

Remediation Final Report Form

General Information

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

Date: January 21, 2013

Client: LINN Energy

Site Name: Skelly Unit 18

County: Eddy

State: NM

Site Coordinates Latitude: 32.8400142033788
Longitude: -103.864017185541

Property Owner: Federal

State Report No.: Federal

Release Description and Assessment

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

Date of Spill: 9/11/2012

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

Cause of Spill: ☐ Equipment Failure ☐ Valve Failure ☐ Line Rupture ☐ Leaking Tank ☐ Tank Overfill
☒ Other (List): Buried 2" line was hit while digging a ditch for conduit

Other Contributing Factors or Comments:

Quantity Spilled: 15 bbls. **Quantity Recovered:** 0 bbls. **Total Released:** 15 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):

Total Square Footage Impacted: 1125 **Estimated Depth:** 1-5' **Volume (Cu. Yds):** 125

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.

Impacted soils were transported off-site to Lea Land Landfill. Once the impacted soils were removed to acceptable levels, the production pad was backfilled with like materials and smoothed to grade.

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 Bottom	1	11/8/12				80
SP1 South Wall	0.5	11/8/12				48
SP1 North Wall	0.5	11/8/12				32
SP2 Bottom	1	11/8/12				48
SP2 South Wall	0.5	11/8/12				320
SP3 Bottom	1	11/8/12				112
SP3 West Wall	0.5	11/8/12				<16.0
SP3 North Wall	0.5	11/8/12				32
SP3 East Wall	0.5	11/8/12				176
SP4 Bottom	1	11/8/12				48
SP4 South Wall	0.5	11/8/12				160
SP4 East Wall	0.5	11/8/12				80
SP5 Bottom	5	11/8/12				<16.0
SP5 West Wall	2	11/8/12				16
SP5 East Wall	2	11/8/12				<16.0
SP5 South Wall	2	11/8/12				512
SP5 North Wall	2	11/8/12				48

* 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:



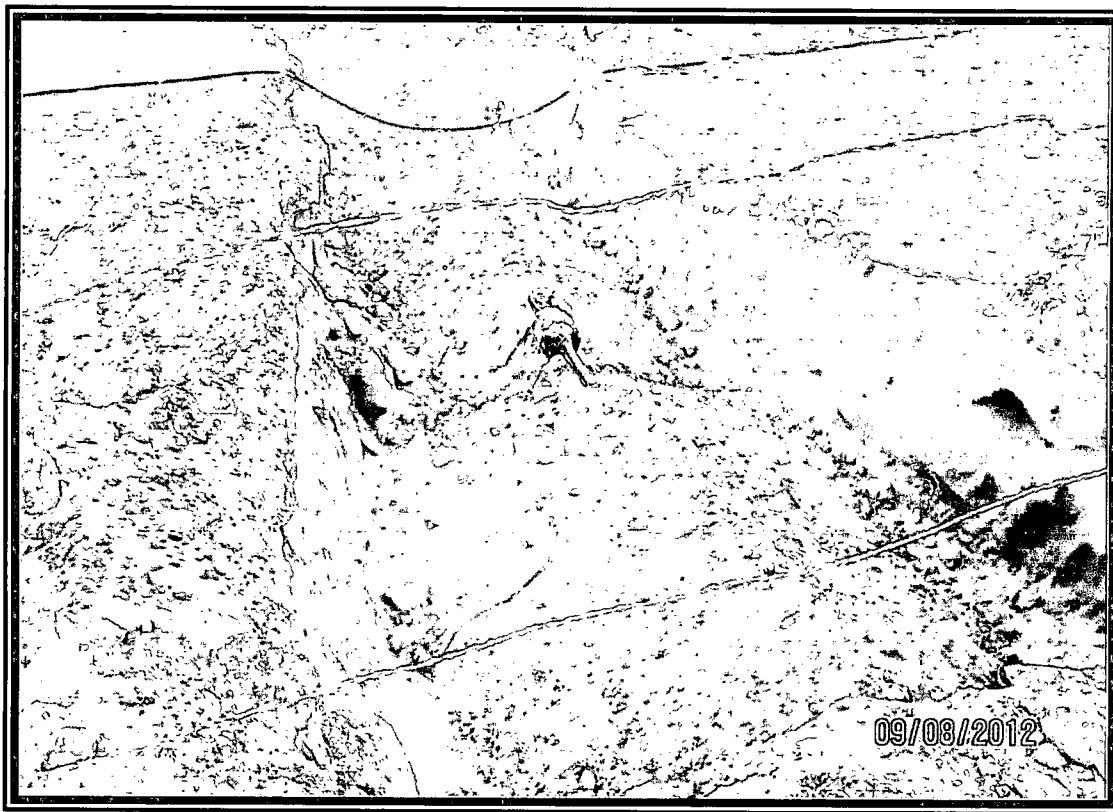
Kit Prichard
Etech Environmental & Safety Solutions, Inc.



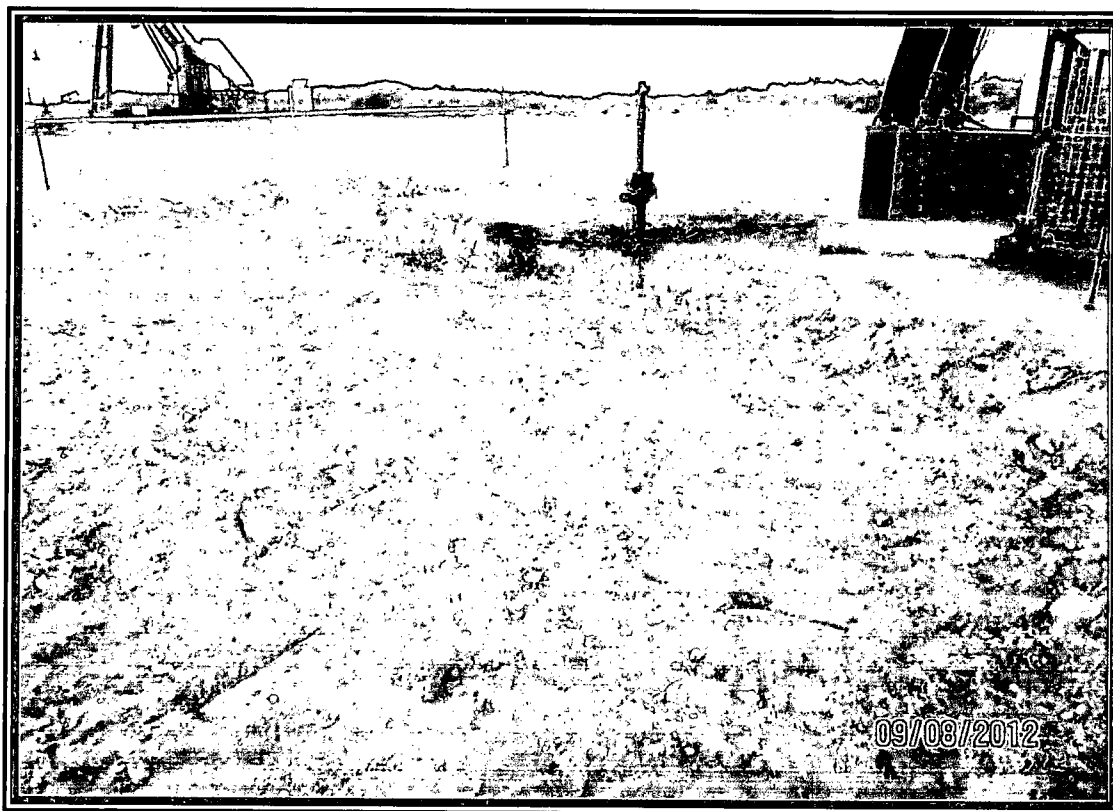
Spill area before excavation.



Spill area before excavation.



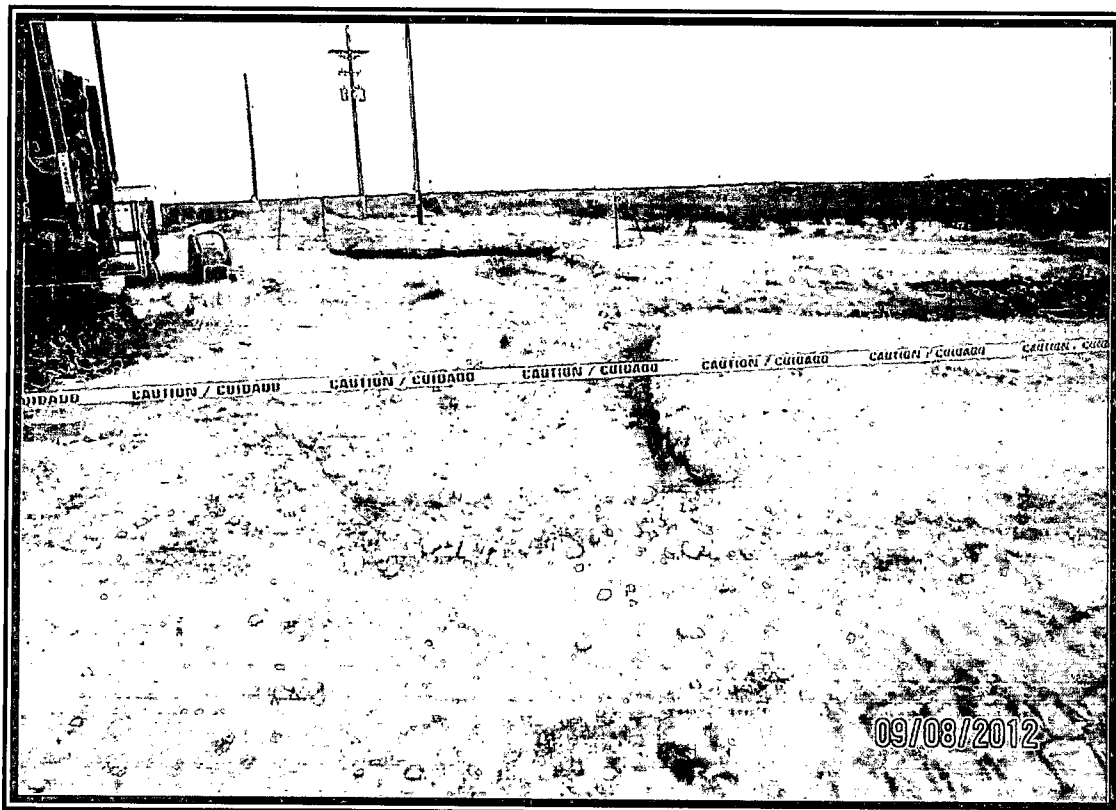
Spill area during backfill.



Spill area during backfill.



Spill area during backfill.



Spill area during backfill.

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 August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: LINN Energy	Contact: Joe Hernandez
Address: 2130 W Bender Blvd. - Hobbs, NM	Telephone No.: 575-942-8675
Facility Name: Skelly Unit 18	Facility Type: Injection Well

Surface Owner: Federal	Mineral Owner: Federal	API No.: 3001505154
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LOCATION OF RELEASE

Unit Letter D	Section 15	Township 17S	Range 31E	Feet from the 660	North/South Line North	Feet from the 660	East/West Line West	County Eddy
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Latitude: 32.8400142033788 Longitude: -103.864017185541

NATURE OF RELEASE

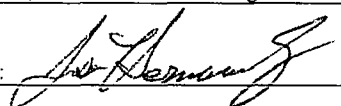
Type of Release: Produced Water	Volume of Release: 15bbbls	Volume Recovered: 0
Source of Release: Injection Line	Date and Hour of Occurrence: 09/11/2012 - 1100	Date and Hour of Discovery: 09/11/2012 - 1130
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? M. Bratcher OCD - Terry Gregston BLM	
By Whom? Gary Wink	Date and Hour: 09/13/2012 - 1000	
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.*:	<div>RECEIVED FEB 25 2013 NMOCD ARTESIA</div>
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Describe Cause of Problem and Remedial Action Taken.*: Dixie was digging a ditch to lay conduit for COG& hit a 2" fiberglass injection line coming from the Skelly Unit 18. The injection header was shut in to stop the leak. The line was repaired.

Describe Area Affected and Cleanup Action Taken.*: Spill was on a COG location. Affected area 75' x 15'. Impacted soils above regulatory threshold levels were manually and mechanically excavated from the spill area. Impacted soils were transported off-site to Lea Land Landfill. Once the impacted soils were removed to acceptable levels, the production pad area was backfilled with like materials and smoothed to grade.

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

Signature: 	OIL CONSERVATION DIVISION		
Printed Name: Jose Hernandez	Approved by District Supervisor:		
Title: Foreman	Approval Date:	Expiration Date:	
E-mail Address: jhernandez@linneenrgy.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: February 15, 2013	Phone: 575-738-1739		

* Attach Additional Sheets If Necessary



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

November 08, 2012

FRED HOLMES

ETECH Environmental & Safety Solutions, Inc.

P. O. BOX 8469

MIDLAND, TX 79708

RE: SKELLY #18

Enclosed are the results of analyses for samples received by the laboratory on 11/05/12 15:20.

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.

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, appearing to read "Coley D. Keene", written in a cursive 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: 11/05/2012
 Reported: 11/08/2012
 Project Name: SKELLY #18
 Project Number: 253-3627-000
 Project Location: EDDY COUNTY, NM

 Sampling Date: 11/05/2012
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Jodi Henson

Sample ID: SP 1 BOTTOM 1' (H202690-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	11/08/2012	ND	432	108	400	0.00	

Sample ID: SP 1 S WALL 0-6" (H202690-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	11/08/2012	ND	432	108	400	0.00		

Sample ID: SP 1 N WALL 0-6" (H202690-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/08/2012	ND	432	108	400	0.00		

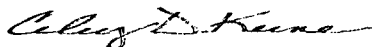
Sample ID: SP 2 BOTTOM 1' (H202690-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	11/08/2012	ND	384	96.0	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: 11/05/2012
 Reported: 11/08/2012
 Project Name: SKELLY #18
 Project Number: 253-3627-000
 Project Location: EDDY COUNTY, NM

 Sampling Date: 11/05/2012
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Jodi Henson

Sample ID: SP 2 S WALL 0-6" (H202690-05)

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	11/08/2012	ND	384	96.0	400	0.00	

Sample ID: SP 3 BOTTOM 1' (H202690-06)

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	11/08/2012	ND	384	96.0	400	0.00	

Sample ID: SP 3 W WALL 0-6" (H202690-07)

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/08/2012	ND	384	96.0	400	0.00	

Sample ID: SP 3 N WALL 0-6" (H202690-08)

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/08/2012	ND	384	96.0	400	0.00	

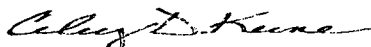
Sample ID: SP 3 E WALL 0-6" (H202690-09)

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	11/08/2012	ND	384	96.0	400	0.00	

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

 Received: 11/05/2012
 Reported: 11/08/2012
 Project Name: SKELLY #18
 Project Number: 253-3627-000
 Project Location: EDDY COUNTY, NM

 Sampling Date: 11/05/2012
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Jodi Henson

Sample ID: SP 4 BOTTOM 1' (H202690-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/08/2012	ND	384	96.0	400	0.00	

Sample ID: SP 4 S WALL 0-6" (H202690-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	11/08/2012	ND	384	96.0	400	0.00	

Sample ID: SP 4 E WALL 0-6" (H202690-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	11/08/2012	ND	384	96.0	400	0.00	

Sample ID: SP 5 BOTTOM 5' (H202690-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/08/2012	ND	384	96.0	400	0.00	

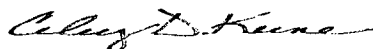
Sample ID: SP 5 W WALL 2' (H202690-14)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	11/08/2012	ND	384	96.0	400	0.00		

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* = Accredited Analyte

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Celest D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 11/05/2012
Reported: 11/08/2012
Project Name: SKELLY #18
Project Number: 253-3627-000
Project Location: EDDY COUNTY, NM

Sampling Date: 11/05/2012
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: SP 5 E WALL 2' (H202690-15)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/08/2012	ND	384	96.0	400	0.00	

Sample ID: SP 5 S WALL 2' (H202690-16)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	11/08/2012	ND	384	96.0	400	0.00	

Sample ID: SP 5 N WALL 2' (H202690-17)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/08/2012	ND	384	96.0	400	0.00	

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*=Accredited Analyte

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Celestine D. Keene

Celestine D. Keene, Lab Director/Quality Manager

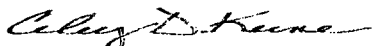
Notes and Definitions

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

Page 7 of 8

Company Name: <u>Etech</u>				BILL TO				ANALYSIS REQUEST																				
Project Manager: <u>Fred Holmes</u>				P.O. #: <u>253-3627-000</u>																								
Address:				Company:																								
City:		State:		Zip:		Attn:																						
Phone #:		Fax #:		Address:																								
Project #: <u>253-3627-000</u>				Project Owner:																City:								
Project Name: <u>skelly #18</u>				State:																Zip:								
Project Location:				Phone #:																								
Sampler Name: <u>Terry Osborn</u>				Fax #:																<u>chlorides</u>								
FOR LAB USE ONLY	Lab I.D. <u>H202690</u>	Sample I.D.	(GRAB OR C/COMP.)	# CONTAINERS	MATRIX					PRESERV.		SAMPLING																
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME													

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Relinquished By: <u>[Signature]</u>	Date: <u>11-5</u>	Received By: <u>[Signature]</u>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: <u>3:20</u>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:			
Delivered By: (Circle One)		Sample Condition	CHECKED BY:	
Sampler - UPS - Bus - Other:		Cool Intact	(Initials)	
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>[Signature]</u>	

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

#26



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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[illegible]

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