

LINN ENERGY

2130 W. Bender Blvd.
Hobbs, NM 88241
Phone 575.738.1739

McClay Federal #7
2RP-1914
2RP-1959

Termination Request

API No. 3001510370

Release Date: September 8th, 2013 & September 24th, 2013

Unit Letter C, Section 33, Township 18S, Range 30E

Rice Environmental Consulting & Safety

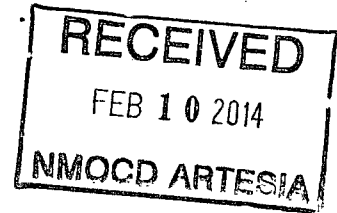
P.O. Box 2948, Hobbs, NM 88241

Phone 575.393.2967

February 6th, 2014

Mike Bratcher

New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau – District 2
811 S. First St.
Artesia, NM 88210



RE: CAP Report and Termination Request

Linn Energy

McClay Federal #7 (2RP-1914)

McClay Federal #7 (2RP-1959)

UL/C sec. 33 T18S R30E

API No. 3001510370

Mr. Bratcher:

Linn Energy (Linn) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The site is located approximately 7.5 miles south of Loco Hills, New Mexico at UL/C sec. 33 T18S R30E. This site is located in an area of no known groundwater.

Two releases occurred at the site in September 2013. The first (2RP-1914), which occurred on September 8th, 2013, was a release of 4 barrels of produced water and 1 barrel oil from a hole in the bottom of the heater. All the fluid remained in the lined heater dike. A vacuum truck was called to the site and recovered all the fluid. NMOCD and BLM were notified of the release on September 10th, 2013 and NMOCD approved the initial C-141 on September 19th, 2013.

The second release (2RP-1959), which occurred on September 24th, 2013, was a release of 10 barrels of oil. When the heater was restarted, a valve was not opened. The heater exceeded operating pressure and blew oil through the pressure relief valve on the top of the heater. None of this fluid was recovered. NMOCD and BLM were notified on the release on September 26th, 2013 and NMOCD approved the initial C-141 on October 2nd, 2013 (Appendix A).

Together the two releases covered 2,486 sq ft of lease pad and pasture land. RECS personnel were on site beginning on September 10th, 2013 and then on September 30th, 2013 to assess the releases. The first release was in the lined dike surrounding the heater and was not sampled. Soil samples from the surface and with depth were taken from the second release (Figure 1). The samples were field tested for chlorides and organic vapors and representative samples were taken to a commercial laboratory for analysis (Appendix

B). Point 1 returned laboratory chloride, GRO, DRO and BTEX below regulatory standards beginning at 6 inches. Point 2 returned laboratory chloride, GRO, DRO and BTEX below regulatory standards beginning at 1 foot. Point 3 returned laboratory chloride, GRO, DRO and BTEX below regulatory standards beginning at 8.5 feet.

A Corrective Action Plan (CAP) for the first release (2RP-1914) was sent to NMOCD and BLM on September 30th, 2013 and approved by BLM on October 30th, 2013 and by NMOCD on November 15th, 2013. As part of the CAP, the caliche above the liner would be removed and taken to a NMOCD approved facility for disposal. Clean caliche would be imported to the site to replace the contaminated caliche.

A CAP for the second release (2RP-1959) was sent to NMOCD and BLM on October 29th, 2013 and approved by BLM the same day. NMOCD approved the CAP on November 15th, 2013. As part of the CAP, the release area around Point 1 and Point 2, indicated that this area would reach acceptable standards by 6 inches bgs. Thus, this area would be scraped down 6 inches and a 5 point bottom composite would be taken to a commercial laboratory to show that the chloride level is below 1,000 mg/kg and the combined GRO/DRO reading is below 1,000 mg/kg.

The area around Point 3 will be excavated to depth of 4 ft bgs. The walls of the excavation would be advanced horizontally until laboratory analyses showed the walls to have a chloride reading below 1,000 mg/kg and combined GRO/DRO below 1,000 mg/kg. At the base of the 4 ft bgs excavation, a 20 mil reinforced poly liner would be installed at properly seated (Figure 2).

All excavated soils would be taken to a NMOCD approved facility for disposal. The 6 inch scrape and the 4 ft excavation would be backfilled with clean, imported soil to ground surface and contoured to the surrounding location. The site would be seeded with a blend of native vegetation. Vegetation acts as an infiltration barrier for the site, since plants capture water through their roots thereby reducing the amount of water traveling through the vadose zone to groundwater.

CAP Report

On November 6th, 2013, CAP activities began at the site. The area inside the treater berm, the contaminated berm, the 6 inch scrape and the 4 foot excavation were completed and a total of 228 yards of contaminated soil was taken to a NMOCD approved facility for disposal.

A total of 72 yards of clean caliche was imported to the site to backfill the treater area and replace the contaminated berm. The remaining caliche was backfilled into the 4 foot excavation.

Once the 4 foot excavation was completed, wall samples were taken to a commercial laboratory for analysis to confirm all constituents were below regulatory standards (Appendix C). At the base of the 6 inch scrape, a 5 point bottom composite was taken

and sent to a commercial laboratory for analysis. The bottom composite returned a chloride value of 320 mg/kg, a DRO value of 306 mg/kg and GRO and BTEX values of non-detect. This data was sent to BLM and NMOCD with a request to backfill the site. BLM approved the site to be backfilled on November 25th, 2013 and NMOCD approved the site to be backfilled on December 2nd, 2013.

A trench was installed along the periphery of the 4 foot excavation and a 20-mil reinforced poly liner was key set into the excavation. A total of 108 yards of top soil was imported to site to serve as backfill. The liner was padded with 6 inches of the top soil and the remaining caliche was backfilled over the padded liner. A sample of the imported top soil was taken to a commercial laboratory and returned a laboratory chloride reading of 64 mg/kg. The 6 inch scrape and the remainder of the 4 foot excavation was backfilled with the imported top soil and the area was contoured to the surrounding location.

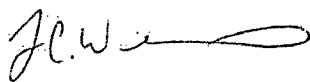
On December 10th, 2013, soil amendments were added to the pasture area and the site was seeded with LPC seed mix.

Photo documentation of these activities can be found in Appendix D.

Given that the site was remediated per the approved CAP and backfilled with clean, imported soil, Linn respectfully requests that the site be granted 'remediation termination' and site closure. Final C-141s for both sites can be found in Appendix E.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,



Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

- Figure 1 – Initial Sampling Data
- Figure 2 – Proposed CAP Activities
- Figure 3 – Excavation Data
- Appendix A – Initial C-141s
- Appendix B – Initial Sampling Lab
- Appendix C – CAP Activities Labs
- Appendix D – Photo Documentation
- Appendix E – Final C-141s

Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948, Hobbs, NM 88241
Phone 575.393.2967

Initial Sampling Data

Point 1

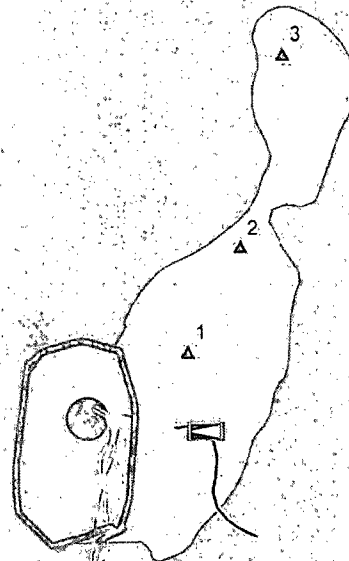
	CI-	PID	GRO	DRO	B	T	E	X	BTEX
SS	464	308.6	893	15100	<1	2.8	10.5	19.5	32.8
6"	32	96.8	<10	72.6	<0.05	<0.05	<0.05	<0.15	<0.3
1'	<16	27.2	<10	23.6	<0.05	<0.05	<0.05	<0.15	<0.3

Point 2

	CI-	PID	GRO	DRO	B	T	E	X	BTEX
SS	3520	414.4	685	18900	0.235	3.11	6.67	11.5	21.5
6"	750	88.7							
1'	64	23.2	<10	13	<0.05	<0.05	0.069	<0.15	<0.3
1.5'	48	27.3	<10	14.2	<0.05	<0.05	<0.05	<0.15	<0.3

Point 3

	CI-	PID	GRO	DRO	B	T	E	X	BTEX
SS	3320	709.3	1830	26700	<2	9.42	19	33.1	61.6
6"	2009	1377							
1'	4684	587.6							
1.5'	6672	105.7							
2'	5015	22.7							
2.5'	4915	30							
3'	5120	14.7	<10	28.2	<0.05	<0.05	<0.05	<0.15	<0.3
3.5'	3730	11.3							
4'	2630	29							
4.5'	2884	20.1							
5'	2558	23.6							
5.5'	1792	31.3							
6'	1282	27.2							
6.5'	721	12.6							
7'	699	144.3							
7.5'	460	35.2							
8'	560	49.2	<10	69.3	<0.05	<0.05	<0.05	<0.15	<0.3
8.5'	208	20.1	<10	44.4	<0.05	<0.05	<0.05	<0.15	<0.3



Legend

- ▲ AUGUR POINTS
- LINED BERM
- ☐ GAS REGULATOR
- 3 in SURFACE POLY
- 3 in SURFACE STEEL
- ☐ HEATER
- ☐ STAIN (2,486 sq ft)

DGW: None

Landowner: BLM

Source: Esri, DigitalGlobe, GeoEye, AeroGRID, IGN, ICF



**LINN MCCLAY
FEDERAL #7**

2RP-1914

2RP-1959

LEGALS: UL/C sec. 33

T-18-S R-30-E

EDDY COUNTY, NM

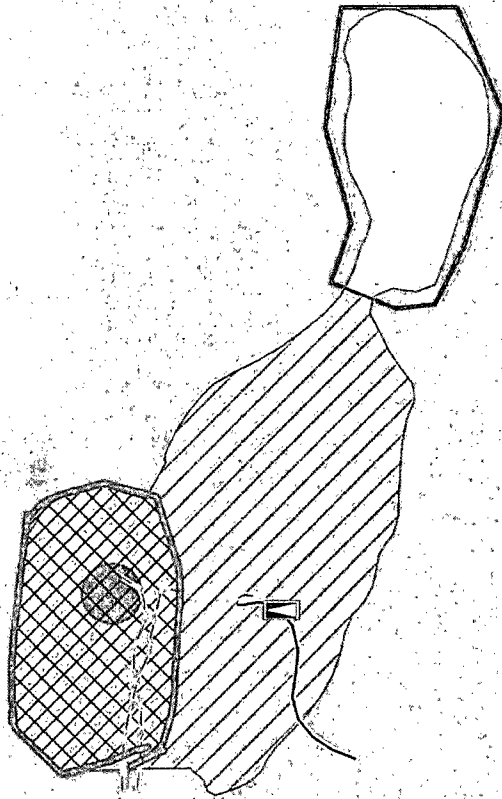
Figure 1



0 20 40
Feet

GPS date: 9/30/13 EC
Drawing date: 10/22/13
Drafted by: L. Weinheimer

Proposed CAP Activities



Legend

- LINED BERM
- GAS REGULATOR
- 3 in SURFACE POLY
- 3 in SURFACE STEEL
- REMOVE AND REPLACE CALICHE OVER LINER
- SCRAPE AREA TO 6 INCHES
- PROPOSED 20-MIL REINFORCED POLY LINER AT 4 FT BGS
- HEATER
- STAIN (2,486 sq ft)

DGW: None

Landowner: BLM



**LINN MCCLAY
FEDERAL #7**

(2RP-1914)

(2RP-1959)

LEGALS: UL/C sec. 33

T-18-S R-30-E

EDDY COUNTY, NM

Figure 2



0 10 20
HHH Feet

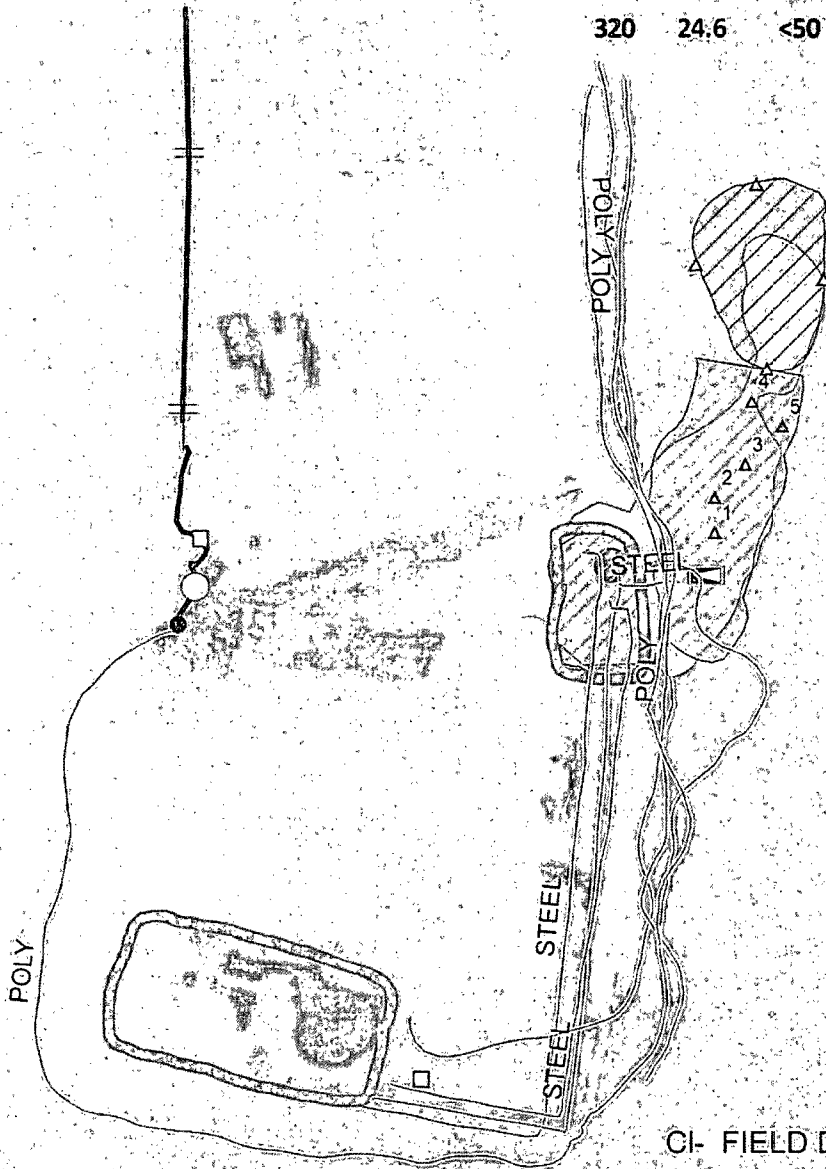
GPS date: 9/30/13 EC
Drawing date: 10/22/13
Drafted by: L. Weinheimer

Excavation Data

Wall Samples	CI-	PID	GRO	DRO	B	T	E	X	BTEX
North Wall	<16	25.6	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
East Wall	112	0.9	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
West Wall	<16	5.1	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
South Wall	256	14.4	<10	113	<0.05	<0.05	<0.05	<0.15	<0.3

5 point composite at 6 inches

CI-	PID	GRO	DRO	B	T	E	X	BTEX
320	24.6	<50	306	<0.05	<0.05	<0.05	<0.15	<0.3



Legend

- ▲ FINAL WALL SAMPLE POINTS
- ▲ SAMPLE POINT
- CHEMICAL TANK
- ⊥ ELECTRIC POLE
- ELECTRICAL BOX
- WELLHEAD
- ▬ BERM
- OVERHEAD ELECTRICAL
- ▬ PAD
- SURFACE ELECTRICAL
- SURFACE PIPELINE
- ⊡ GAS REGULATOR
- ▨ 6 IN SCRAPE
- ▨ HEATER
- ▨ STAIN (2,486 sq ft)
- ▨ 4 FT EXCAVATION

CI- FIELD DATA
CI- LAB DATA

Source: Esri, DigitalGlobe, GeoEye, AeroGRID, IGN, IGC

Landowner: BLM
DGW: None

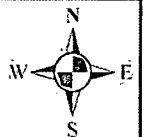


**LINN MCCLAY
FEDERAL #7**

(2RP-1914)
(2RP-1959)

LEGALS: UL/C sec. 33
T-18-S R-30-E
EDDY COUNTY, NM

Figure 3



0 30 60
Feet

GPS date: 11/7/13 BC, 11/14/13 AG
Drawing date: 11/7/13, 11/15/13
Drafted by: T. Grieco

Appendix A

Initial C-141s

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

RECEIVED

SEP 10 2013

Form C-141
Revised October 10, 2003

NMOCD ARTESIA

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

Release Notification and Corrective Action

njmw 1326252893

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: McClay Federal # 7	Facility Type: Oil Producer
Surface Owner: Federal	Mineral Owner:
API No.: 3001510370	

LOCATION OF RELEASE

Unit Letter C	Section 23	Township 18S	Range 30E	Feet from the 330'	North/South Line North	Feet from the 1650'	East/West Line West	County Eddy
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Latitude: 32.7103208597655 Longitude: -103.980175130974

NATURE OF RELEASE

Type of Release: Produced Water / Oil	Volume of Release: 4 bbls / 1 bbl	Volume Recovered: 4 bbls / 1 bbl
Source of Release: Heater	Date and Hour of Occurrence: 09/08/2013 12:00am	Date and Hour of Discovery: 09/08/2013
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Burton, BLM Mike Brucher, NM OCD	
By Whom? Brian Wall	Date and Hour 09/10/2013	
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: Hole in bottom of heater in side base ring.

Describe Area Affected and Cleanup Action Taken: All fluid in dike area picked up with vacuum truck emptied heater; Cause degradation.

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 poses 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: Brian Wall	Approved by District Supervisor:	Signed By:
Title: Construction Foreman III	Approval Date: SEP 19 2013	Expiration Date:
E-mail Address: bwall@linnenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 09/10/2013 Phone: 806-367-0645	Remediation per OCD Rule & Guidelines, & like approval by BLM: SUBMIT REMEDIATION PROPOSAL NO LATER THAN	

Attach Additional Sheets If Necessary

Remediation per OCD Rule & Guidelines, & like approval by BLM: SUBMIT REMEDIATION PROPOSAL NO LATER THAN

October 19, 2013

2RP-1914

District I
1635 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

RECEIVED

SEP 26 2013

Form C-141
Revised October 10, 2003

NMOC DISTRICT OFFICE IN ARTESIA

Operate District Office in accordance with 19-15-29 NMAC

Release Notification and Corrective Action

nJMW 327537083

OPERATOR:

☒ Initial Report ☐ Final Report

Name of Company: Linn Operating 269324	Contact: Brian Wall
Address: 2130 W. Bender Hobbs, NM 88240	Telephone No.: 575-738-1739
Facility Name: McClay Federal # 7	Facility Type: Oil
Surface Owner: Federal	Mineral Owner: API No: 3001510370

LOCATION OF RELEASE

Unit Letter: C	Section: 53	Township: 18S	Range: 30E	Feet from the: 330	North/South Line: North	Feet from the: 1650	East/West Line: West	County: Curry
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Latitude: 32.7103208597655 Longitude: -103.980175130974

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 10 bbls	Volume Recovered: 0
Source of Release: Heater	Date and Hour of Occurrence: 09/24/2013 12:00am	Date and Hour of Discovery: 09/24/2013
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES To Whom? Mike Burton: BLM Mike Bratcher: NM OCD	
By Whom?: Brian Wall	Date and Hour 09/26/2013 7:45am	
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: Missed opening valve when restarting well. Heater exceeded operating pressure blew oil through pressure relief valve on top of the heater.		
Describe Area Affected and Cleanup Action Taken: contaminated soil to be removed and replaced with clean re-seeded to requirements.		

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

Signature: [Signature]		OIL CONSERVATION DIVISION	
Printed Name: Brian Wall		Approved by District Supervisor: [Signature]	
Title: Construction Foreman II		Approval Date: OCT 02 2013	
E-mail Address: bwall@linenergy.com		Expiration Date:	
Date: 09/26/2013 Phone: 806-367-0645		Conditions of Approval:	
Attach Additional Sheets If Necessary:		Attached: <input type="checkbox"/>	

Remediation per OCD Rule & Guidelines & like approval by BLM. SUBMIT REMEDIATION PROPOSAL NO LATER THAN

November 2, 2013

2 RP = 1939

Appendix B

Initial Sampling Lab

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

October 22, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: MC CLAY FEDERAL #7

Enclosed are the results of analyses for samples received by the laboratory on 10/16/13 8:45.

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.

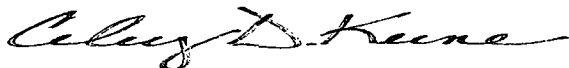
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	10/16/2013	Sampling Date:	10/09/2013
Reported:	10/22/2013	Sampling Type:	Soil
Project Name:	MC CLAY FEDERAL #7	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT 1 @ SURFACE (H302503-01)

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	10/18/2013	ND	1.93	96.4	2.00	1.36	
Toluene*	2.80	1.00	10/18/2013	ND	1.99	99.3	2.00	2.92	
Ethylbenzene*	10.5	1.00	10/18/2013	ND	2.01	100	2.00	2.99	
Total Xylenes*	19.5	3.00	10/18/2013	ND	5.85	97.4	6.00	2.79	
Total BTX	32.8	6.00	10/18/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 141 % 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	464	16.0	10/17/2013	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	893	200	10/17/2013	ND	191	95.3	200	2.37	
DRO >C10-C28	15100	200	10/17/2013	ND	191	95.5	200	3.62	

Surrogate: 1-Chlorooctane 172 % 65.2-140

Surrogate: 1-Chlorooctadecane 527 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

 Received: 10/16/2013
 Reported: 10/22/2013
 Project Name: MC CLAY FEDERAL #7
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 10/09/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: POINT 1 @ 6" (H302503-02)

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	10/18/2013	ND	1.93	96.4	2.00	1.36	
Toluene*	<0.050	0.050	10/18/2013	ND	1.99	99.3	2.00	2.92	
Ethylbenzene*	<0.050	0.050	10/18/2013	ND	2.01	100	2.00	2.99	
Total Xylenes*	<0.150	0.150	10/18/2013	ND	5.85	97.4	6.00	2.79	
Total BTEX	<0.300	0.300	10/18/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 105 % 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	32.0	16.0	10/17/2013	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	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	72.6	10.0	10/17/2013	ND	181	90.6	200	1.79	

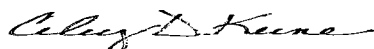
Surrogate: 1-Chlorooctane 100 % 65.2-140

Surrogate: 1-Chlorooctadecane 110 % 63.6-154

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

 Received: 10/16/2013
 Reported: 10/22/2013
 Project Name: MC CLAY FEDERAL #7
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 10/09/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: POINT 1 @ 1' (H302503-03)

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	10/21/2013	ND	1.93	96.4	2.00	1.36	
Toluene*	<0.050	0.050	10/21/2013	ND	1.99	99.3	2.00	2.92	
Ethylbenzene*	<0.050	0.050	10/21/2013	ND	2.01	100	2.00	2.99	
Total Xylenes*	<0.150	0.150	10/21/2013	ND	5.85	97.4	6.00	2.79	
Total BTEX	<0.300	0.300	10/21/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 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	<16.0	16.0	10/17/2013	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	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	23.6	10.0	10/17/2013	ND	181	90.6	200	1.79	

Surrogate: 1-Chlorooctane 99.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

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Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	10/16/2013	Sampling Date:	10/09/2013
Reported:	10/22/2013	Sampling Type:	Soil
Project Name:	MC CLAY FEDERAL #7	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT 2 @ SURFACE (H302503-04)

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.235	0.050	10/18/2013	ND	1.93	96.4	2.00	1.36	
Toluene*	3.11	0.050	10/18/2013	ND	1.99	99.3	2.00	2.92	
Ethylbenzene*	6.67	0.050	10/18/2013	ND	2.01	100	2.00	2.99	
Total Xylenes*	11.5	0.150	10/18/2013	ND	5.85	97.4	6.00	2.79	
Total BTEX	21.5	0.300	10/18/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 383 % 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	3520	16.0	10/17/2013	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	685	200	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	18900	200	10/17/2013	ND	181	90.6	200	1.79	

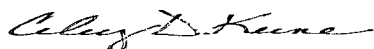
Surrogate: 1-Chlorooctane 166 % 65.2-140

Surrogate: 1-Chlorooctadecane 242 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
JACOB KAMPLAIN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 10/16/2013
Reported: 10/22/2013
Project Name: MC CLAY FEDERAL #7
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/09/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 2 @ 1' (H302503-05)

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	10/18/2013	ND	1.93	96.4	2.00	1.36	
Toluene*	<0.050	0.050	10/18/2013	ND	1.99	99.3	2.00	2.92	
Ethylbenzene*	0.069	0.050	10/18/2013	ND	2.01	100	2.00	2.99	
Total Xylenes*	<0.150	0.150	10/18/2013	ND	5.85	97.4	6.00	2.79	
Total BTEX	<0.300	0.300	10/18/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 108 % 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	64.0	16.0	10/17/2013	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	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	13.0	10.0	10/17/2013	ND	181	90.6	200	1.79	

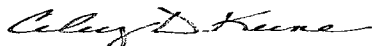
Surrogate: 1-Chlorooctane 105 % 65.2-140

Surrogate: 1-Chlorooctadecane 110 % 63.6-154

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Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

 Received: 10/16/2013
 Reported: 10/22/2013
 Project Name: MC CLAY FEDERAL #7
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 10/09/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: POINT 2 @ 1.5' (H302503-06)

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	10/18/2013	ND	1.93	96.4	2.00	1.36	
Toluene*	<0.050	0.050	10/18/2013	ND	1.99	99.3	2.00	2.92	
Ethylbenzene*	<0.050	0.050	10/18/2013	ND	2.01	100	2.00	2.99	
Total Xylenes*	<0.150	0.150	10/18/2013	ND	5.85	97.4	6.00	2.79	
Total BTEX	<0.300	0.300	10/18/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 101 % 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	10/17/2013	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	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	14.2	10.0	10/17/2013	ND	181	90.6	200	1.79	

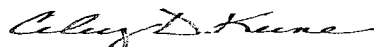
Surrogate: 1-Chlorooctane 111 % 65.2-140

Surrogate: 1-Chlorooctadecane 120 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	10/16/2013	Sampling Date:	10/09/2013
Reported:	10/22/2013	Sampling Type:	Soil
Project Name:	MC CLAY FEDERAL #7	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT 3 @ SURFACE (H302503-07)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	10/18/2013	ND	1.93	96.4	2.00	1.36	
Toluene*	9.42	2.00	10/18/2013	ND	1.99	99.3	2.00	2.92	
Ethylbenzene*	19.0	2.00	10/18/2013	ND	2.01	100	2.00	2.99	
Total Xylenes*	33.1	6.00	10/18/2013	ND	5.85	97.4	6.00	2.79	
Total BTX	61.6	12.0	10/18/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 117 % 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	3320	16.0	10/17/2013	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	1830	200	10/17/2013	ND	189	94.6	200	4.47		
DRO >C10-C28	26700	200	10/17/2013	ND	181	90.6	200	1.79		

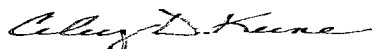
Surrogate: 1-Chlorooctane 190 % 65.2-140

Surrogate: 1-Chlorooctadecane 984 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
JACOB KAMPLAIN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 10/16/2013
Reported: 10/22/2013
Project Name: MC CLAY FEDERAL #7
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/09/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 3 @ 3' (H302503-08)

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	10/18/2013	ND	1.93	96.4	2.00	1.36	
Toluene*	<0.050	0.050	10/18/2013	ND	1.99	99.3	2.00	2.92	
Ethylbenzene*	<0.050	0.050	10/18/2013	ND	2.01	100	2.00	2.99	
Total Xylenes*	<0.150	0.150	10/18/2013	ND	5.85	97.4	6.00	2.79	
Total BTEX	<0.300	0.300	10/18/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 105 % 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	5120	16.0	10/17/2013	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	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	28.2	10.0	10/17/2013	ND	181	90.6	200	1.79	

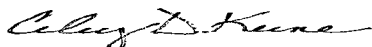
Surrogate: 1-Chlorooctane 104 % 65.2-140

Surrogate: 1-Chlorooctadecane 110 % 63.6-154

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Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
JACOB KAMPLAIN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	10/16/2013	Sampling Date:	10/09/2013
Reported:	10/22/2013	Sampling Type:	Soil
Project Name:	MC CLAY FEDERAL #7	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT 3 @ 8' (H302503-09)

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	10/18/2013	ND	1.93	96.4	2.00	1.36	
Toluene*	<0.050	0.050	10/18/2013	ND	1.99	99.3	2.00	2.92	
Ethylbenzene*	<0.050	0.050	10/18/2013	ND	2.01	100	2.00	2.99	
Total Xylenes*	<0.150	0.150	10/18/2013	ND	5.85	97.4	6.00	2.79	
Total BTEX	<0.300	0.300	10/18/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 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	560	16.0	10/17/2013	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	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	69.3	10.0	10/17/2013	ND	181	90.6	200	1.79	

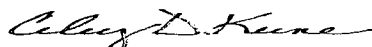
Surrogate: 1-Chlorooctane 109 % 65.2-140

Surrogate: 1-Chlorooctadecane 120 % 63.6-154

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Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

 Received: 10/16/2013
 Reported: 10/22/2013
 Project Name: MC CLAY FEDERAL #7
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 10/09/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: POINT 3 @ 8.5' (H302503-10)

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	10/18/2013	ND	1.93	96.4	2.00	1.36	
Toluene*	<0.050	0.050	10/18/2013	ND	1.99	99.3	2.00	2.92	
Ethylbenzene*	<0.050	0.050	10/18/2013	ND	2.01	100	2.00	2.99	
Total Xylenes*	<0.150	0.150	10/18/2013	ND	5.85	97.4	6.00	2.79	
Total BTEX	<0.300	0.300	10/18/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 99.1 % 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	208	16.0	10/17/2013	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	10/17/2013	ND	189	94.6	200	4.47	
DRO >C10-C28	44.4	10.0	10/17/2013	ND	181	90.6	200	1.79	

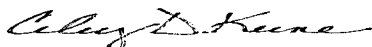
Surrogate: 1-Chlorooctane 109 % 65.2-140

Surrogate: 1-Chlorooctadecane 116 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

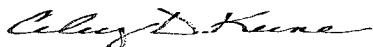
Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
- 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

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Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Linn</u>				BILL TO				ANALYSIS REQUEST											
Project Manager: <u>Jackie Kamplain</u>				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>											
Address:				Company:															
City: Hobbs State: NM Zip: 88240				Attn:															
Phone #: Fax #:				Address:															
Project #: Project Owner:				City:															
Project Name:				State: Zip:															
Project Location: <u>McClay Federal #7</u>				Phone #:															
Sampler Name: <u>Kyle Schnaidt</u>				Fax #:															
FOR LAB USE ONLY																			
Lab I.D.	Sample I.D.	(GRAB OR C)OMP.	# CONTAINERS	MATRIX					PRESERV.		SAMPLING								
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE/COOL	OTHER:	DATE	TIME					
<u>H30250B</u>																			
1	<u>Point 1 @ Surface</u>	<u>6</u>	<u>1</u>			<u>X</u>				<u>X</u>			<u>10-9-13</u>	<u>11:45</u>	<u>✓</u>	<u>✓</u>			
2	<u>Point 1 @ 6"</u>	<u>6</u>	<u>1</u>			<u>X</u>				<u>X</u>				<u>11:50</u>	<u>✓</u>	<u>✓</u>			
3	<u>Point 1 @ 1'</u>	<u>6</u>	<u>1</u>			<u>X</u>				<u>X</u>				<u>11:55</u>	<u>✓</u>	<u>✓</u>			
4	<u>point 2 @ Surface</u>	<u>6</u>	<u>1</u>			<u>X</u>				<u>X</u>				<u>12:00</u>	<u>✓</u>	<u>✓</u>			
5	<u>point 2 @ 1'</u>	<u>6</u>	<u>1</u>			<u>X</u>				<u>X</u>				<u>12:05</u>	<u>✓</u>	<u>✓</u>			
6	<u>point 2 @ 1.5'</u>	<u>6</u>	<u>1</u>			<u>X</u>				<u>X</u>				<u>12:10</u>	<u>✓</u>	<u>✓</u>			
7	<u>point 3 @ Surface</u>	<u>6</u>	<u>1</u>			<u>X</u>				<u>X</u>				<u>12:15</u>	<u>✓</u>	<u>✓</u>			
8	<u>point 3 @ 3'</u>	<u>6</u>	<u>1</u>			<u>X</u>				<u>X</u>				<u>12:20</u>	<u>✓</u>	<u>✓</u>			
9	<u>point 3 @ 8'</u>	<u>6</u>	<u>1</u>			<u>X</u>				<u>X</u>				<u>12:25</u>	<u>✓</u>	<u>✓</u>			
10	<u>point 3 @ 8.5'</u>	<u>6</u>	<u>1</u>			<u>X</u>				<u>X</u>				<u>12:30</u>	<u>✓</u>	<u>✓</u>			

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Relinquished By:	Date: <u>10-16-13</u>	Received By:	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
<u>Kyle Schnaidt</u>	Time: <u>8:45</u>	<u>Jodi Benson</u>	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:		kschnaidt@rice-ecs.com	
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	Knorman@rice-ecs.com	
Sampler - UPS - Bus - Other:	Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	(Initials)	Kjones@riceswd.com; jkamplain@rice-ecs.com	
	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	<u>[Signature]</u>	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com	

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

#54

Appendix C

CAP Activities Labs

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967



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

November 19, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: MC CLAY FEDERAL #7

Enclosed are the results of analyses for samples received by the laboratory on 11/15/13 16:10.

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:

RICE ENVIRONMENTAL CONSULTING & SAFETY
JACOB KAMPLAIN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 11/15/2013
Reported: 11/19/2013
Project Name: MC CLAY FEDERAL #7
Project Number: NONE GIVEN
Project Location: T18S R30E

Sampling Date: 11/15/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: EAST WALL (H302804-01)

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	11/18/2013	ND	1.98	99.2	2.00	5.01	
Toluene*	<0.050	0.050	11/18/2013	ND	1.96	98.2	2.00	5.59	
Ethylbenzene*	<0.050	0.050	11/18/2013	ND	1.95	97.4	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/18/2013	ND	5.71	95.2	6.00	5.49	
Total BTEX	<0.300	0.300	11/18/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 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	112	16.0	11/18/2013	ND	432	108	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	11/18/2013	ND	215	108	200	0.572	
DRO >C10-C28	<10.0	10.0	11/18/2013	ND	210	105	200	2.06	

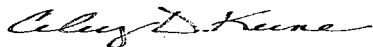
Surrogate: 1-Chlorooctane 72.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 82.2 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

 Received: 11/15/2013
 Reported: 11/19/2013
 Project Name: MC CLAY FEDERAL #7
 Project Number: NONE GIVEN
 Project Location: T18S R30E

 Sampling Date: 11/15/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SOUTH WALL (H302804-02)

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	11/18/2013	ND	1.98	99.2	2.00	5.01	
Toluene*	<0.050	0.050	11/18/2013	ND	1.96	98.2	2.00	5.59	
Ethylbenzene*	<0.050	0.050	11/18/2013	ND	1.95	97.4	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/18/2013	ND	5.71	95.2	6.00	5.49	
Total BTEX	<0.300	0.300	11/18/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 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	256	16.0	11/18/2013	ND	432	108	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	11/18/2013	ND	215	108	200	0.572	
DRO >C10-C28	113	10.0	11/18/2013	ND	210	105	200	2.06	

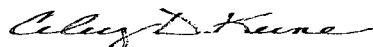
Surrogate: 1-Chlorooctane 69.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 83.9 % 63.6-154

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

 Received: 11/15/2013
 Reported: 11/19/2013
 Project Name: MC CLAY FEDERAL #7
 Project Number: NONE GIVEN
 Project Location: T18S R30E

 Sampling Date: 11/15/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: WEST WALL (H302804-03)

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	11/18/2013	ND	1.98	99.2	2.00	5.01	
Toluene*	<0.050	0.050	11/18/2013	ND	1.96	98.2	2.00	5.59	
Ethylbenzene*	<0.050	0.050	11/18/2013	ND	1.95	97.4	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/18/2013	ND	5.71	95.2	6.00	5.49	
Total BTEX	<0.300	0.300	11/18/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 108 % 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	<16.0	16.0	11/18/2013	ND	432	108	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	11/18/2013	ND	215	108	200	0.572	
DRO >C10-C28	<10.0	10.0	11/18/2013	ND	210	105	200	2.06	

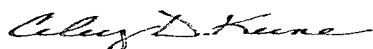
Surrogate: 1-Chlorooctane 83.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 94.0 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	11/15/2013	Sampling Date:	11/15/2013
Reported:	11/19/2013	Sampling Type:	Soil
Project Name:	MC CLAY FEDERAL #7	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T18S R30E		

Sample ID: NORTH WALL (H302804-04)

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	11/18/2013	ND	1.98	99.2	2.00	5.01	
Toluene*	<0.050	0.050	11/18/2013	ND	1.96	98.2	2.00	5.59	
Ethylbenzene*	<0.050	0.050	11/18/2013	ND	1.95	97.4	2.00	5.81	
Total Xylenes*	<0.150	0.150	11/18/2013	ND	5.71	95.2	6.00	5.49	
Total BTEX	<0.300	0.300	11/18/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 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	<16.0	16.0	11/18/2013	ND	432	108	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	11/18/2013	ND	215	108	200	0.572	
DRO >C10-C28	<10.0	10.0	11/18/2013	ND	210	105	200	2.06	

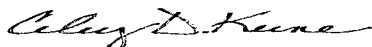
Surrogate: 1-Chlorooctane 75.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 88.1 % 63.6-154

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

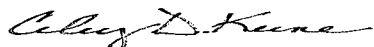
Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603

(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 7 of 7

RELEASE NOTICE: 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 the client for the applicable 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 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:		Date:	Received By:	Phone Result:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Amber Groves		11-15-13	Jodi Benson	Fax Result:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Time:				REMARKS:		
4:10				email results		
Relinquished By:		Date:	Received By:	knorman@rice-ecs.com hconder@rice-ecs.com;		
				Lweinheimer@rice-ecs.com; kjones@riceswd.com;		
Time:				Lpena@riceswd.com; sedwards@rice-ecs.com		
				agroves@rice-ecs.com		
Delivered By: (Circle One)			Sample Condition	CHECKED BY:		
Sampler - UPS - Bus - Other:			Cool Intact	(Initials)		
			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	[Signature]		

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

54



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

November 21, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: MC CLAY FEDERAL #7

Enclosed are the results of analyses for samples received by the laboratory on 11/14/13 16:45.

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 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:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

 Received: 11/14/2013
 Reported: 11/21/2013
 Project Name: MC CLAY FEDERAL #7
 Project Number: NONE GIVEN
 Project Location: T18S R30E

 Sampling Date: 11/14/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: 5 PT. COMPOSITE (H302788-01)

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	11/18/2013	ND	2.14	107	2.00	2.60		
Toluene*	<0.050	0.050	11/18/2013	ND	2.12	106	2.00	2.40		
Ethylbenzene*	<0.050	0.050	11/18/2013	ND	2.12	106	2.00	2.58		
Total Xylenes*	<0.150	0.150	11/18/2013	ND	6.19	103	6.00	2.34		
Total BTEX	<0.300	0.300	11/18/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 113 % 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	320	16.0	11/21/2013	ND	432	108	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	11/15/2013	ND	182	91.1	200	5.05	
DRO >C10-C28	306	50.0	11/15/2013	ND	182	90.8	200	6.00	

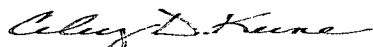
Surrogate: 1-Chlorooctane 81.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 141 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

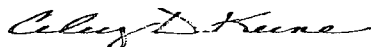
Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4 of 4

[illegible]

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

#54



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

November 18, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: MC CLAY FEDERAL #7

Enclosed are the results of analyses for samples received by the laboratory on 11/13/13 10:45.

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 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:

RICE ENVIRONMENTAL CONSULTING & SAFETY
JACOB KAMPLAIN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	11/13/2013	Sampling Date:	11/12/2013
Reported:	11/18/2013	Sampling Type:	Soil
Project Name:	MC CLAY FEDERAL #7	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

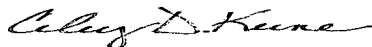
Sample ID: IMPORTED SOIL (H302765-01)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	11/15/2013	ND	416	104	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

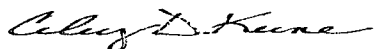
Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

Relinquished By: <i>Chris Flores</i>	Date: <i>11-13-13</i> Time: <i>10:45</i>	Received By: <i>Jodi Henson</i>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No REMARKS:
Relinquished By:	Date: Time:	Received By:	email results Jkamplain@rice-ecs.com Cflores@rice-ecs.com; Lweinheimer@rice-ecs.com Cflores@rice-ecs.com
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No	CHECKED BY: (Initials) <i>CH</i>	

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

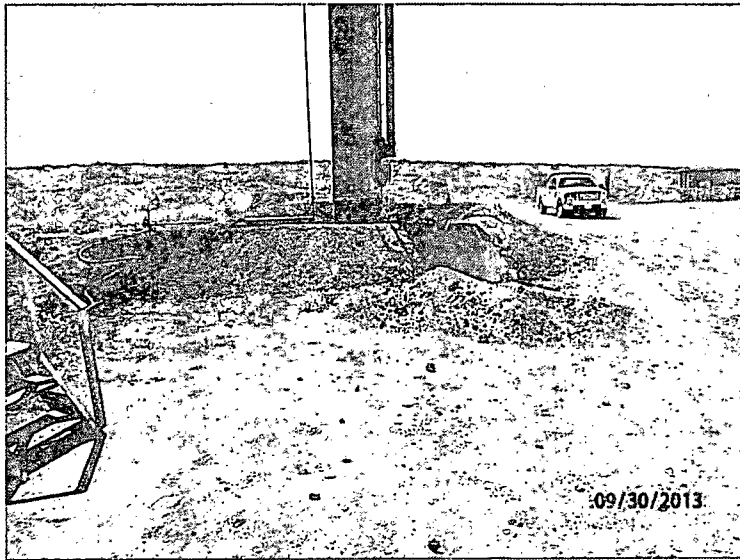
#54

Appendix D

Photo Documentation

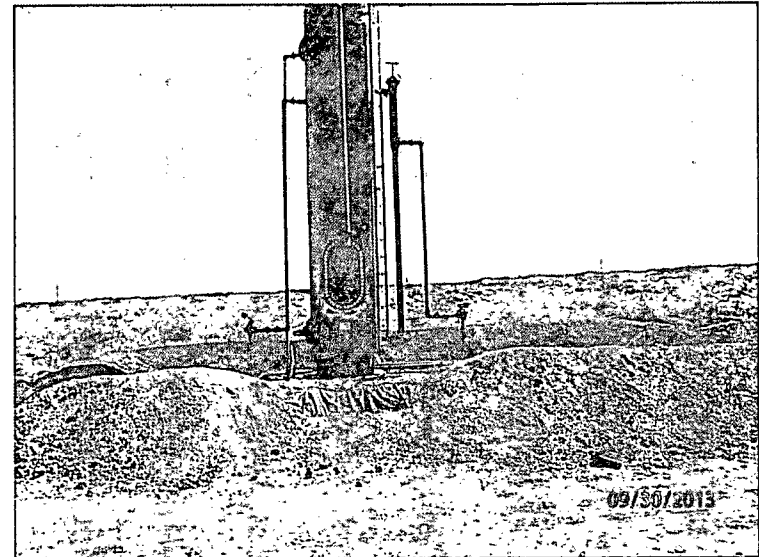
RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

Linn McClay Federal #7
Unit Letter C, Section 33, T18S, R30E



Initial release area, facing west

9/30/13



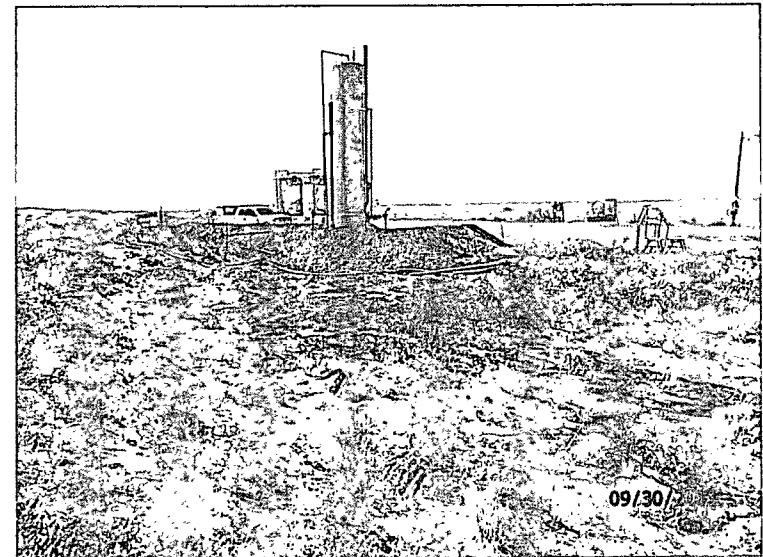
Showing liner beneath release, facing south

9/30/13



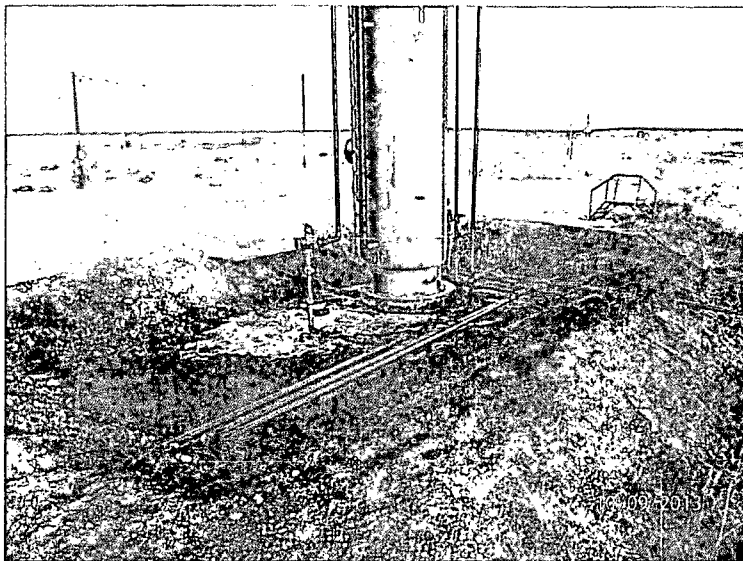
Initial release area, facing east

9/30/13



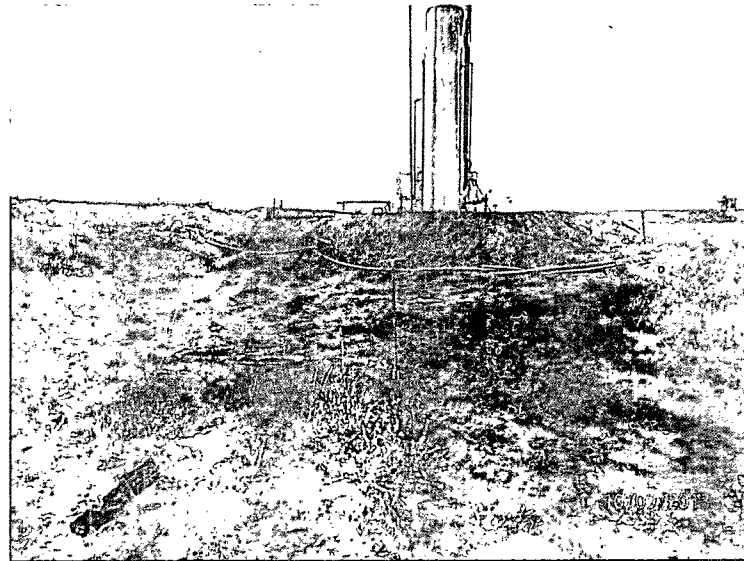
Initial release area, facing northwest

9/30/13



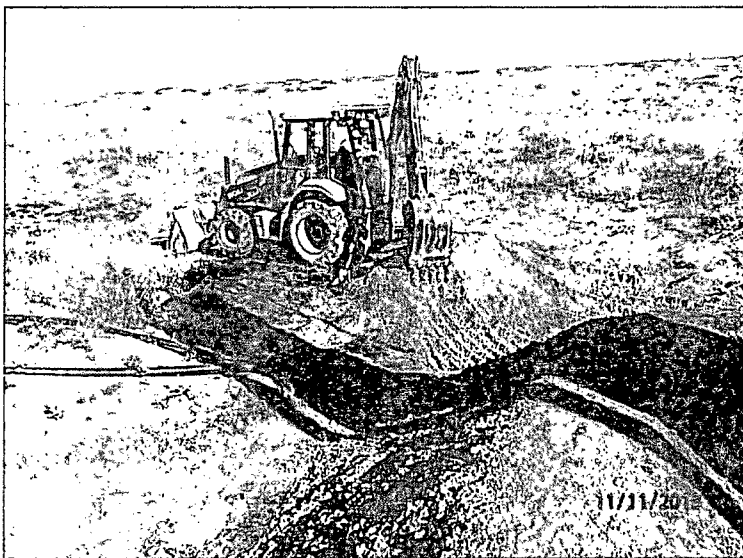
Initial release area, facing northeast

10/9/13



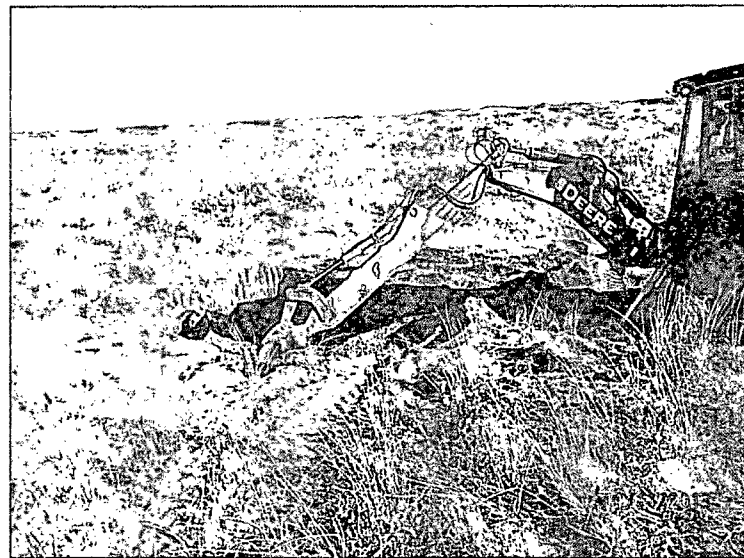
Hand augur site for depth, facing northwest

10/9/13



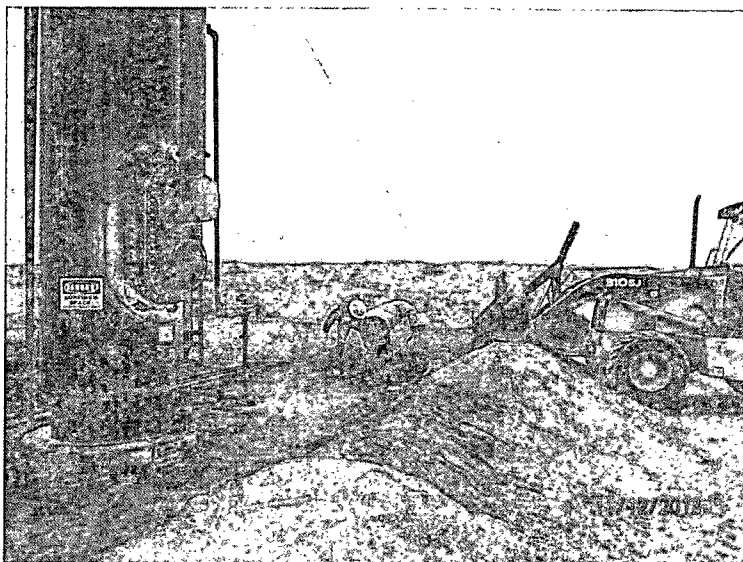
Beginning 6 in scrape, facing northeast

11/11/13

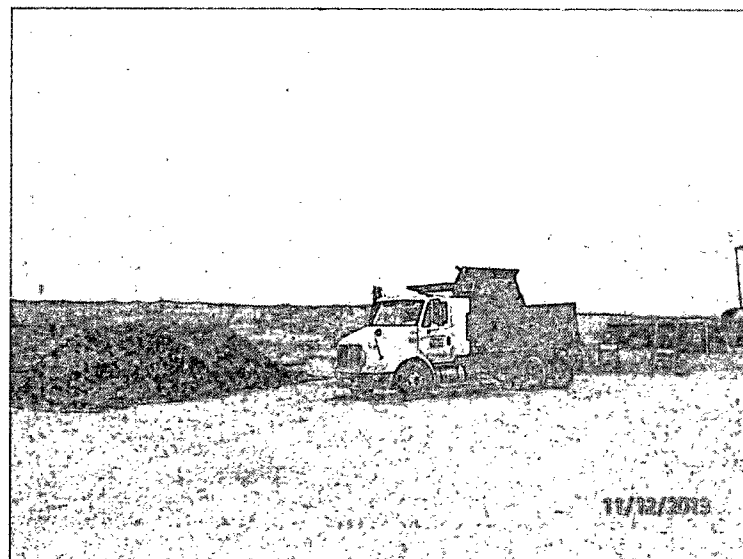


Beginning 4 ft excavation, facing north

11/11/13

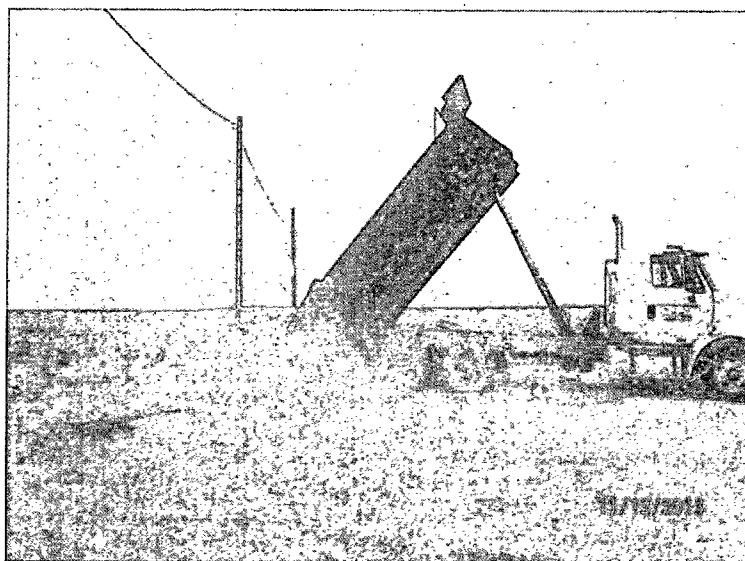


Removing caliche over liner, facing southeast 11/12/13



Exporting soil, facing southeast

11/12/13



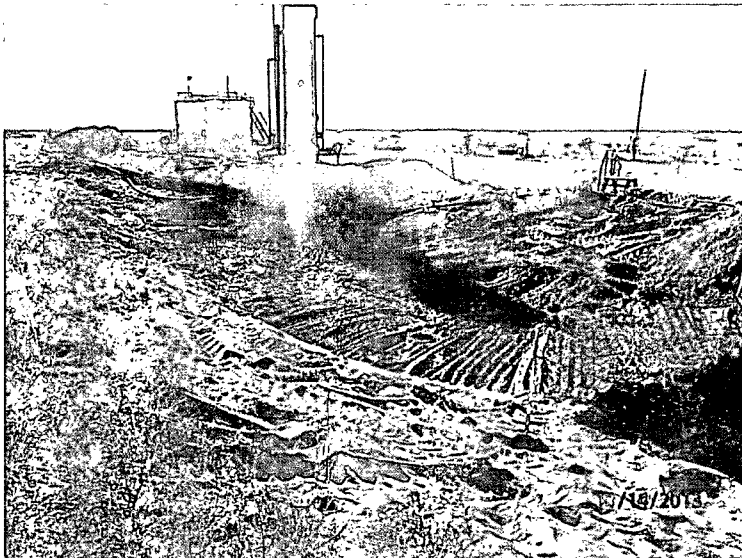
Importing caliche, facing north

11/12/13

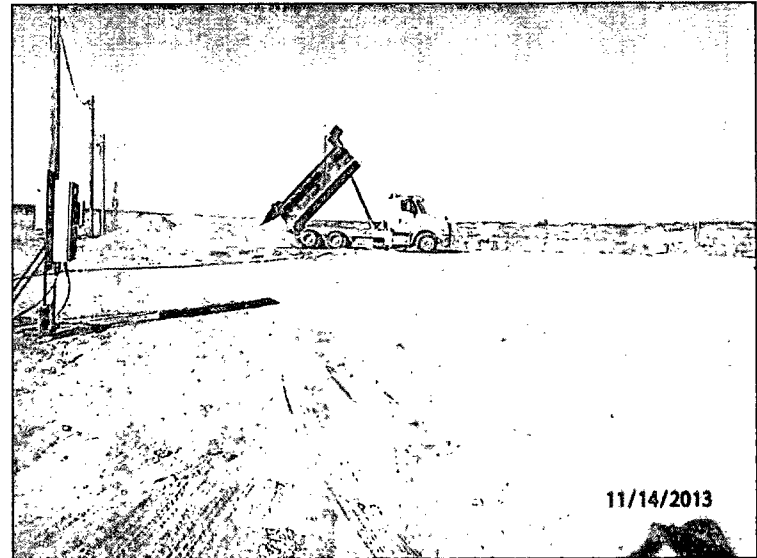


Taking final samples, facing south

11/14/13



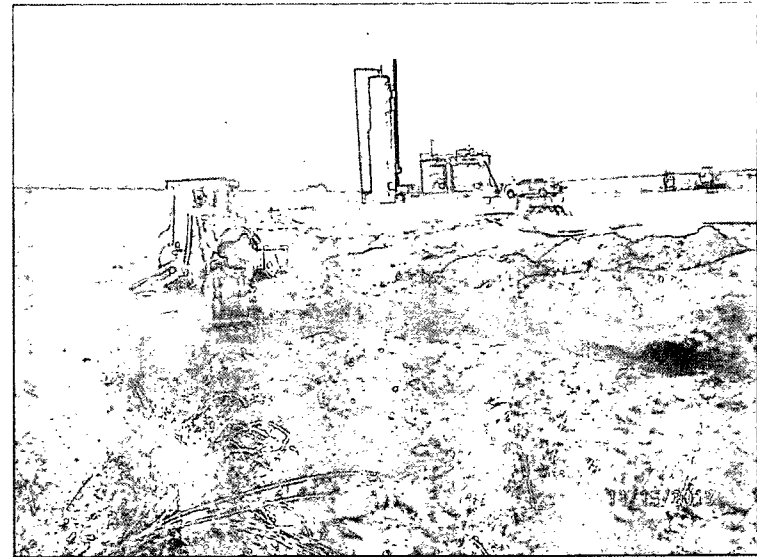
6 in scrape completed, facing southwest 11/14/13



Importing topsoil, facing north 11/14/13



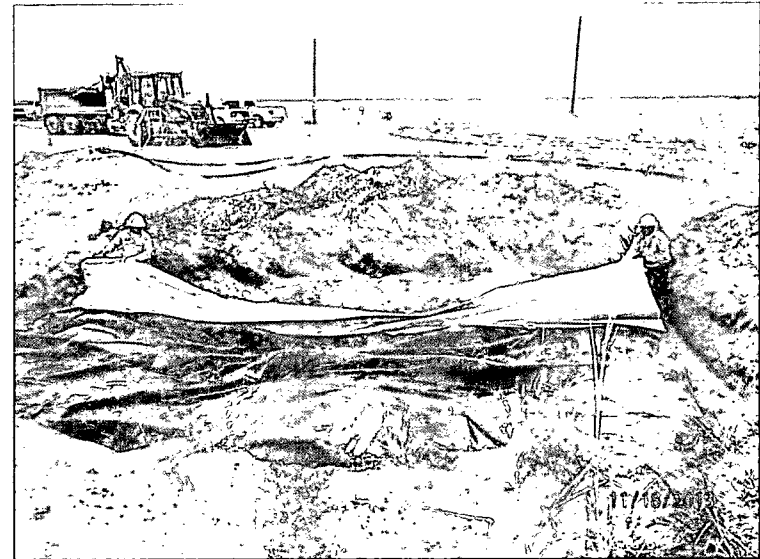
Sampling 4 ft excavation, facing northeast 11/15/13



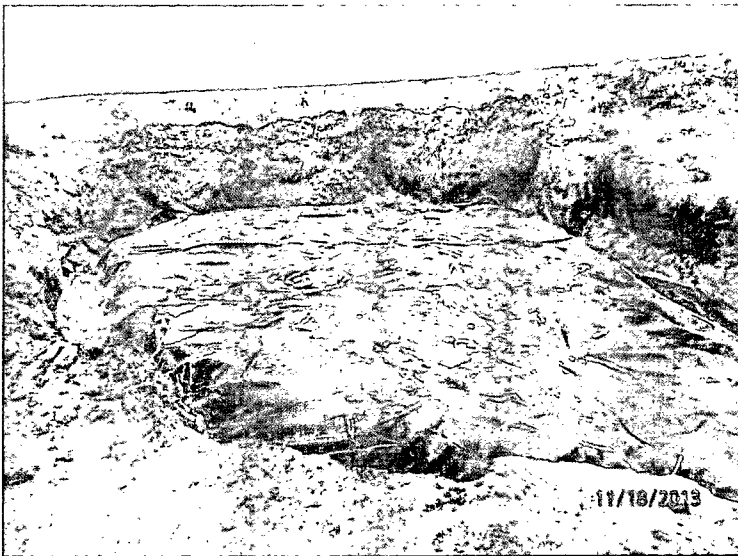
Installing trench to key set liner, facing south 11/15/13



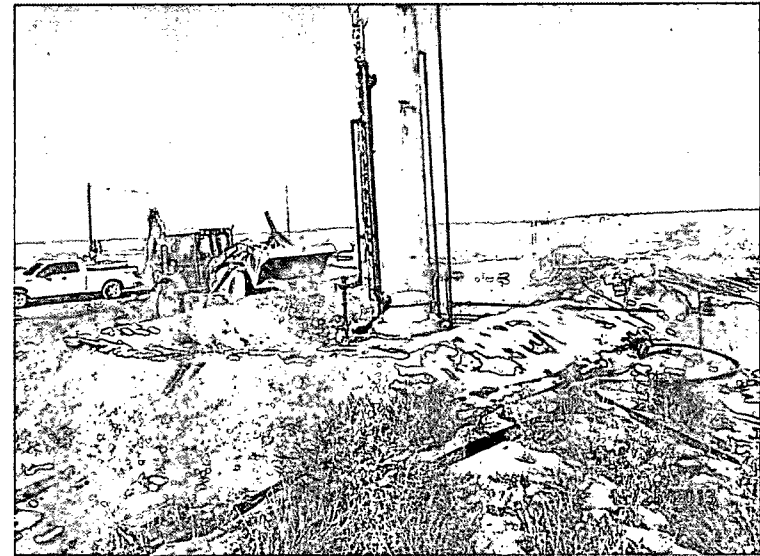
Trench for key set completed, facing northwest
11/18/13



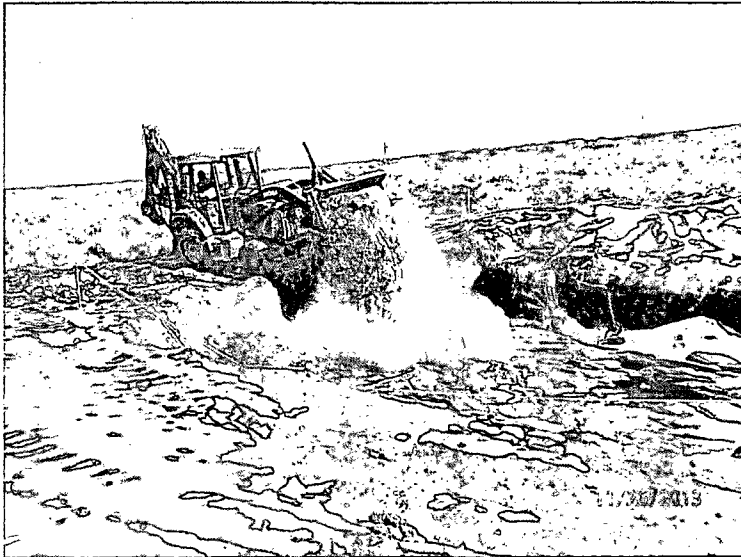
Installing liner, facing southwest
11/18/13



Liner installation completed, facing north
11/18/13

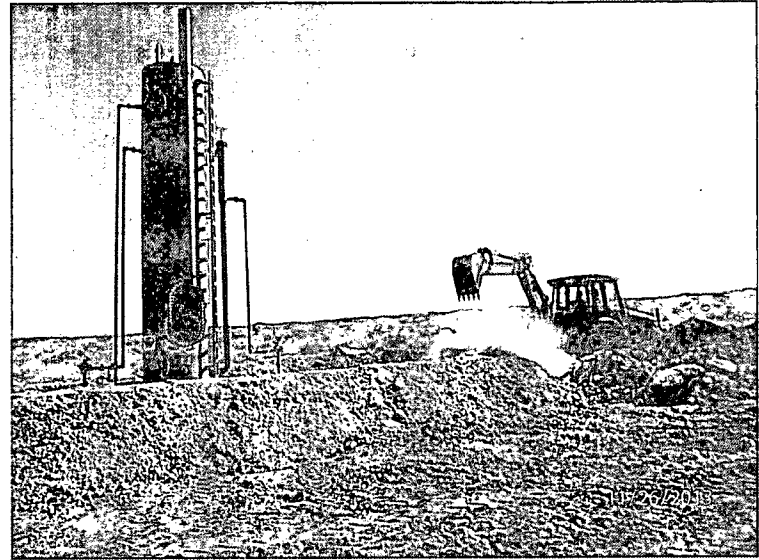


Backfilling treater area, facing northwest
11/26/13



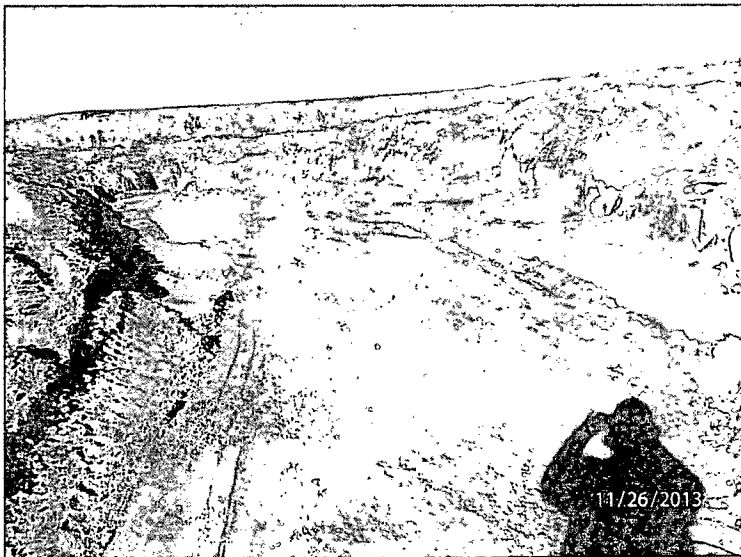
Padding liner, facing northeast

11/26/13



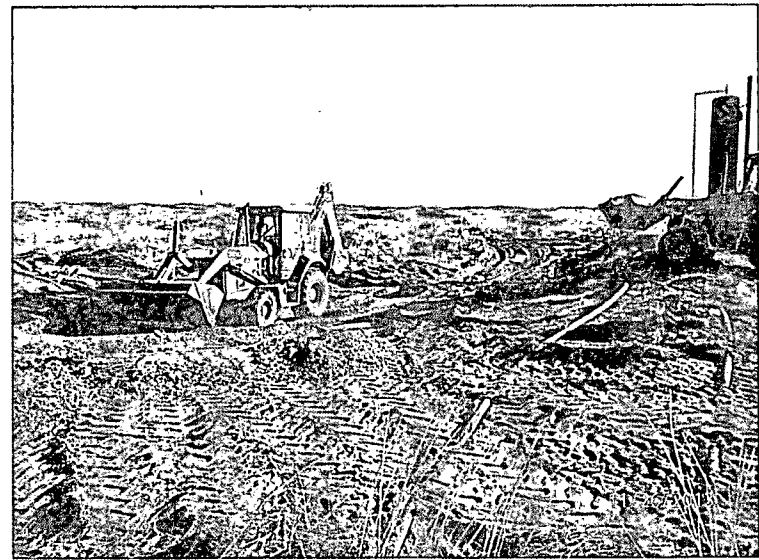
Re-building berm, facing southeast

11/26/13



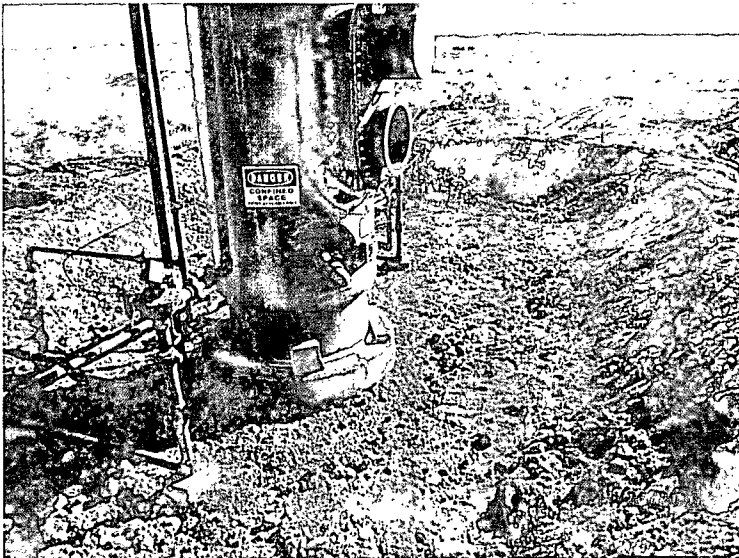
Padding of liner completed, facing north

11/26/13



Backfilling excavation and scrape, facing southeast

11/26/13



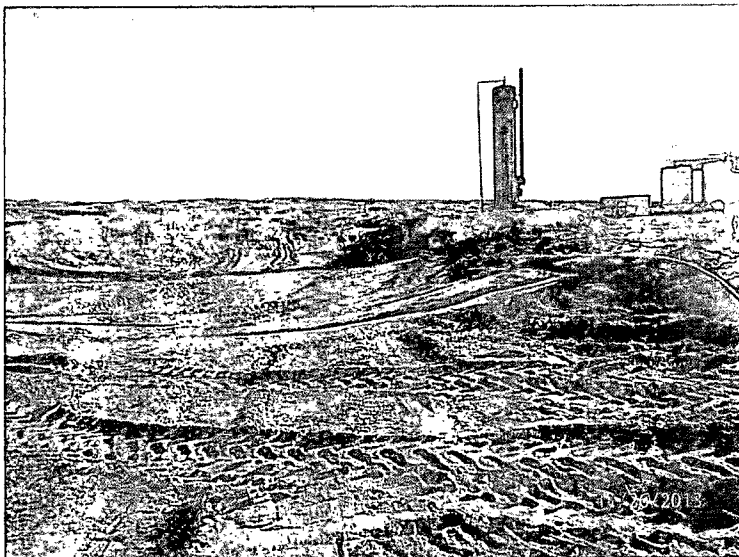
Backfill of treater completed, facing southeast

11/26/13



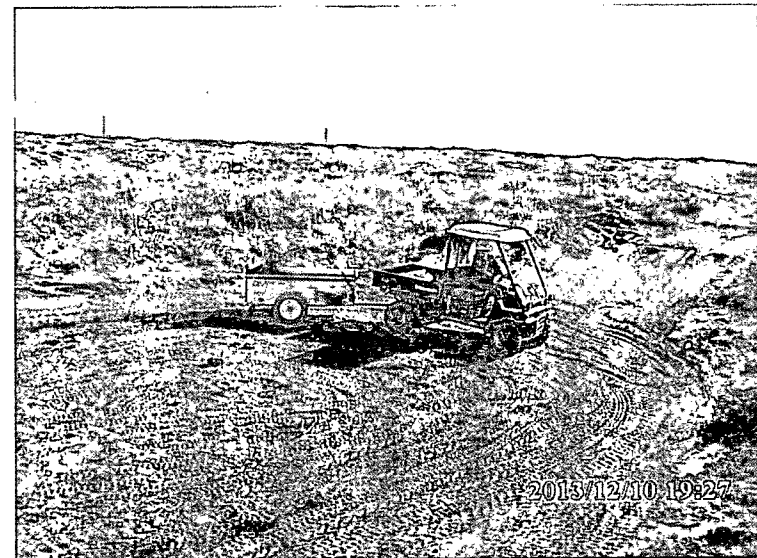
Backfill of pasture area completed, facing east

11/26/13



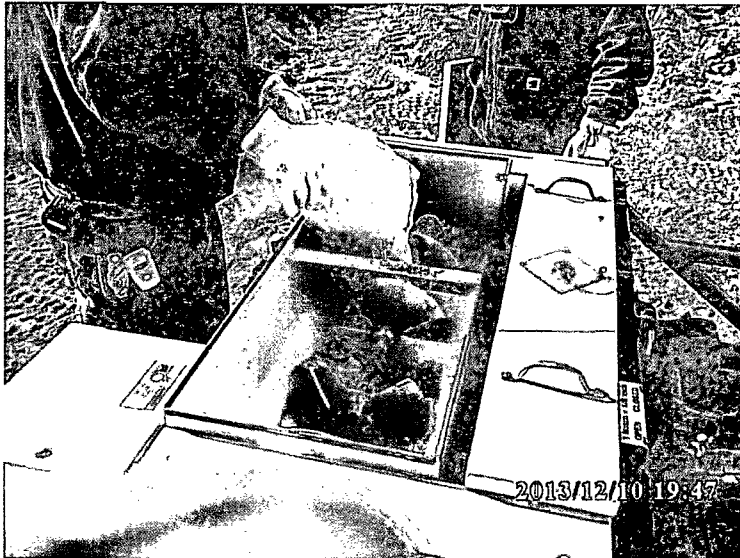
Backfill of pasture area completed, facing south

11/26/13



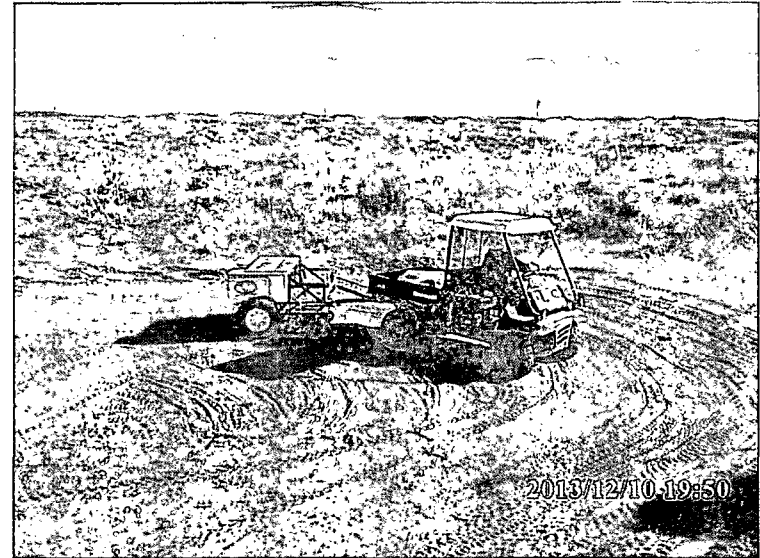
Adding soil amendments, facing north

12/10/13



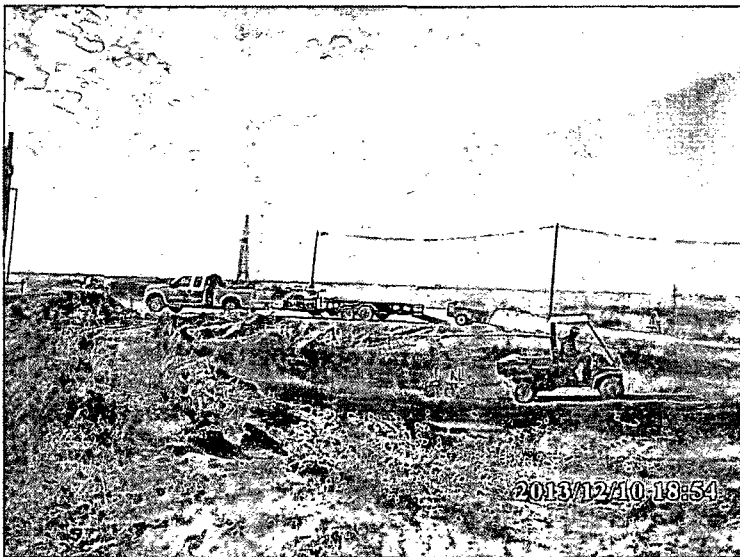
Loading seeder with LPC mix

12/10/13



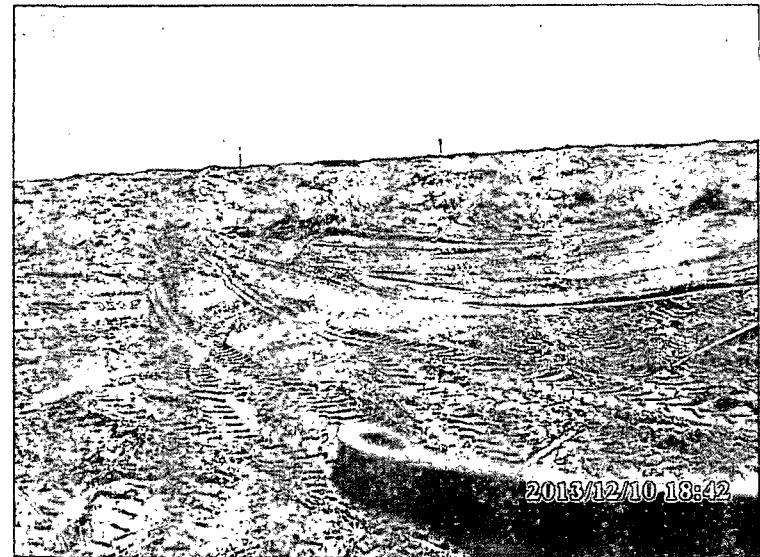
Seeding site, facing northwest

12/10/13



Tilling site, facing east

12/10/13



Site completed, facing northeast

12/10/13

Appendix E

Final C-141s

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-141
Revised August 8, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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.: 806-367-0645	
Facility Name: McClay Federal #7	Facility Type: Oil Producer	
Surface Owner: Federal	Mineral Owner	API No.: 3001510370

LOCATION OF RELEASE

Unit Letter C	Section 33	Township 18S	Range 30E	Feet from the 330	North/South Line North	Feet from the 1650	East/West Line West	County Eddy
------------------	---------------	-----------------	--------------	----------------------	---------------------------	-----------------------	------------------------	----------------

Latitude 32.7103208597655 Longitude -103.980175130974

NATURE OF RELEASE

Type of Release: Produced Water/ Oil	Volume of Release: 4bbls/ 1bbl	Volume Recovered: 4bbls/ 1bbl
Source of Release: Heater	Date and Hour of Occurrence: 9/8/2013 12:00 am	Date and Hour of Discovery: 09/08/2013
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Burton- BLM Mike Bratcher- NM OCD	
By Whom? Brian Wall	Date and Hour 09/10/2013	
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.* Hole in bottom of heater inside base ring. All fluid in dike area picked up with vacuum truck emptied in heater. Cause degradation.		
Describe Area Affected and Cleanup Action Taken.* A total of 31 sq ft of the lined, bermed area surrounding the heater was affected. RECS personnel arrived on site on September 10th, 2013. The site was photographed and mapped. The liner was found across the base of the heater and none of the release occurred outside the liner. The contaminated caliche above the liner was removed and taken to a NMOCD approved facility for disposal. Clean caliche was imported to the site to replace the contaminated caliche.		
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>Fred B Wall</u>		OIL CONSERVATION DIVISION
Printed Name: Brian Wall		Approved by Environmental Specialist:
Title: Construction Foreman II	Approval Date:	Expiration Date:
E-mail Address: bwall@linnenery.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <u>2/5/14</u>	Phone: 806-367-0645	

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Linn Operating	Contact: Brian Wall
Address: 2130 W. Bender Hobbs, NM 88240	Telephone No.: 806-367-0645
Facility Name: McClay Federal #7	Facility Type: Oil

Surface Owner: Federal	Mineral Owner	API No.: 3001510370
------------------------	---------------	---------------------

LOCATION OF RELEASE

Unit Letter C	Section 33	Township 18S	Range 30E	Feet from the 330	North/South Line North	Feet from the 1650	East/West Line West	County Eddy
------------------	---------------	-----------------	--------------	----------------------	---------------------------	-----------------------	------------------------	----------------

Latitude: 32.7103208597655 Longitude: -103.980175130974

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 10 bbls	Volume Recovered: 0
Source of Release: Heater	Date and Hour of Occurrence: 09/24/2013 12:00am	Date and Hour of Discovery: 9/24/2013
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Burton- BLM Mike Bratcher- NM OCD	
By Whom? Brian Wall	Date and Hour 09/26/2013 7:45am	
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.*: Missed opening valve when restarting well. Heater exceeded operating pressure blew oil through pressure relief valve on top of the heater.

Describe Area Affected and Cleanup Action Taken.*: The release covered 2,486 sq ft of lease pad and pasture land. RECS personnel were on site beginning on September 30th, 2013 to assess the releases. Soil samples from the surface and with depth were taken from the release. The samples were field tested for chlorides and organic vapors and representative samples were taken to a commercial laboratory for analysis. Point 1 returned laboratory chloride, GRO, DRO and BTEX below regulatory standards beginning at 6 inches. Point 2 returned laboratory chloride, GRO, DRO and BTEX below regulatory standards beginning at 1 foot. Point 3 returned laboratory chloride, GRO, DRO and BTEX below regulatory standards beginning at 8.5 feet. A CAP for the release (2RP-1959) was sent to NMOCD and BLM on October 29th, 2013 and approved by BLM the same day. NMOCD approved the CAP on November 15th, 2013. On November 6th, 2013, CAP activities began at the site. The area inside the treater berm, the contaminated berm, the 6 inch scrape and the 4 foot excavation were completed and a total of 228 yards of contaminated soil was taken to a NMOCD approved facility for disposal. A total of 72 yards of clean caliche was imported to the site to backfill the treater area and replace the contaminated berm. The remaining caliche was backfilled into the 4 foot excavation. Once the 4 foot excavation was completed, wall samples were taken to a commercial laboratory for analysis to confirm all constituents were below regulatory standards. At the base of the 6 inch scrape, a 5 point bottom composite was taken and sent to a commercial laboratory for analysis. The bottom composite returned a chloride value of 320 mg/kg, a DRO value of 306 mg/kg and GRO and BTEX values of non-detect. This data was sent to BLM and NMOCD with a request to backfill the site. BLM approved the site to be backfilled on November 25th, 2013 and NMOCD approved the site to be backfilled on December 2nd, 2013. A trench was installed along the periphery of the 4 foot excavation and a 20-mil reinforced poly liner was key set into the excavation. A total of 108 yards of top soil was imported to site to serve as backfill. The liner was padded with 6 inches of the top soil and the remaining caliche was backfilled over the padded liner. A sample of the imported top soil was taken to a commercial laboratory and returned a laboratory chloride reading of 64 mg/kg. The 6 inch scrape and the remainder of the 4 foot excavation was backfilled with the imported top soil and the area was contoured to the surrounding location. On December 10th, 2013, soil amendments were added to the pasture area and the site was seeded with LPC seed mix.

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: <i>Fred B Wall</i>	OIL CONSERVATION DIVISION	
Printed Name: Brian Wall	Approved by Environmental Specialist:	
Title: Construction Foreman II	Approval Date:	Expiration Date:
E-mail Address: bwall@linenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 2/5/14	Phone: 806-367-0645	

* Attach Additional Sheets If Necessary