Reported: 10/15/2014
Project Name: SRQU #60
Project Number: 253-5377-000
Project Location: LEA COUNTY, NM

Sampling Date: 10/14/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: SP 2 S. WALL 3' (H403154-06)

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) 99.1 % 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	10/15/2014	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	10/15/2014	ND	170	85.1	200	2.28	
DRO >C10-C28	<10.0	10.0	10/15/2014	ND	172	86.1	200	2.02	

Surrogate: 1-Chlorooctane 80.3 % 47.2-157

Surrogate: 1-Chlorooctadecane 88.4 % 52.1-176

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETECH Environmental & Safety Solutions, Inc.
KIT PRICHARD
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received: 10/14/2014
Reported: 10/15/2014
Project Name: SRQU #60
Project Number: 253-5377-000
Project Location: LEA COUNTY, NM

Sampling Date: 10/14/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: SP2 N. WALL 3' (H403154-07)

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	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 BTX	<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	16.0	16.0	10/15/2014	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	10/15/2014	ND	170	85.1	200	2.28	
DRO >C10-C28	<10.0	10.0	10/15/2014	ND	172	86.1	200	2.02	

Surrogate: 1-Chlorooctane 90.4 % 47.2-157

Surrogate: 1-Chlorooctadecane 102 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETECH Environmental & Safety Solutions, Inc.
KIT PRICHARD
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received: 10/14/2014
Reported: 10/15/2014
Project Name: SRQU #60
Project Number: 253-5377-000
Project Location: LEA COUNTY, NM

Sampling Date: 10/14/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: SP 3 BOTTOM 6' (H403154-08)

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	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 BTX	<0.300	0.300	10/15/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	5040	16.0	10/15/2014	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	10/15/2014	ND	170	85.1	200	2.28	
DRO >C10-C28	<10.0	10.0	10/15/2014	ND	172	86.1	200	2.02	

Surrogate: 1-Chlorooctane 87.6 % 47.2-157

Surrogate: 1-Chlorooctadecane 99.3 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETECH Environmental & Safety Solutions, Inc.
KIT PRICHARD
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received: 10/14/2014
Reported: 10/15/2014
Project Name: SRQU #60
Project Number: 253-5377-000
Project Location: LEA COUNTY, NM

Sampling Date: 10/14/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: SP3 E. WALL 3' (H403154-09)

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	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 BTX	<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	96.0	16.0	10/15/2014	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	10/15/2014	ND	170	85.1	200	2.28	
DRO >C10-C28	<10.0	10.0	10/15/2014	ND	172	86.1	200	2.02	

Surrogate: 1-Chlorooctane 89.5 % 47.2-157

Surrogate: 1-Chlorooctadecane 98.8 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETECH Environmental & Safety Solutions, Inc.
 KIT PRICHARD
 P. O. BOX 8469
 MIDLAND TX, 79708
 Fax To: (432) 563-2213

Received: 10/14/2014
 Reported: 10/15/2014
 Project Name: SRQU #60
 Project Number: 253-5377-000
 Project Location: LEA COUNTY, NM

Sampling Date: 10/14/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kathy Perez

Sample ID: SP3 S. WALL 3' (H403154-10)

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	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 BTX	<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	144	16.0	10/15/2014	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	10/15/2014	ND	170	85.1	200	2.28	
DRO >C10-C28	<10.0	10.0	10/15/2014	ND	172	86.1	200	2.02	

Surrogate: 1-Chlorooctane 92.4 % 47.2-157

Surrogate: 1-Chlorooctadecane 100 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETECH Environmental & Safety Solutions, Inc.
KIT PRICHARD
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received: 10/14/2014
Reported: 10/15/2014
Project Name: SRQU #60
Project Number: 253-5377-000
Project Location: LEA COUNTY, NM

Sampling Date: 10/14/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: SP 3 N. WALL 3' (H403154-11)

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) 101 % 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	10/15/2014	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	10/15/2014	ND	170	85.1	200	2.28	
DRO >C10-C28	<10.0	10.0	10/15/2014	ND	172	86.1	200	2.02	

Surrogate: 1-Chlorooctane 94.8 % 47.2-157

Surrogate: 1-Chlorooctadecane 104 % 52.1-176

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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



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

BILL TO							ANALYSIS REQUEST											
Company Name:	E-Tech Env						P.O. #:	283-5377-000										
Project Manager:	K.T. Prichard.						Company:	Lin Energy										
Address:							Attn:											
City:							Address:											
Phone #:							City:											
Fax #:							State:	Zip:										
Project #:	253-5377-000						Project Owner:											
Project Name:	SRQV H&O						Phone #:											
Project Location:	Enrica, NM						Fax #:											
Sampler Name:	Terry Osborn.																	
FOR LAB USE ONLY																		
Lab I.D.	Sample I.D.						(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING			
H410361											GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :		ACID/BASE: ICE / COOL OTHER :		DATE TIME			
SP1 Bottom 6'											<input checked="" type="checkbox"/>				Y Y			
SP1 W.wall 3'											<input checked="" type="checkbox"/>				Y Y			
SP1 S.wall 3'											<input checked="" type="checkbox"/>				Y Y			
SP1 N.wall 3'											<input checked="" type="checkbox"/>				Y Y			
SP2 Bottom 6'											<input checked="" type="checkbox"/>				Y Y			
SP2 S.wall 3'											<input checked="" type="checkbox"/>				Y Y			
SP2 N.wall 3'											<input checked="" type="checkbox"/>				Y Y			
SP3 Bottom 6'											<input checked="" type="checkbox"/>				Y Y			
SP3 E.wall 3'											<input checked="" type="checkbox"/>				Y Y			
SP3 S.wall 3'											<input checked="" type="checkbox"/>				Y Y			
<small>RELEASE NOTE: Liability and Damages. Cardinal's liability and clients exclusive remedy for any claim arising whether based in contract or tort shall be limited to the amount paid by the client for the service. 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 time, or loss of profits incurred by client. As subcontractor, 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 remedies or otherwise.</small>																		
Relinquished By:	[Signature]						Date:	10-14-14		Received By:	[Signature]							
Relinquished By:	[Signature]						Date:	10-14-14		Received By:	[Signature]							
Time:							Time:			Time:								
Delivered By: (Circle One)	UPS						Sample Condition	Cool Intact Yes No		CHECKED BY:	(Initials)							
Sampler - UPS - Bus - Other:	Bus						Sample Condition	Cool Intact Yes No		CHECKED BY:	(Initials)							
REMARKS:																		
RUSH!																		



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>E-tech Env</u>		BILL TO		ANALYSIS REQUEST											
Project Manager: <u>Kir Pricehard</u>		P.O. #: <u>253-5377-000</u>													
Address:		Company: <u>Linn Energy</u>													
City:		Attn:													
State:		Address:													
Zip:		City:													
Phone #:		State:													
Fax #:		Zip:													
Project #: <u>253-5377-000</u>		Project Owner:													
Project Name: <u>SRQA #60</u>		Phone #:													
Project Location: <u>Eunice NM</u>		Fax #:													
Sampler Name: <u>Terry Osborn</u>															
FOR LAB USE ONLY															
Lab I.D. <u>403154</u>		Sample I.D.													
SP3 N. Wall 3'		(G)RAB OR (C)OMP.													
		# CONTAINERS													
		GROUNDWATER													
		WASTEWATER													
		SOIL													
		OIL													
		SLUDGE													
		OTHER :													
		ACID/BASE:													
		ICE / COOL													
		OTHER :													
		DATE													
		TIME													
		CL													
		TPH													
		BTEX													
PLEASE NOTE: Liability and Damages: Cardinal's liability and clients exclusive remedy for any claim arising whether caused in contract or tort, 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: <u>[Signature]</u>		Date: <u>10-14-04</u>		Time: <u>4:55</u>		Received By: <u>[Signature]</u>		Date: <u>10-14-04</u>		Time: <u>5:17</u>					
Delivered By: (Circle One)		Sample Condition		Cool		Intact		CHECKED BY: <u>[Signature]</u>							
Sampler - UPS - Bus - Other:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
REMARKS: <u>Rush!</u>															



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

September 09, 2014

KIT PRICHARD

ETECH Environmental & Safety Solutions, Inc.

P. O. BOX 8469

MIDLAND, TX 79708

RE: SRQU #60

Enclosed are the results of analyses for samples received by the laboratory on 09/08/14 16:30.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

ETECH Environmental & Safety Solutions, Inc.
KIT PRICHARD
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received: 09/08/2014
Reported: 09/09/2014
Project Name: SRQU #60
Project Number: 253-5377-000
Project Location: LEA COUNTY, NM

Sampling Date: 09/08/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 4' (H402785-01)

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	09/09/2014	ND	1.89	94.7	2.00	8.34	
Toluene*	<0.050	0.050	09/09/2014	ND	1.70	85.0	2.00	8.25	
Ethylbenzene*	<0.050	0.050	09/09/2014	ND	1.57	78.4	2.00	8.62	
Total Xylenes*	<0.150	0.150	09/09/2014	ND	4.86	81.0	6.00	7.43	
Total BTEX	<0.300	0.300	09/09/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/09/2014	ND	416	104	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	09/09/2014	ND	168	84.0	200	4.11	
DRO >C10-C28	35.1	10.0	09/09/2014	ND	186	92.9	200	2.47	

Surrogate: 1-Chlorooctane 86.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.0 % 63.6-154

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Analytical Results For:

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KIT PRICHARD
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received: 09/08/2014
Reported: 09/09/2014
Project Name: SRQU #60
Project Number: 253-5377-000
Project Location: LEA COUNTY, NM

Sampling Date: 09/08/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 12' (H402785-02)

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	09/09/2014	ND	1.89	94.7	2.00	8.34	
Toluene*	<0.050	0.050	09/09/2014	ND	1.70	85.0	2.00	8.25	
Ethylbenzene*	<0.050	0.050	09/09/2014	ND	1.57	78.4	2.00	8.62	
Total Xylenes*	<0.150	0.150	09/09/2014	ND	4.86	81.0	6.00	7.43	
Total BTX	<0.300	0.300	09/09/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	09/09/2014	ND	416	104	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	<50.0	50.0	09/09/2014	ND	168	84.0	200	4.11	
DRO >C10-C28	258	50.0	09/09/2014	ND	186	92.9	200	2.47	

Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 111 % 63.6-154

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

ETECH Environmental & Safety Solutions, Inc.
KIT PRICHARD
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received: 09/08/2014
Reported: 09/09/2014
Project Name: SRQU #60
Project Number: 253-5377-000
Project Location: LEA COUNTY, NM

Sampling Date: 09/08/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 3 18' (H402785-03)

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	09/09/2014	ND	1.89	94.7	2.00	8.34	
Toluene*	<0.050	0.050	09/09/2014	ND	1.70	85.0	2.00	8.25	
Ethylbenzene*	<0.050	0.050	09/09/2014	ND	1.57	78.4	2.00	8.62	
Total Xylenes*	<0.150	0.150	09/09/2014	ND	4.86	81.0	6.00	7.43	
Total BTX	<0.300	0.300	09/09/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	09/09/2014	ND	416	104	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	09/09/2014	ND	168	84.0	200	4.11	
DRO >C10-C28	10.0	10.0	09/09/2014	ND	186	92.9	200	2.47	

Surrogate: 1-Chlorooctane 93.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 101 % 63.6-154

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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

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 October 10, 2003

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	Contact: Brian Wall	
Address: 2130 W. Bender Hobbs, NM 88240	Telephone No.: 575-738-1739	
Facility Name: Seven Rivers Queen Unit # 60	Facility Type: Oil Producer	
Surface Owner: Private	Mineral Owner:	API No.: 30-025-28122

LOCATION OF RELEASE

Unit Letter L	Section 34	Township 22S	Range 36E	Feet from the 2605	North/South Line South	Feet from the 1280	East/West Line West	County Lea
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Latitude: 32.3482077157592 Longitude: -103.257434938142

NATURE OF RELEASE

Type of Release: Produced Water / Oil	Volume of Release: 15 bbls /1 bbl	Volume Recovered: 0 / 0
Source of Release: 2 7/8 Steel pipeline	Date and Hour of Occurrence: 08/04/2014	Date and Hour of Discovery: 08/04/2014 2:45pm
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 / Tomas Oberding- NM OCD	
By Whom? Brian Wall	Date and Hour 08/06/2014 0700	
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.*: Old 2 7/8 steel flow line has a pinn hole could not see leak from well. Leak is in sanddunes. Airplane passing by spotted leak.

Describe Area Affected and Cleanup Action Taken.* :

Directions to site: Go south on 207 for one mile turn left onto delaware basin road go six miles then turn left onto pipeline rightway for 3 and a half miles then turn right the go a 1/4 of a mile to well 60 then go north 600 ft.

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: 	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Brian Wall	Approved by District Supervisor:		
Title: Construction Foreman II	Approval Date:	Expiration Date:	
E-mail Address: bwall@linenergy.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 08/06/2014	Phone: 806-367-0645		

* Attach Additional Sheets If Necessary