



Linn Energy Turner A #43

REMEDIATION WORK PLAN

API No. 30-015-28793

Release Date: 6/15/2015

Unit Letter P, Section 18, Township 17 South, Range 31 East

October 9, 2015

Prepared by:

Lance Crenshaw, Project Manager
Environmental Department
Diversified Field Service, Inc.
206 W. Snyder
Hobbs, NM 88240
Phone: (575)964-8394
Fax: (575)393-8396

Diversified Field Service, Inc.

Monday, November 9, 2015

Environmental Department

206 W. Snyder

Hobbs, NM 88240

Phone: (575)964-8394

Fax: (575)964-8396

Mike Bratcher

Environmental Specialist

NM Oil Conservation District – Division 2

811 S. First St.

Artesia, NM 88210

RE: Turner A #43– Work Plan Remediation

UL/P, Section 18, T17S, R31E

API No. 30-015-28793

Mr. Bratcher,

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

The site is located northeast of Loco Hills, in Eddy County. This leak site resulted from the stuffing box wearing out, causing a small leak. The release was approximately 6 bbls of oil and 2 bbls of produced water and was on the south side of the pumping unit about 20' long and 15' wide. The spill was contained by a berm around the location. A vacuum truck recovered 4 bbls of oil and 2 bbls of produced water. A form C-141 was submitted to the NMOCD on June 15, 2015 (Appendix I).

Site Delineation

Diversified Field Services responded to the spill and scraped up the contaminated area on the pad. All contaminated materials were hauled to an approved NM state facility. DFSI personnel then sampled four points of the spill area. These samples were field tested for chloride levels as well as BTEX. The BTEX samples were performed using a Mini Rae Photoionization Detector (PID). All clean samples were submitted to Cardinal Labs of Hobbs, NM.

On November 6, 2015, DFSI personnel returned to the location to delineate SP #1 and SP #2. Two bore holes were drilled for these sample points. Those results are attached.

According to the Chevron-Texaco depth to groundwater map, the average depth to groundwater for this location is 350 feet.

Conclusion

Diversified Field Service, Inc.

Monday, November 9, 2015

Environmental Department

206 W. Snyder

Hobbs, NM 88240

Phone: (575)964-8394 Fax: (575)964-8396

Of the four samples tested, only SP #1 was dirty beyond the surface. Because this sample point was located so close to the actual pumping unit, DFSI proposes this area will be re-addressed when the well is plugged and abandoned. The rest of the sample points tested clean at the surface. The initial scrape of the spill area minimized any harm to the environment. DFSI will submit all proper closure documentation to NMOCD and BLM in accordance with regulatory compliance.

Please contact me with and questions and/or concerns. Thank you.

Sincerely,



Lance Crenshaw
Project Manager
Diversified Field Service, Inc.
315 S. Leech
Hobbs, NM 88240
Office: (575)397-6437
Mobile: (575)441-2359
Fax: (575)393-2981

cc Shelley Tucker
NM Bureau of Land Management

Attachments:

C-141
Photo Page
Site Diagram
Lab Results

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 Inc.	Contact	E.L. Gonzales
Address	2130 W Bender Blvd Hobbs, NM 88240	Telephone No.	575-738-1739
Facility Name	Turner A #43	Facility Type	Oil Producer
Surface Owner	Federal	Mineral Owner	API No. 30-015-28793

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	18	17S	31E	50	South	1250	East	Eddy

Latitude 32.8274123769042 Longitude -103.904628477667

NATURE OF RELEASE

Type of Release	Oil / Produced Water	Volume of Release	2bbls / 6bbls	Volume Recovered	2bbls / 4bbls
Source of Release	Stuffing box	Date and Hour of Occurrence	06/15/2015	Date and Hour of Discovery	06/15/2015 11:30pm
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?	Date and Hour				
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.* Packing of stuffing box was wore out, made a small mess. Spilled about 8bbls. Of oil and produce water, and rain water mixture on the ground. The spill was on the south side of the pumping unit about 20 ft. long and about 15 ft. wide. The spill was contained by a berm around the location.					
Describe Area Affected and Cleanup Action Taken.* Vacuum truck suck up the mess and take it to disposal.					
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.					
Signature: 		<u>OIL CONSERVATION DIVISION</u>			
Printed Name: E.L. Gonzales		Approved by Environmental Specialist:			
Title: Production Supervisor		Approval Date:		Expiration Date:	
E-mail Address: elgonzales@linenergy.com		Conditions of Approval:		Attached <input type="checkbox"/>	
Date: 06/18/2015 Phone: 505-504-8002					

* Attach Additional Sheets If Necessary

Linn Energy, Turner A #43

Unit Letter P, Section 18, T17S R31E



Sign marking location



Spill location on pad



Spill location on pad



Scraping spill on pad



Scraping spill area around lines, wellhead

Site Diagram

Linn, Turner A 43
Sec. 18 T17S R31E
Eddy County, NM
Drafted By: Lance Crenshaw, 6-16-15

0 0.005 0.01 0.02 Miles

Legend

Misc_points

Types

- Electrical Box
- Power Pole
- Headers
- Injection
- Pumpjacks
- Tanks
- Valves
- Other
- Soil Bores
- sample_pts
- Source

Pipeline

Type

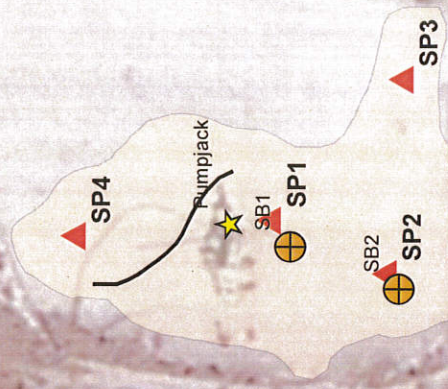
- Above Ground Line
- Buried Line

Spill

- <all other values>

Spill_Media

- Oil and Produced H2O
- Oil
- Other
- Produced Water



Spill Area:
13,465 sq. ft.

Lance Crenshaw
GIS Technician

Soil Remediation and Ground Water Remediation
Environmental Assessments
Regulatory Compliance



DFSI

Environmental

Services

Office: 575-964-8394
Fax: 575-964-8396

Cell: 575-441-2359
Email: lcrenshaw@diversifiedfsi.com

Source: Esri, DigitalGlobe, GeoEye, i-cub
swisstopo, and the GIS User Community

[illegible]

	Lab Confirmation Sample
	Field Sampling
	Needs Delineation and confirmation samples



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

July 07, 2015

DENNIS POTTER

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: TURNER A # 43

Enclosed are the results of analyses for samples received by the laboratory on 06/30/15 16:25.

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,

Hope S. Moreno For Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 DENNIS POTTER
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

Received:	06/30/2015	Sampling Date:	06/30/2015
Reported:	07/07/2015	Sampling Type:	Soil
Project Name:	TURNER A # 43	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP.1 @ 9' (H501688-01)

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	07/02/2015	ND	2.27	114	2.00	2.86	
Toluene*	<0.050	0.050	07/02/2015	ND	2.03	101	2.00	3.09	
Ethylbenzene*	<0.050	0.050	07/02/2015	ND	1.92	96.0	2.00	5.36	
Total Xylenes*	<0.150	0.150	07/02/2015	ND	5.76	96.0	6.00	5.18	
Total BTEX	<0.300	0.300	07/02/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 109 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	07/02/2015	ND	432	108	400	3.77	

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	07/02/2015	ND	198	98.8	200	4.52	
DRO >C10-C28	<10.0	10.0	07/02/2015	ND	211	106	200	4.94	

Surrogate: 1-Chlorooctane 92.8 % 47.2-157

Surrogate: 1-Chlorooctadecane 98.2 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Hope S. Moreno For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 DENNIS POTTER
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

Received:	06/30/2015	Sampling Date:	06/30/2015
Reported:	07/07/2015	Sampling Type:	Soil
Project Name:	TURNER A # 43	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP.2 @ SURFACE (H501688-02)

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	07/02/2015	ND	2.27	114	2.00	2.86		
Toluene*	<0.050	0.050	07/02/2015	ND	2.03	101	2.00	3.09		
Ethylbenzene*	<0.050	0.050	07/02/2015	ND	1.92	96.0	2.00	5.36		
Total Xylenes*	<0.150	0.150	07/02/2015	ND	5.76	96.0	6.00	5.18		
Total BTEX	<0.300	0.300	07/02/2015	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 107 % 61-154

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	832	16.0	07/02/2015	ND	432	108	400	3.77		

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	07/02/2015	ND	198	98.8	200	4.52		
DRO >C10-C28	<10.0	10.0	07/02/2015	ND	211	106	200	4.94		

Surrogate: 1-Chlorooctane 86.1 % 47.2-157

Surrogate: 1-Chlorooctadecane 87.3 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Hope S. Moreno For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 DENNIS POTTER
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

Received:	06/30/2015	Sampling Date:	06/30/2015
Reported:	07/07/2015	Sampling Type:	Soil
Project Name:	TURNER A # 43	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP.3 @ SURFACE (H501688-03)

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	07/02/2015	ND	2.27	114	2.00	2.86	
Toluene*	<0.050	0.050	07/02/2015	ND	2.03	101	2.00	3.09	
Ethylbenzene*	<0.050	0.050	07/02/2015	ND	1.92	96.0	2.00	5.36	
Total Xylenes*	<0.150	0.150	07/02/2015	ND	5.76	96.0	6.00	5.18	
Total BTEX	<0.300	0.300	07/02/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 111 % 61-154

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/02/2015	ND	432	108	400	3.77	

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	07/02/2015	ND	198	98.8	200	4.52	
DRO >C10-C28	<10.0	10.0	07/02/2015	ND	211	106	200	4.94	


Surrogate: 1-Chlorooctane 87.9 % 47.2-157

Surrogate: 1-Chlorooctadecane 85.4 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Hope S. Moreno For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
DENNIS POTTER
2130 W. BENDER
HOBBS NM, 88240
Fax To: (575) 738-1740

Received: 06/30/2015
Reported: 07/07/2015
Project Name: TURNER A # 43
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/30/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP.4 @ SURFACE (H501688-04)

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	07/02/2015	ND	2.27	114	2.00	2.86	
Toluene*	<0.050	0.050	07/02/2015	ND	2.03	101	2.00	3.09	
Ethylbenzene*	<0.050	0.050	07/02/2015	ND	1.92	96.0	2.00	5.36	
Total Xylenes*	<0.150	0.150	07/02/2015	ND	5.76	96.0	6.00	5.18	
Total BTEX	<0.300	0.300	07/02/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 109 % 61-154

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	07/02/2015	ND	432	108	400	3.77	

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	07/02/2015	ND	198	98.8	200	4.52	
DRO >C10-C28	<10.0	10.0	07/02/2015	ND	211	106	200	4.94	

Surrogate: 1-Chlorooctane 88.3 % 47.2-157

Surrogate: 1-Chlorooctadecane 89.5 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Hope S. Moreno For Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

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*=Accredited Analyte

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Hope S. Moreno For Celey D. Keene, Lab Director/Quality Manager



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

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 398-2326

November 09, 2015

DENNIS POTTER

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: TURNER A # 43

Enclosed are the results of analyses for samples received by the laboratory on 11/06/15 8:15.

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,



Caley D. Keene

Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
 DENNIS POTTER
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

Received:	11/06/2015	Sampling Date:	11/05/2015
Reported:	11/09/2015	Sampling Type:	Soil
Project Name:	TURNER A # 43	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	NOT GIVEN		

Sample ID: SAMPLE POINT 1 @ 10' (H502943-01)

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	11/07/2015	ND	2.01	100	2.00	0.639		
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639		
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423		
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558		
Total BTEX	<0.300	0.300	11/07/2015	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 101 % 73.6-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	11/06/2015	ND	400	100	400	0.00		

TPH 8015M			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	11/06/2015	ND	207	104	200	3.66		
DRO >C10-C28	<10.0	10.0	11/06/2015	ND	214	107	200	2.38		

Surrogate: 1-Chlorooctane 83.0 % 35-147

Surrogate: 1-Chlorooctadecane 92.9 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

LINN OPERATING-HOBBS
DENNIS POTTER
2130 W. BENDER
HOBBS NM, 88240
Fax To: (575) 738-1740

Received: 11/06/2015
Reported: 11/09/2015
Project Name: TURNER A # 43
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/05/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: SAMPLE POINT 2 @ 7' (H502943-02)

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	11/07/2015	ND	2.01	100	2.00	0.639	
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639	
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423	
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558	
Total BTEX	<0.300	0.300	11/07/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	11/06/2015	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2015	ND	207	104	200	3.66	
DRO >C10-C28	<10.0	10.0	11/06/2015	ND	214	107	200	2.38	

Surrogate: 1-Chlorooctane 83.8 % 35-147

Surrogate: 1-Chlorooctadecane 97.6 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST

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



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

No records found.

PLSS Search:

Section(s): 18

Township: 17S

Range: 31E

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