

# Remediation Summary Report Form

## General Information

This section provides general information about the operator and the site where the spill occurred.

Date: October 15, 2012

Client: LINN Energy

Site Name: Turner B 111

County: Eddy

State: NM

Site Coordinates Latitude: 32° 48' 8.322"  
Longitude: 103° 54' 35.936"

Property Owner: BLM

State Report No.: 2RP-932

## Release Description and Assessment

The information below is related to the spill (Date, Type, Cause and Quantity) and the area impacted.

Date of Spill: 9/28/2011

Type of Spill:  Oil  Produced Water  Condensate  Other (Specify):

Cause of Spill:  Equipment Failure  Valve Failure  Line Rupture  Leaking Tank  Tank Overfill  
 Other (List):

### Other Contributing Factors or Comments:

Quantity Spilled: 25 bbls. Quantity Recovered: 0 bbls. Total Released: 25 bbls.

Method of Recovery:  Vacuum Truck  Other (Specify):

OCD Notified:  Yes  No C-141 Completed and Submitted:  Yes  No

Spill Area Impacted:  Inside Firewall  On Production Pad  In Pasture  In Cultivated Land  
 Other (List): Caliche Road

Total Square Footage Impacted: 14,000 Estimated Depth: 1-5' Volume (Cu. Yds): 520

Other Comments:

## Remediation Activity Summary

The following summarizes the activities used to remediate the spill.

Impacted soils above regulatory threshold levels were manually and mechanically excavated from the spill area. During the course of the excavation soil samples were screened on site to determine the progress of the remediation.

Impacted soils were transported off-site for disposal at Lea Land Landfill. Once the impacted soils were removed to acceptable levels, the pasture areas and road areas were backfilled with like materials and smoothed to grade. The pasture area was seeded with a BLM mix #2 and #4. Water bars were installed to prevent wind and water erosion.

**Analytical Summary**

Results of analyses following remediation activities are as follows:

Summary of Remediation Sampling Analytical Results Total Petroleum Hydrocarbons - [TPH (mg/kg)] & Chlorides [Chl (mg/kg)]						
Sample #	Depth (ft)	Date	TPH C6-C10	TPH C10-C28	Total TPH	Chl
SP1	1	12/30/11				32
SP2	1	12/30/11				672
SP3	1	12/30/11				<16.0
SP4	1	12/30/11				48
SP5	1	12/30/11				32
SP6	1	12/30/11				16

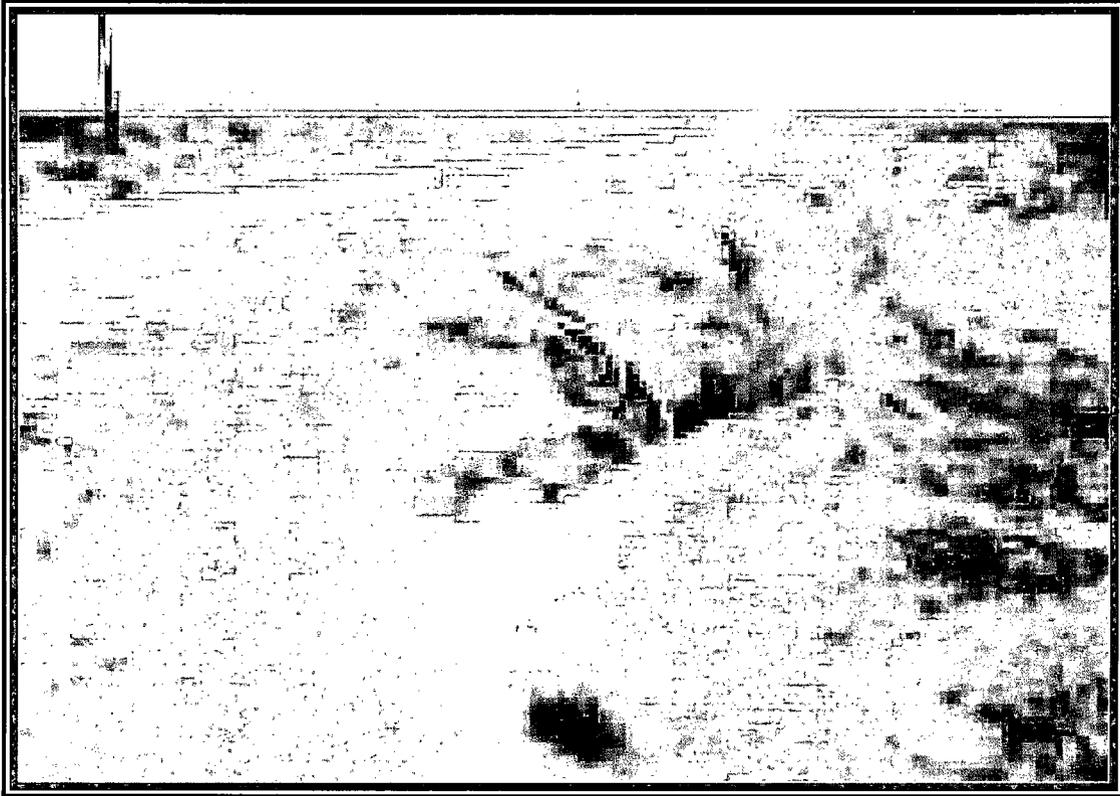
\* ND = Non-Detect; concentration below            mg/kg.

A review of the analytical data indicated the sample is within the Oil Conservation Division (OCD) regulatory threshold limits. Based upon this information it has been determined that remediation of the site is complete. Copies of analytical reports, seed tickets, photographs, BLM closure and final C-141 are attached.

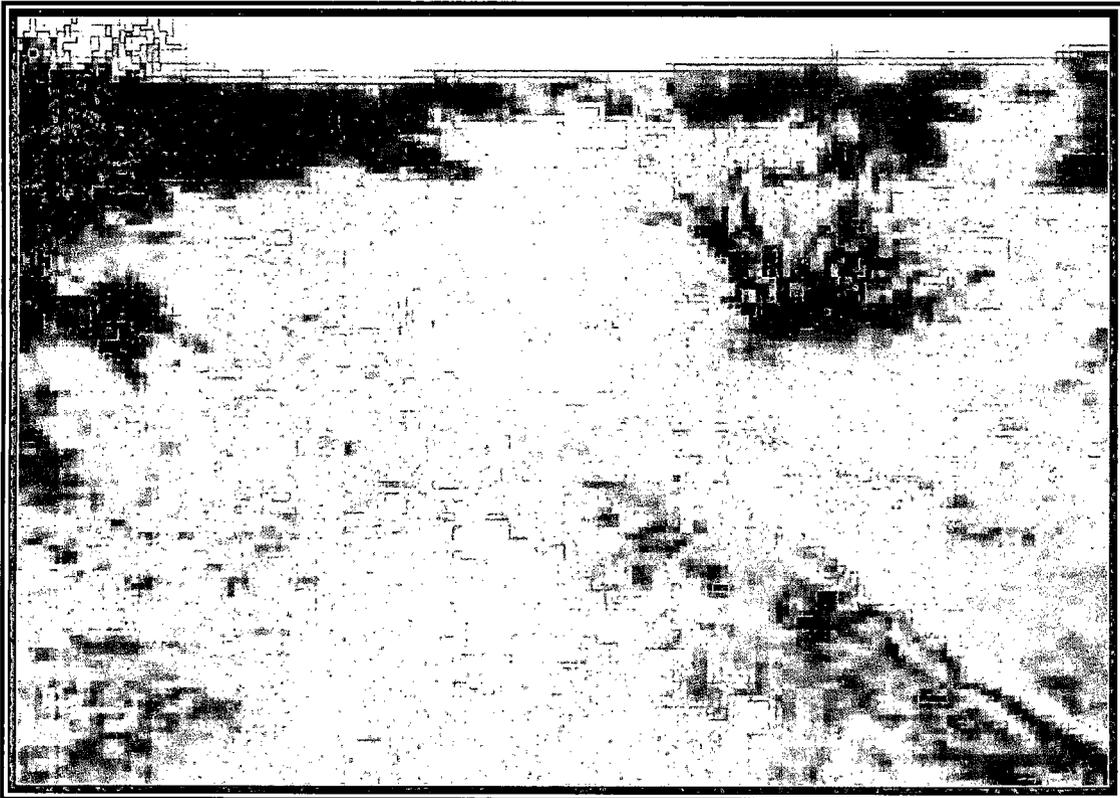
Prepared by:



*Kit Prichard*  
Etech Environmental & Safety Solutions, Inc.



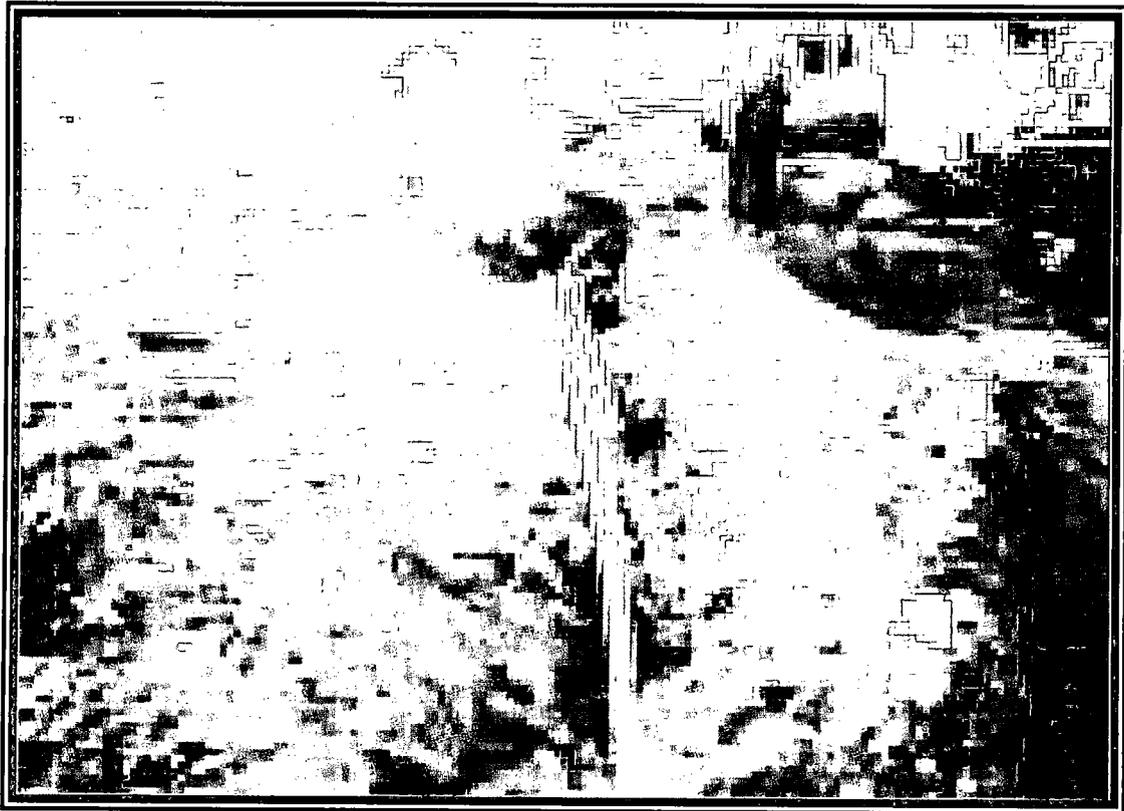
View of spill site next to the road before excavation.



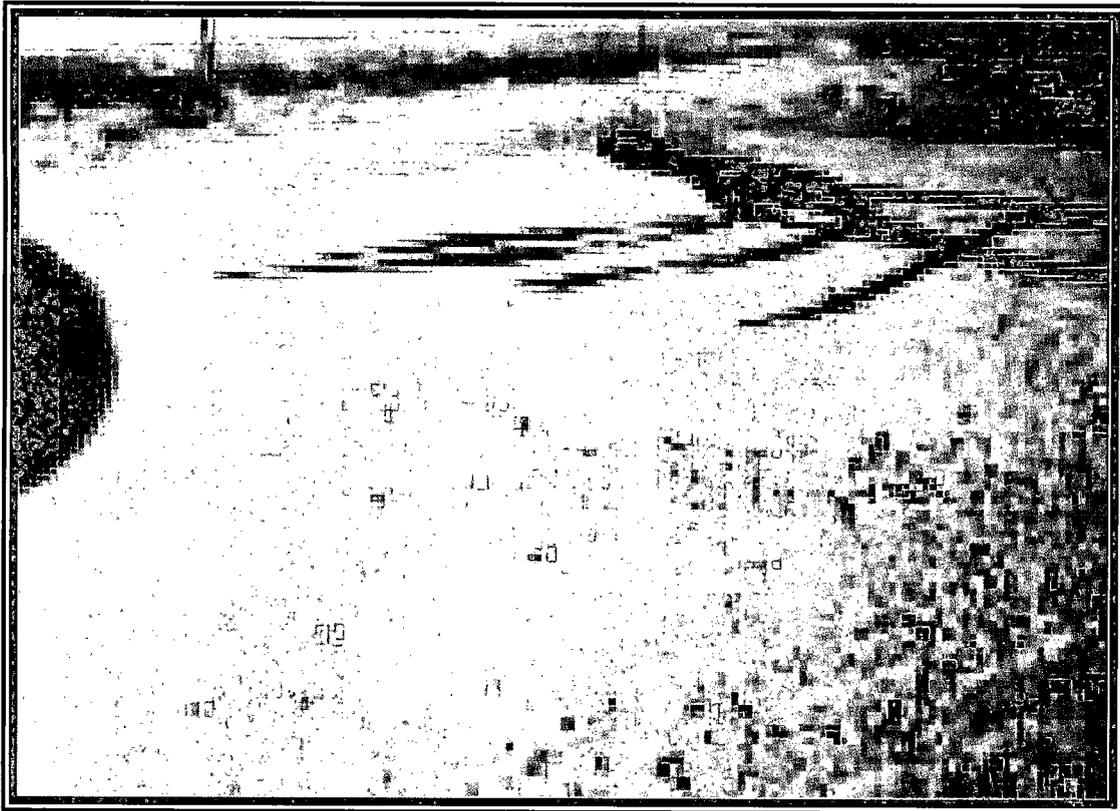
View of the spill site pasture area before the excavation.



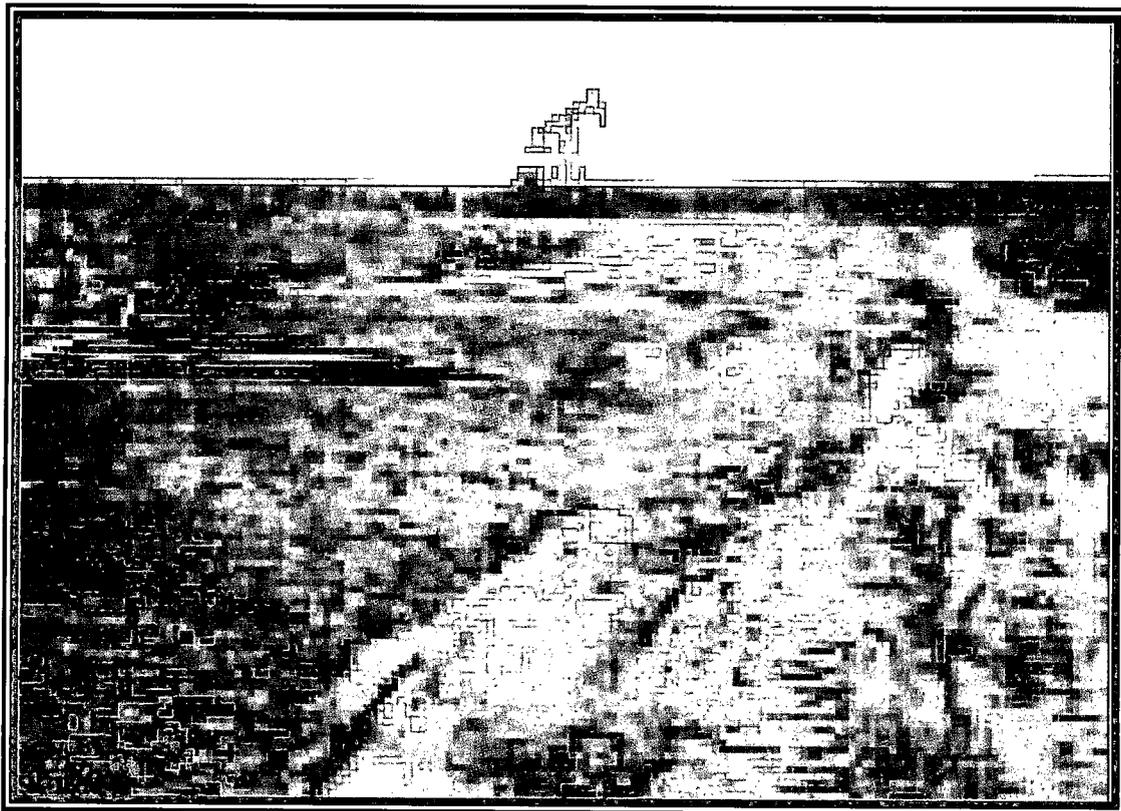
View of the spill site during excavation.



View of the spill site during the excavation.



View of the excavation after backfill during the seeding process.



View of the excavation after backfill during the seeding process.



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

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January 03, 2012

FRED HOLMES

ETECH Environmental & Safety Solutions, Inc.

P. O. BOX 8469

MIDLAND, TX 79708

RE: TURNER B 111

Enclosed are the results of analyses for samples received by the laboratory on 12/30/11 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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,

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

Received:	12/30/2011	Sampling Date:	12/30/2011
Reported:	01/03/2012	Sampling Type:	Soil
Project Name:	TURNER B 111	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LOCO HILLS, NM		

**Sample ID: SP 1 1' (H102800-01)**

Chloride, SM4500Cl-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	01/03/2012	ND	416	104	400	0.00		

**Sample ID: SP 2 1' (H102800-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	672	16.0	01/03/2012	ND	416	104	400	0.00		

**Sample ID: SP 3 1' (H102800-03)**

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	01/03/2012	ND	416	104	400	0.00		

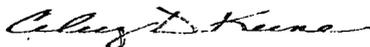
**Sample ID: SP 4 1' (H102800-04)**

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	01/03/2012	ND	416	104	400	0.00		

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/30/2011	Sampling Date:	12/30/2011
Reported:	01/03/2012	Sampling Type:	Soil
Project Name:	TURNER B 111	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LOCO HILLS, NM		

**Sample ID: SP 5 1' (H102800-05)**

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	01/03/2012	ND	416	104	400	0.00		

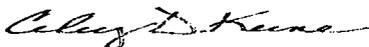
**Sample ID: SP 6 1' (H102800-06)**

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	01/03/2012	ND	416	104	400	0.00		

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\*=Accredited Analyte

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Celest D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

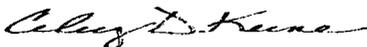
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported 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



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

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

Company Name: <u>Etech</u>				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																						
Project Manager: <u>Fred Holmes</u>				P.O. #:																										
Address:				Company:																										
City:		State:		Zip:		Attn:																								
Phone #:		Fax #:		Address:																										
Project #:		Project Owner:		City:																										
Project Name: <u>Turner B III</u>				State:																Zip:										
Project Location: <u>Loco hills</u>				Phone #:																										
Sampler Name:				Fax #:																										
FOR LAB USE ONLY																														
Lab I.D.		Sample I.D.		# GRAB OR (C)OMP.	# CONTAINERS	MATRIX				PRESERV.		SAMPLING		Chloride																
						GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL													OTHER:	DATE		TIME	
<u>H102800</u>																											<u>12-30</u>		<u>2 30</u>	
<u>1</u>		<u>SP1 1</u>																												
<u>2</u>		<u>SP2 1</u>																												
<u>3</u>		<u>SP3 1</u>																												
<u>4</u>		<u>SP4 1</u>																												
<u>5</u>		<u>SP5 1</u>																												
<u>6</u>		<u>SP6 1</u>																												

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Relinquished By: <u>Steph McShane</u>		Date: <u>12/30/11</u>		Received By: <u>Jodi Benson</u>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:	
Relinquished By:		Date:		Received By:		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:	
Time: <u>4:00</u>		Time:		Time:		REMARKS:			
Delivered By: (Circle One)		Sample Condition		CHECKED BY:					
Sampler - UPS - Bus - Other:		Cool <input type="checkbox"/> Intact <input checked="" type="checkbox"/>		(Initials)					
		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		<u>[Signature]</u>					

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

Etech Env.

Project Turner B 111

Project No. 253-3005-000

Date Started 6-9-12

Date Finished 6-9-12

**Bamert Seed Company**

1897 CR 1018  
806-272-5506

Muleshoe, TX 79347  
Texas Permit# 00905

Description	BLM #2 MIX		16 BAGS		43152	
	Pure Seed	Germ	Dormant	Origin		
VNS PLAINS BRISTLEGRASS ( <i>Setaria vulpicata</i> )	49.36%	4.00%	84.00%	TX		
BEND SAND LOYDGRASS ( <i>Eragrostis trichodes</i> )	24.97%	89.00%	0.00%	TX		
SAND DROPSSEED VNS ( <i>Sporobolus cryptandrus</i> )	24.63%	5.00%	88.00%			
Purity: 98.96%	Inert Matter: 0.63%	Other Crop Seed: 0.37%	Weed Seed: 0.02%			

Noxious Weeds: None

Test Date: 02-2012

Net Wt: 25#

**BLM #4**

% Pure Seed	Kind:	% Germ
74.40%	4 Wing Saltbush	67%
7.63%	Alkali Sacaton	89%

Test Date: 3/12  
Purity: 82.04%  
Inert: 17.92%  
Other Crop: 0.01%  
Weed: 0.03%  
Noxious: None

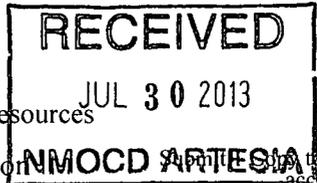
**RICHARDSON SEEDS, LTD.**  
**VEGA, TX 79072**

Supervisor

Stephen W. Johnson

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



Form C-141  
Revised August 8, 2011

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505  
Submit 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 Energy	Contact: Joe Hernandez
Address: 2130 W Bender Blvd. - Hobbs, NM	Telephone No.: 575-942-8675
Facility Name: Turner B South Well 111 Flowline	Facility Type: Producing Oil Well

Surface Owner: BLM	Mineral Owner: BLM	Lease No.: LC-029395-B
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**LOCATION OF RELEASE**

Unit Letter	Section 30	Township 17S	Range 31E	Feet from the 330	North/South Line S	Feet from the 1825	East/West Line E	County Eddy
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Latitude: 32 48' 8.322" Longitude: 103 54' 35.936"

**NATURE OF RELEASE**

Type of Release: Oil & Produced Water	Volume of Release: 25bbbls	Volume Recovered: 0
Source of Release: Flowline	Date and Hour of Occurrence: 09/28/2011 - 0700	Date and Hour of Discovery: 09/28/2011 - 0800
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? T. Gregston, BLM, M. Bratcher, OCD	
By Whom? Fred Holmes	Date and Hour: 09/29/2011 - 0730	
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.\*: Coupling thread integrity failed, back pressure caused line to break. Well was shut in, and repairs were made to the line.

Describe Area Affected and Cleanup Action Taken.\* : Area is "tear-drop shaped" which includes road and portions of the pasture. Pasture area impact is approx. 560' long, the wider portion of the spill area is approx. 50' in diameter and as it goes northward, it is reduced to 10-15' wide. Impacted soils above regulatory threshold levels were manually and mechanically excavated from the spill area. During the course of the excavation soil samples were screened on site to determine the progress of the remediation. Impacted soils were transported off-site for disposal at Lea Land Landfill. Once the impacted soils were removed to acceptable levels, the pasture areas and road areas were backfilled with like materials and smoothed to grade. The pasture area was seeded with a BLM mix #2 and #4. Water bars were installed to prevent wind and water erosion.

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

Signature:	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Jose Hernandez	Approved by District Supervisor:	
Title: Foreman	Approval Date:	Expiration Date:
E-mail Address: jhernandez@linneenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 10/15/2012 Phone: 575-738-1739		

\* Attach Additional Sheets If Necessary