1R - 427-364

WORKPLANS

Date:
10-18-12

ARCADIS
Infrastructure, environment, buildings

ARCADIS U.S., Inc.
1004 North Big Spring Street
Suite 300
Midland
Texas 79701
Tel 432.687.5400
Fax 432.687.5401
www.arcadis-us.com

Sent Certified Mail
Return Receipt No. 7002 2410 0001 5813 0400

Mr. Ed Hansen
New Mexico Energy, Minerals, & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

Environmental

Subject:

ICP Report and Corrective Action Plan (CAP)
EME I-7 EOL
Unit I, SEC. 7, T19S, R37E, Monument, Lea County, New Mexico
NMOCD CASE # 1R427-364

Date:
October 18, 2012

Contact:
Sharon Hall

Phone:
432.687.5400

Email:
sharon.hall@arcadis-us.cor

Our ref:
MT001107.0001

ARCADIS U.S., Inc.
TX Engineering License # F-533

Mr. Hansen:

RICE Operating Company (ROC) has retained ARCADIS U.S., Inc. (ARCADIS) to address potential environmental concerns at the above-referenced site. ROC is the service provider (agent) for the EME SWD System and has no ownership of any portion of the pipeline, well, or facility. The System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis. Environmental projects of this nature require System Party AFE approval prior to work commencing at the site. In general, project funding is not forthcoming until NMOCD approves the work plan. Therefore, your timely review of this submission is greatly appreciated.

On behalf of ROC, ARCADIS respectfully submits this ICP Report and Corrective Action Plan (CAP) for the above-referenced site.

SITE HISTORY AND BACKGROUND

The site is located approximately five miles northwest of Monument, New Mexico. Groundwater at the site occurs at a depth of approximately 35 feet below ground surface (bgs). The junction box was eliminated and initial delineation was conducted from February 15th through May 12th, 2011. Initial delineation was completed with the drilling of five soil borings on July 9, 2012.

A backhoe was used to excavate soils from an excavation measuring 10 feet by 10 feet by 12 feet deep around the former junction box. Soil samples were collected at regular intervals and analyzed in the field for chlorides using field-adapted Standard Method 4500-Cl B and screened in the field using a photoionization detector (PID).

A five-point wall composite sample was collected from each of the four walls and combined to make a representative four-wall composite sample, and a five-point composite sample was collected from the bottom of the excavation and submitted to Cardinal Laboratories for gasoline range organics (GRO), diesel range organics (DRO) and chloride analysis. DRO was detected at a concentration of 144 milligrams per kilogram (mg/kg) in the four-wall composite sample and 46.8 mg/kg in the five-point bottom composite sample. Chlorides were detected at a concentration of 496 mg/kg in the four-wall composite sample and 48 mg/kg in the five-point composite bottom sample. GRO was not detected in either of the samples.

Based on the results of the soil sampling analytical results, elevated hydrocarbon concentrations are present at the subject site.

Approximately 96 cubic yards of excavated soil was disposed at a NMOCD approved facility. The excavation was backfilled with clean imported soil to ground surface and the area was contoured to the surrounding landscape.

ROC disclosed potential groundwater impact at the site to New Mexico Oil Conservation Division (NMOCD) via e-mail on April 9th, 2012. A disclosure report was submitted to NMOCD in the 2011 junction box closures and disclosures.

ROC submitted an ICP to NMOCD on June 7, 2012 and was approved by NMOCD on July 25, 2012.

ICP INVESTIGATION RESULTS

Five soil borings (SB-1 through SB-5) were drilled at the site on July 9, 2012. Soil boring (SB-1) was advanced at the former junction box location and four soil borings were advanced 16 feet west (SB-2), 11 feet south (SB-3), 12 feet north (SB-4) and 12 feet east (SB-5) of the former junction box location.

The soil borings were drilled to depth of 20 feet bgs. Soil samples were collected every five feet and analyzed in the field for chlorides using field-adapted Method 4500-Cl-B and screened in the field using a PID. Two samples from each boring

were submitted to Cardinal Laboratories and analyzed for chlorides, GRO and DRO. Chloride concentrations were low throughout the site, with the 20 ft sample in each bore being below 176 mg/kg. GRO was non-detect throughout all bores. DRO was detected in SB-1 at 5 feet bgs (17.2 mg/kg) and at 20 feet bgs (10.7 mg/kg) and in SB-3 at 20 feet bgs (24.8 mg/kg). DRO was non-detect in SB-2, SB-4 and SB-5 (see attached figures and soil bore logs).

PROPOSED CORRECTIVE ACTION WORKPLAN

The potential source of chloride impacts to groundwater has been removed. Due to the low chlorides and DRO and non-detect GRO, ARCADIS recommends large rocks be removed and the site be seeded with native vegetation. Soil amendments will be added as necessary.

Thank you for your consideration concerning this ICP Report and CAP. If you have any questions, do not hesitate to contact Hack Conder or me.

Sincerely,

ARCADIS U.S., Inc.

Sharon E. Hall

Sharon E. Hall
Associate Vice President

Copies:
Hack Conder, ROC

Attachments:

Soil Boring Installation Figure
Soil Boring Logs
Soil Boring Photo Documentation
Soil Boring Laboratory Analysis Results

Soil Bore Installation

SB-1

Depth	Cl-	PID	LAB Cl-	GRO	DRO
SS	94	8.2			
5	84	75.2	<16	<10	17.2
10	88	27.5			
15	124	27.4			
20	118	29.1	48	<10	10.7

SB-3

Depth	Cl-	PID	LAB Cl-	GRO	DRO
SS	89	6.4			
5	144	3.4	64	<50	<50
10	117	1.6			
15	94	3.3			
20	88	1.6	32	<10	24.8

SB-4

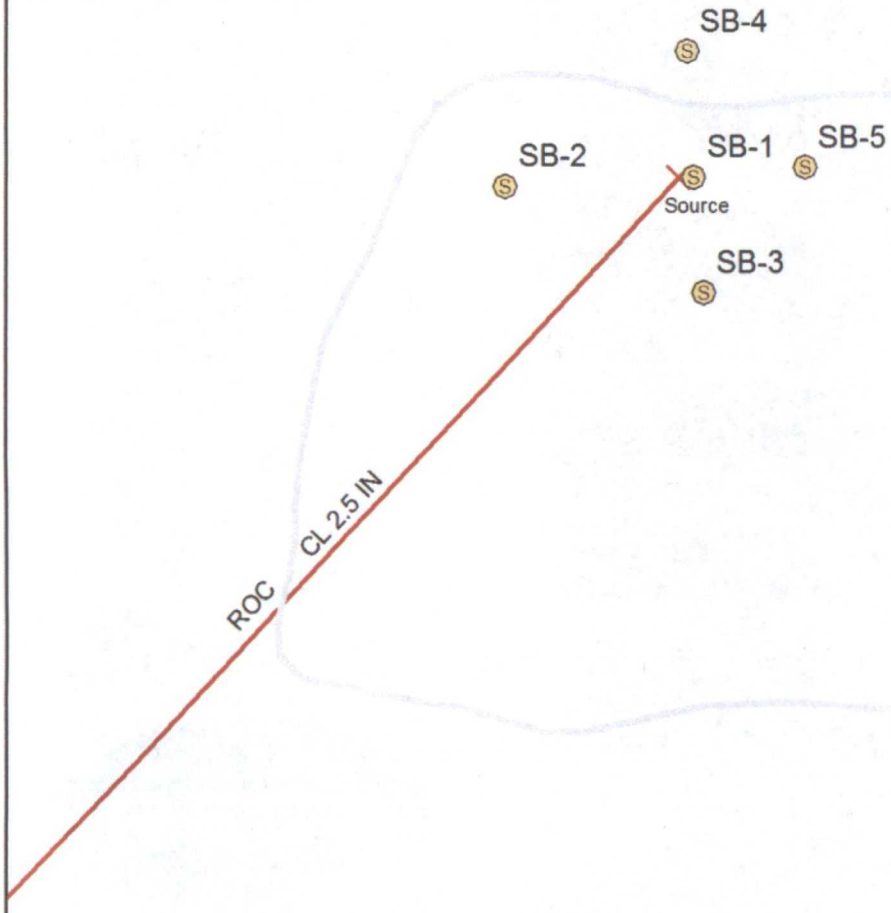
Depth	Cl-	PID	LAB Cl-	GRO	DRO
SS	122	0.4			
5	204	2.4			
10	292	2.1	304	<10	<10
15	171	2.6			
20	139	2.1	176	<10	<10

SB-2

Depth	Cl-	PID	LAB Cl-	GRO	DRO
SS	120	0.7			
5	231	1.7			
10	353	2.8	544	<10	<10
15	176	2.6			
20	122	2.4	64	<10	<10

SB-5

Depth	Cl-	PID	LAB Cl-	GRO	DRO
SS	86	0.9			
5	211	1.7	240	<10	<10
10	168	1.5			
15	143	1.8			
20	117	1.4	32	<10	<10



DGW = 35 ft

RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

EME I-7 EOL

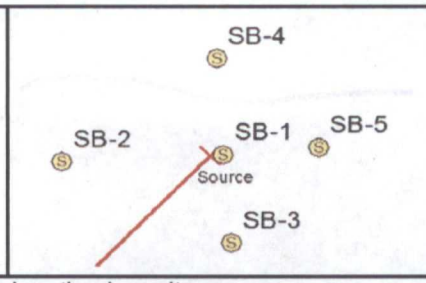
UL/I SECTION 7
T-19-S R-37-E
LEA COUNTY, NM

NMOCD CASE #: 1R427-364

N W E S

0 10 20 Feet

GPS date: 7/10/12
Drawing date: 7/11/12
Drafted by: L. Weinheimer

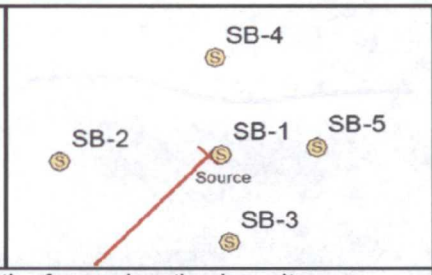
Logger:	Kyle Norman		RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC
Driller:	Harrison & Cooper, Inc.		**Project Name:** EME I-7 EOL **Well ID:** SB-1
Drilling Method:	Air Rotary		**Project Consultant:** ARCADIS
Start Date:	7/9/2012		
End Date:	7/9/2012		

Comments: Located at the former junction box site.
All samples were from cuttings.
DRAFTED BY: Amy C. Ruth
TD = 20 ft. GW = 35 ft.

Location: UL/I sec. 7 T-19-S R-37-E

Lat: 32°40'22.961"N **Long:** 103°17'6.285"W **County:** Lea **State:** NM

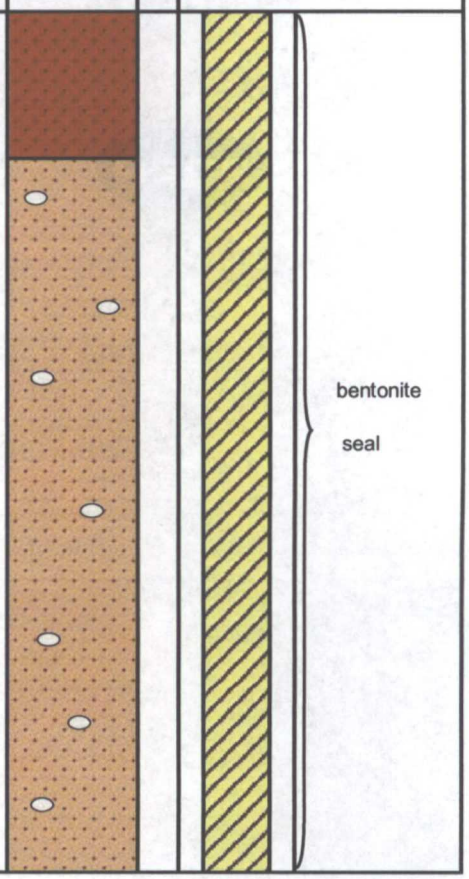
Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
SS	94		8.2			
5 ft	84	Cl- <16	75.2			
		GRO <10				
		DRO 17.2				
10 ft	88		27.5	Brown Sand		bentonite seal
15 ft	124		27.4			
20 ft	118	Cl- 48	29.1			
		GRO <10				
		DRO 10.7				

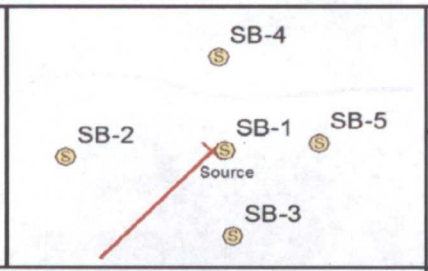
Logger:	Kyle Norman		**Project Name:** EME I-7 EOL **Well ID:** SB-2
Driller:	Harrison & Cooper, Inc.		**Project Consultant:** ARCADIS
Drilling Method:	Air Rotary		
Start Date:	7/9/2012		
End Date:	7/9/2012		

Comments: Located 16 ft. west of the former junction box site.
All samples were from cuttings.
DRAFTED BY: Amy C. Ruth
TD = 20 ft. GW = 35 ft.

Location: UL/I sec. 7 T-19-S R-37-E
Lat: 32°40'22.954"N **County**: Lea
Long: 103°17'6.495"W **State**: NM

Depth (feet)	Chloride field tests	LAB	PID	Description
				Brown Sand
SS	120		0.7	
				Tan Sand With Some Caliche
5 ft	231		1.7	
10 ft	353	Cl- 544	3	
		GRO <10		
		DRO <10		
15 ft	176		3	
20 ft	122	Cl- 64	2.4	
		GRO <10		
		DRO <10		



Logger:	Kyle Norman		RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC — RECS
Driller:	Harrison & Cooper, Inc.		
Drilling Method:	Air Rotary		**Project Name:** EME I-7 EOL **Well ID:** SB-3
Start Date:	7/9/2012		
End Date:	7/9/2012		**Project Consultant:** ARCADIS

Comments: Located 11 ft. south of the former junction box site.
All samples were from cuttings.
DRAFTED BY: Amy C. Ruth

TD = 20 ft. GW = 35 ft.

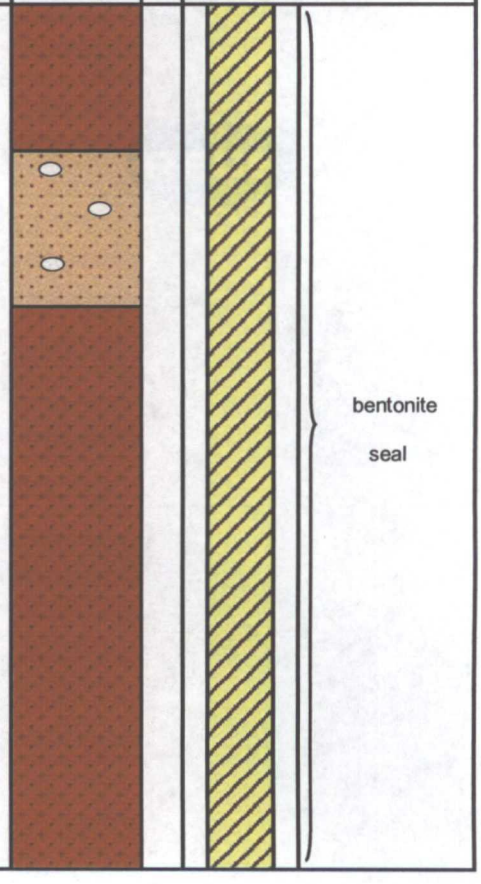
Location: UL/I sec. 7 T-19-S R-37-E

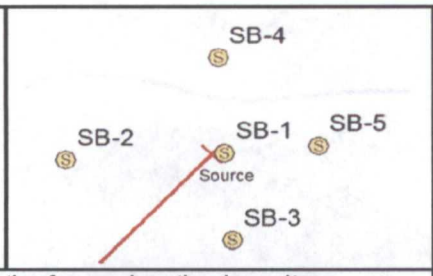
Lat: 32°40'22.862"N **County**: Lea
Long: 103°17'6.278"W **State**: NM

Depth (feet)	Chloride field tests	LAB	PID	Description
				Brown Sand
SS	89		6.4	
				Tan Sand With Some Caliche
5 ft	144	Cl- 64	3.4	
		GRO <50		Brown Sand
		DRO <50		
10 ft	117		1.6	
15 ft	94		3.3	
20 ft	88	Cl- 32	1.6	
		GRO <10		
		DRO 24.8		

Lithology

Well Construction



Logger:	Kyle Norman		RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC
Driller:	Harrison & Cooper, Inc.		
Drilling Method:	Air Rotary		**Project Name:** EME I-7 EOL **Well ID:** SB-4
Start Date:	7/9/2012		
End Date:	7/9/2012		**Project Consultant:** ARCADIS

Comments: Located 12 ft. north of the former junction box site.
All samples were from cuttings.
DRAFTED BY: Amy C. Ruth

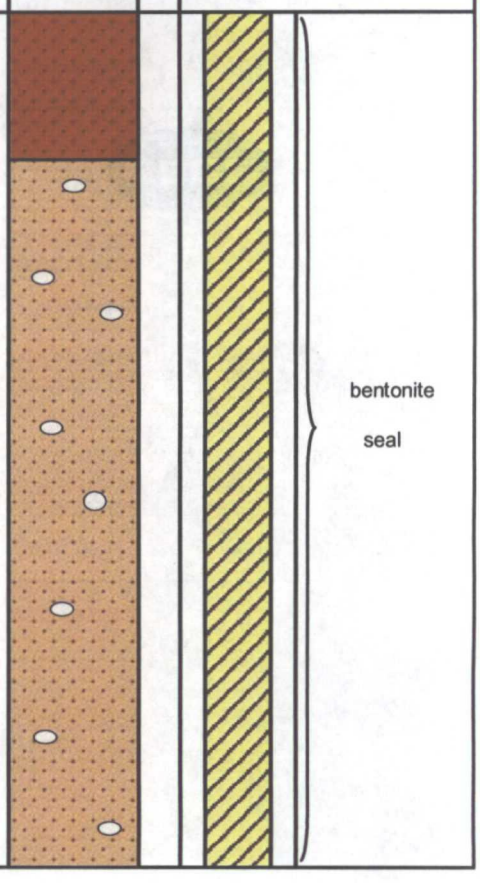
TD = 20 ft. GW = 35 ft.

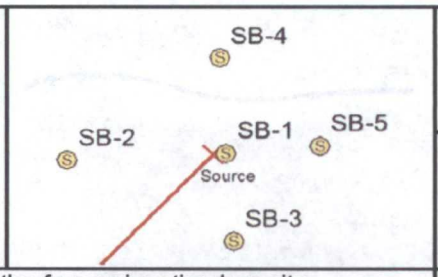
Location: UL/I sec. 7 T-19-S R-37-E

Lat: 32°40'23.073"N **County**: Lea

Long: 103°17'6.295"W **State**: NM

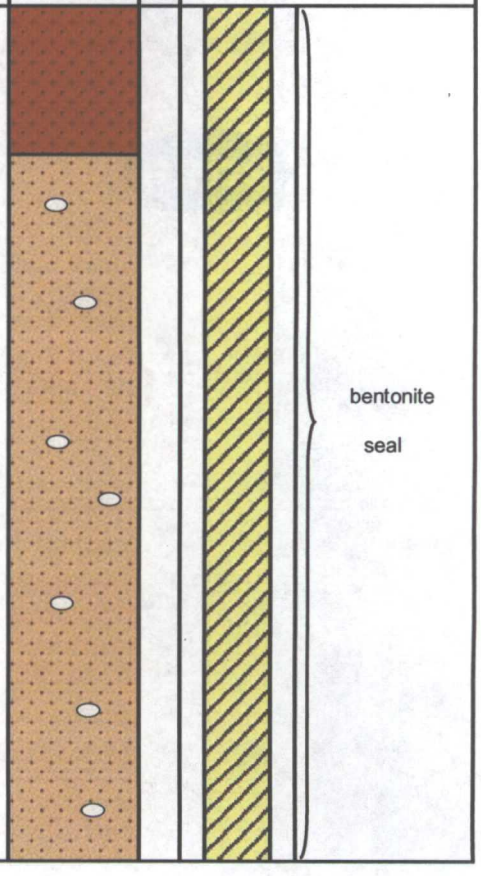
Depth (feet)	Chloride field tests	LAB	PID	Description
				Brown Sand
SS	122		0.4	
				Tan Sand With Some Caliche
5 ft	204		2.4	
10 ft	292	Cl- 304	2.1	
		GRO <10		
		DRO <10		
15 ft	171		2.6	
20 ft	139	Cl- 176	2.1	
		GRO <10		
		DRO <10		



Logger:	Kyle Norman		**Project Name:** EME I-7 EOL **Well ID:** SB-5
Driller:	Harrison & Cooper, Inc.		**Project Consultant:** ARCADIS
Drilling Method:	Air Rotary		**Location:** UL/I sec. 7 T-19-S R-37-E
Start Date:	7/9/2012		**Lat:** 32°40'22.969"N **County**: Lea
End Date:	7/9/2012		**Long:** 103°17'6.161"W **State**: NM

Comments: Located 12 ft. east of the former junction box site.
All samples were from cuttings.
DRAFTED BY: Amy C. Ruth
TD = 20 ft. GW = 35 ft.

Depth (feet)	Chloride field tests	LAB	PID	Description
				Brown Sand
SS	86		0.9	
				Tan Sand With Some Caliche
5 ft	211	Cl- 240	1.7	
		GRO <10		
		DRO <10		
10 ft	168		1.5	
15 ft	143		1.8	
20 ft	117	Cl- 32	1.4	
		GRO <10		
		DRO <10		



EME I-7 EOL
Unit I, Section 7, T-19-S, R-37-E

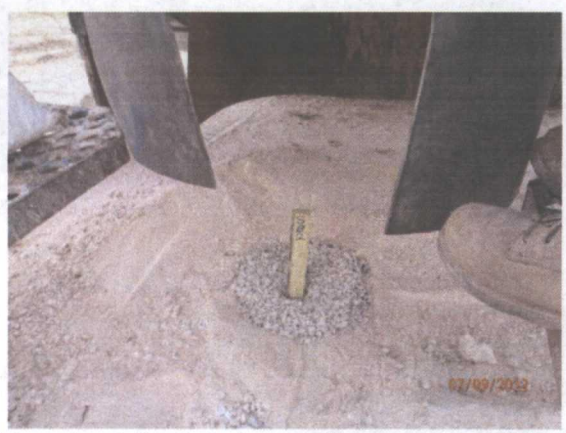
Drilling SB-1, facing west 7/9/12

Plugging SB-1 in total with bentonite 7/9/12

Completed SB-1, facing west 7/9/12

Drilling SB-2, facing west 7/9/12

Plugging SB-2 in total with bentonite 7/9/12



Completed SB-2, facing northwest 7/9/12

Drilling SB-3, facing northwest 7/9/12

Plugging SB-3 in total with bentonite 7/9/12

Completed SB-3, facing northwest 7/9/12

Drilling SB-4, facing west 7/9/12

Plugging SB-4 in total with bentonite 7/9/12

Completed SB-4, facing west 7/9/12

Drilling SB-5, facing north 7/9/12

Plugging SB-5 in total with bentonite 7/9/12

Completed SB-5, facing west 7/9/12

CARDINAL Laboratories

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

July 16, 2012

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME I-7 EOL (19/37)

Enclosed are the results of analyses for samples received by the laboratory on 07/09/12 16:15.

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Rice Operating Company
Hack Conder
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	07/09/2012	Sampling Date:	07/09/2012
Reported:	07/16/2012	Sampling Type:	Soil
Project Name:	EME I-7 EOL (19/37)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 1 @ 5' (H201561-01)

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	07/12/2012	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/11/2012	ND	171	85.5	200	3.36	
DRO >C10-C28	**17.2**	10.0	07/11/2012	ND	184	92.2	200	1.06	

Surrogate: 1-Chlorooctane	*82.0 %*	*65.2-140*
Surrogate: 1-Chlorooctadecane	*105 %*	*63.6-154*

Sample ID: SB 1 @ 20' (H201561-02)

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	07/12/2012	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/11/2012	ND	171	85.5	200	3.36	
DRO >C10-C28	**10.7**	10.0	07/11/2012	ND	184	92.2	200	1.06	

Surrogate: 1-Chlorooctane	*81.0 %*	*65.2-140*
Surrogate: 1-Chlorooctadecane	*104 %*	*63.6-154*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Rice Operating Company
Hack Conder
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	07/09/2012	Sampling Date:	07/09/2012
Reported:	07/16/2012	Sampling Type:	Soil
Project Name:	EME I-7 EOL (19/37)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 2 @ 10' (H201561-03)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**544**	16.0	07/12/2012	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/11/2012	ND	171	85.5	200	3.36	
DRO >C10-C28	<10.0	10.0	07/11/2012	ND	184	92.2	200	1.06	

Surrogate: 1-Chlorooctane	*85.5 %*	*65.2-140*
Surrogate: 1-Chlorooctadecane	*108 %*	*63.6-154*

Sample ID: SB 2 @ 20' (H201561-04)

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	07/12/2012	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/11/2012	ND	171	85.5	200	3.36	
DRO >C10-C28	<10.0	10.0	07/11/2012	ND	184	92.2	200	1.06	

Surrogate: 1-Chlorooctane	*71.3 %*	*65.2-140*
Surrogate: 1-Chlorooctadecane	*93.4 %*	*63.6-154*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Rice Operating Company
Hack Conder
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	07/09/2012	Sampling Date:	07/09/2012
Reported:	07/16/2012	Sampling Type:	Soil
Project Name:	EME I-7 EOL (19/37)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 3 @ 5' (H201561-05)

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	07/12/2012	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	07/11/2012	ND	171	85.5	200	3.36	
DRO >C10-C28	<50.0	50.0	07/11/2012	ND	184	92.2	200	1.06	

Surrogate: 1-Chlorooctane	*71.6 %*	*65.2-140*
Surrogate: 1-Chlorooctadecane	*103 %*	*63.6-154*

Sample ID: SB 3 @ 20' (H201561-06)

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	07/12/2012	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/11/2012	ND	171	85.5	200	3.36	
DRO >C10-C28	**24.8**	10.0	07/11/2012	ND	184	92.2	200	1.06	

Surrogate: 1-Chlorooctane	*79.4 %*	*65.2-140*
Surrogate: 1-Chlorooctadecane	*105 %*	*63.6-154*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Rice Operating Company
Hack Conder
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	07/09/2012	Sampling Date:	07/09/2012
Reported:	07/16/2012	Sampling Type:	Soil
Project Name:	EME I-7 EOL (19/37)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 4 @ 10' (H201561-07)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	07/12/2012	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/11/2012	ND	171	85.5	200	3.36	
DRO >C10-C28	<10.0	10.0	07/11/2012	ND	184	92.2	200	1.06	

Surrogate: 1-Chlorooctane	*84.7 %*	*65.2-140*
Surrogate: 1-Chlorooctadecane	*106 %*	*63.6-154*

Sample ID: SB 4 @ 20' (H201561-08)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	07/12/2012	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/11/2012	ND	171	85.5	200	3.36	
DRO >C10-C28	<10.0	10.0	07/11/2012	ND	184	92.2	200	1.06	

Surrogate: 1-Chlorooctane	*86.2 %*	*65.2-140*
Surrogate: 1-Chlorooctadecane	*110 %*	*63.6-154*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Rice Operating Company
Hack Conder
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	07/09/2012	Sampling Date:	07/09/2012
Reported:	07/16/2012	Sampling Type:	Soil
Project Name:	EME I-7 EOL (19/37)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 5 @ 5' (H201561-09)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	07/12/2012	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/11/2012	ND	171	85.5	200	3.36	
DRO >C10-C28	<10.0	10.0	07/11/2012	ND	184	92.2	200	1.06	

Surrogate: 1-Chlorooctane	*79.6 %*	*65.2-140*
Surrogate: 1-Chlorooctadecane	*96.5 %*	*63.6-154*

Sample ID: SB 5 @ 20' (H201561-10)

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	07/12/2012	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/12/2012	ND	167	83.4	200	0.491	
DRO >C10-C28	<10.0	10.0	07/12/2012	ND	175	87.7	200	1.55	

Surrogate: 1-Chlorooctane	*77.9 %*	*65.2-140*
Surrogate: 1-Chlorooctadecane	*100 %*	*63.6-154*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Rice	**BILL TO**
Project Manager: Hack Conder	P.O. #:
Address:	Company:
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name:	State: Zip:
Project Location: Eddy Co. NM	Phone #:
Sampler Name: Kyle Norman	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS
H20156 1	SB1 @ 5'	G	1			✓					✓		3-9-12	2:00	✓	✓				
2	SB1 @ 20'	G	1			✓					✓			2:20	✓	✓				
3	SB2 @ 10'	G	1			✓					✓			2:30	✓	✓				
4	SB2 @ 30'	G	1			✓					✓			2:40	✓	✓				
5	SB4 @ 5'	G	1			✓					✓			2:55	✓	✓				
6	SB4 @ 20'	G	1			✓					✓			3:00	✓	✓				
7	SB6 @ 10'	G	1			✓					✓			3:15	✓	✓				
8	SB6 @ 20'	G	1			✓					✓			3:30	✓	✓				
9	SB8 @ 5'	G	1			✓					✓			3:45	✓	✓				
10	SB8 @ 20'	G	1			✓					✓			4:00	✓	✓				

Relinquished By:	Date: 3-9-12	Received By: Jodi Henson	Phone Result: ☐ Yes ☑ No Add'l Phone #:
	Time: 4:15		Fax Result: ☐ Yes ☑ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: email results: zconder@rice-ecs.com Knorman@rice-ecs.com; lpena@riceswd.com Kjones@riceswd.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Sample Condition: Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No
CHECKED BY: (Initials)

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

#26

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EME I-7 EOL