



June 25, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

#56

RE: CAPROCK MALJAMAR UNITS

Enclosed are the results of analyses for samples received by the laboratory on 06/24/14 14:40.

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 cursive script that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	06/24/2014	Sampling Date:	06/24/2014
Reported:	06/25/2014	Sampling Type:	Soil
Project Name:	CAPROCK MALJAMAR UNITS	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	ANGEL RANCH		

Sample ID: S1- 4 CMU #56 (H401896-01)

BTEX 8021B			mg/kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/24/2014	ND	2.20	110	2.00	2.12	
Toluene*	<0.050	0.050	06/24/2014	ND	2.39	119	2.00	2.08	
Ethylbenzene*	<0.050	0.050	06/24/2014	ND	2.18	109	2.00	3.12	
Total Xylenes*	<0.150	0.150	06/24/2014	ND	6.82	114	6.00	2.91	
Total BTEX	<0.300	0.300	06/24/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 120 % 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	10100	16.0	06/25/2014	ND	416	104	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	06/24/2014	ND	165	82.3	200	3.92	
DRO >C10-C28	382	50.0	06/24/2014	ND	194	97.2	200	5.37	

Surrogate: 1-Chlorooctane 96.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 131 % 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:

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

Received:	06/24/2014	Sampling Date:	06/24/2014
Reported:	06/25/2014	Sampling Type:	Soil
Project Name:	CAPROCK MALJAMAR UNITS	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	ANGEL RANCH		

Sample ID: S2- 4 CMU #56 (H401896-02)

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/24/2014	ND	2.20	110	2.00	2.12	
Toluene*	<0.050	0.050	06/24/2014	ND	2.39	119	2.00	2.08	
Ethylbenzene*	<0.050	0.050	06/24/2014	ND	2.18	109	2.00	3.12	
Total Xylenes*	<0.150	0.150	06/24/2014	ND	6.82	114	6.00	2.91	
Total BTEX	<0.300	0.300	06/24/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 119 % 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	06/25/2014	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/25/2014	ND	165	82.3	200	3.92	
DRO >C10-C28	358	10.0	06/25/2014	ND	194	97.2	200	5.37	

Surrogate: 1-Chlorooctane 102 % 65.2-140

Surrogate: 1-Chlorooctadecane 115 % 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 analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 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:

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

Received:	06/24/2014	Sampling Date:	06/24/2014
Reported:	06/25/2014	Sampling Type:	Soil
Project Name:	CAPROCK MALJAMAR UNITS	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	ANGEL RANCH		

Sample ID: S3- 4 CMU #56 (H401896-03)

BTEX 80218			mg/kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/24/2014	ND	2.20	110	2.00	2.12	
Toluene*	<0.050	0.050	06/24/2014	ND	2.39	119	2.00	2.08	
Ethylbenzene*	<0.050	0.050	06/24/2014	ND	2.18	109	2.00	3.12	
Total Xylenes*	<0.150	0.150	06/24/2014	ND	6.82	114	6.00	2.91	
Total BTEX	<0.300	0.300	06/24/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 118 % 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	816	16.0	06/25/2014	ND	416	104	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/24/2014	ND	165	82.3	200	3.92	
DRO >C10-C28	<10.0	10.0	06/24/2014	ND	194	97.2	200	5.37	

Surrogate: 1-Chlorooctane 76.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 75.1 % 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:

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

 Received: 06/24/2014
 Reported: 06/25/2014
 Project Name: CAPROCK MALJAMAR UNITS
 Project Number: NONE GIVEN
 Project Location: ANGEL RANCH

 Sampling Date: 06/24/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S4- 4 CMU #56 (H401896-04)
BTEX 80218

mg/kg

Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/25/2014	ND	2.20	110	2.00	2.12	
Toluene*	<0.050	0.050	06/25/2014	ND	2.39	119	2.00	2.08	
Ethylbenzene*	<0.050	0.050	06/25/2014	ND	2.18	109	2.00	3.12	
Total Xylenes*	<0.150	0.150	06/25/2014	ND	6.82	114	6.00	2.91	
Total BTEX	<0.300	0.300	06/25/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 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	352	16.0	06/25/2014	ND	416	104	400	3.92	

TPH 8015M

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	06/24/2014	ND	165	82.3	200	3.92	
DRO >C10-C28	<50.0	50.0	06/24/2014	ND	194	97.2	200	5.37	

Surrogate: 1-Chlorooctane 71.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 79.5 % 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:

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

Received:	06/24/2014	Sampling Date:	06/24/2014
Reported:	06/25/2014	Sampling Type:	Soil
Project Name:	CAPROCK MALJAMAR UNITS	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	ANGEL RANCH		

Sample ID: S5- 4 CMU #56 (H401896-05)

STEX 8021B			mg/kg							
			Analyzed By: CK							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/25/2014	ND	2.20	110	2.00	2.12		
Toluene*	<0.050	0.050	06/25/2014	ND	2.39	119	2.00	2.08		
Ethylbenzene*	<0.050	0.050	06/25/2014	ND	2.18	109	2.00	3.12		
Total Xylenes*	<0.150	0.150	06/25/2014	ND	6.82	114	6.00	2.91		
Total BTEX	<0.300	0.300	06/25/2014	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 118 % 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	1920	16.0	06/25/2014	ND	416	104	400	3.92		

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<50.0	50.0	06/24/2014	ND	165	82.3	200	3.92		
DRO >C10-C28	<50.0	50.0	06/24/2014	ND	194	97.2	200	5.37		

Surrogate: 1-Chlorooctane 65.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 73.8 % 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

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



CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

Company Name:

Viper

Project Manager:

Fred Ramsey

Address:

1502 Bender Ave #11

City:

Hobbs

State: NM Zip: 88240

Phone #:

940-395-3308

Fax #:

Project #:

Project Owner: Linn O.P.

Project Name:

CapRock Maljamar units

Project Location:

CNU Angel Ranch

Sampler Name:

Dusty Boggs

P.O. #:

Company:

Linn O.P.

Address:

2130 W Bender

City:

Hobbs

State:

NM Zip: 88241

Phone #:

575-738-1739

Fax #:

FOR LAB USE ONLY

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

TPH

BTEX

CL

Lab I.D.

Sample I.D.

H401896

S1-4 CNU # 56

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S2-4 CNU # 56

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S3-4 CNU # 56

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S4-4 CNU # 56

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S5-4 CNU # 56

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S1-1 CNU # 400

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S2-1 CNU # 400

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S3-1 CNU # 400

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S4-1 CNU # 400

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S5-1 CNU # 400

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S1-1 CNU # 400

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S2-1 CNU # 400

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S3-1 CNU # 400

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S4-1 CNU # 400

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S5-1 CNU # 400

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V

S1-1 CNU # 400

V

V

V

V

V

V

V

V

V

V

V

V

V

V

V