1R - 2552

WORKPLANS

Date:
12-15-11

Hansen, Edward J., EMNRD

From: Katie Jones [kjones@riceswd.com]
Sent: Monday, December 19, 2011 10:39 AM
To: Leking, Geoffrey R, EMNRD
Cc: Hansen, Edward J., EMNRD; VonGonten, Glenn, EMNRD; Hack Conder
Subject: ROC - EME K-6 leak (1RP-2552) Update Report and Corrective Action Plan to Groundwater
Attachments: EME K-6 leak (1RP-2552) Update Report and Corrective Action to Groundwater.pdf

Mr. Leking,

Attached is an Update Report and Corrective Action Plan (CAP) to Groundwater for the EME K-6 leak (1RP-2552) site. If you have any questions or require any additional information, please contact myself or Hack Conder at (575) 393-9174.

Thank you.

Katie Jones
Environmental Project Manager
RICE *Operating Company*

RICE *Operating Company*
122 West Taylor • Hobbs, New Mexico 88240
Phone: (575) 393-9174 • Fax: (575) 397-1471

CERTIFIED MAIL
RETURN RECIEPT NO. 7008 1140 0001 3070 6082

December 15th, 2011

Mr. Geoffrey Leking
New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1625 N. French Drive
Hobbs, New Mexico 88240

RE: **Update Report and Corrective Action to Groundwater**
Rice Operating Company – EME SWD System
EME K-6 leak (1RP-2552): UL/K sec. 6 T20S R37E

Mr. Leking:

RICE Operating Company (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.

The site is located approximately 2 miles southwest of Monument, New Mexico at UL/K sec. 6 T20S R37E as shown on the Site Location Map (Figure 1). Groundwater in the area is located at a depth of approximately 34 ft bgs. The K-6 leak is located within a regionally impacted groundwater area with chlorides coming onto the site averaging 10,700 mg/kg (Figure 2).

On June 7th, 2010, ROC discovered a leak from the EME K-6 junction box. The leaking valve connection was repaired and NMOCD and BLM were notified of the leak by ROC (Appendix A). The standing fluid was removed from the site by vacuum truck, and the wet soil was scraped and properly disposed of at an NMOCD approved facility. On July 1st, 2010 and August 18th – 20th, 2010, fourteen soil bores were installed at the site (Figure 3 and 4). The soil bores were installed by GeoProbe and ROC personnel field tested the soil at regular intervals. Representative samples from each bore were taken to a commercial laboratory for analysis to confirm field data numbers (Appendix B). Chloride concentrations were elevated in each bore drilled within the leak area but decreased with depth to concentrations similar to background. Chloride concentrations in SB-9 decreased from 5,360 mg/kg at 10 ft bgs to 128 mg/kg at 28 ft bgs, and chloride

concentrations in SB-11 which decreased from 4,400 mg/kg at 10 ft bgs to 272 mg/kg at 16 ft bgs. The soil bores installed during August 2010 were analyzed for Gasoline Range Organics (GRO) and Diesel Range Organics (DRO). GRO and DRO readings were non-detect in each bore drilled within the leak area, except SB-8 which yielded a DRO reading of 821 mg/kg at 30 ft bgs.

Three soil bores (SB-5, SB-12 and SB-14) were completed outside the leak area to determine background concentrations of chlorides and hydrocarbons. In SB-5 and SB-14, chloride values increased with depth with low chloride numbers in the top eight feet of the bore, while DRO and GRO readings were below detectable limits. SB-12 had laboratory chloride readings of non-detect throughout and elevated concentrations of TPH and BTEX. Complete laboratory analyses of the background soil bores can be found in Figures 3 and 4 and Appendix B.

ROC received verbal approval from the NMOCD – District 1 office and notified BLM of the path forward via email on November 29th, 2011. BLM approved the proposed path forward on November 30th, 2010 (Appendix C). The path forward included the installation of a 20-mil reinforced liner and contouring the site to the surrounding area through folding over of the surrounding dunes. Starting on December 6th, 2010, the site was excavated to approximately 4.5 ft bgs to install a 20-mil reinforced liner throughout the leak area (Figure 5). The excavated soil (576 yards) was disposed of at an NMOCD approved facility. Approximately 216 yards of clean sand was imported to the site to lay a 6 inch pad both above and below the liner to prevent the liner from puncturing. Once the liner was padded, the surrounding sand dunes were scraped of their top four inches and stockpiled to use as a nutritive layer after the site was backfilled. The remainder of the sand dunes was then pushed into the excavation as backfill. An additional 156 yards of clean, imported sand was used to complete the backfill. 36 yards of clean, imported sand was mixed with soil amendments and then blended with the stockpiled nutritive layer from the sand dunes. This was spread over the site to contour it to the surrounding area, and the site was seeded with a native vegetative mix (Appendix D). Silt net fencing was positioned around the site to maintain seed placement. Photo documentation of these activities will be found in Appendix E.

Groundwater Remedy

ROC proposes to remove chloride impacted groundwater from the existing recovery system located at EME K-6. Removed groundwater will be utilized for pipeline and well maintenance. Our estimate conservatively reflects the net impact to groundwater at the site resulting from the leak. It does not take into account other sources or regional groundwater conditions that may exist up gradient from the site.

The estimated impact area is 6,560 square feet. ROC installed a 20-mil plastic liner throughout the leak area which will stop the further migration of residual chlorides to groundwater. Therefore, only the bottom 10 feet of the vadose zone will have the potential to affect the groundwater beneath the site. The volume of impacted vadose zone is determined by multiplying the two values together to achieve a volume of 65,600

cubic feet. To determine the mass of the impacted soil, this number is then multiplied by the mass density of soil to attain the mass of 2,978,240 kg. The chloride concentration added to the soil is determined by averaging the chloride concentrations of the bottom 10 feet of the soil bores located within the leak area. This returns a result of 808 mg/kg. To determine the chloride mass of leak, the mass of the impacted vadose zone is multiplied by the chloride concentration added to the soil. This gives a total chloride mass of 2,406 kg.

Estimate of Chloride Mass in the Vadose Zone

Parameter	Unit	Value	Description
Impact area	ft^2	6,560	Estimated Area of Impact
Affected Vadose Zone Thickness	ft	10	Bottom 10 ft of Vadose Zone
Volume of Impacted Vadose Zone	ft^3	65,600	Impact Area x Vadose Zone Thickness
Mass of Impacted Vadose Zone	kg	2,978,240	Volume of Impacted Vadose Zone x Mass Density ($1 ft^3$ of soil weighs approximately 45.4 kg or 100 lb/ft^3)
Chloride Concentration Added to Soil From Leak	mg/kg	808	Average Soil Chloride Concentrations in the Bottom 10 ft of Soil Bores Located Within the Leak Area
TOTAL CHLORIDE MASS	**kg**	**2,406**	Mass of Impacted Vadose Zone x Chloride Concentration Added to the Soil from Source

The chloride mass will be removed from the existing groundwater extraction system located at the nearby EME K-6. The groundwater concentration of RW-1 at the site is 10,900 mg/L. Assuming a pumping rate of one gallon a minute for ten hours a day, we can expect an extraction rate of approximately 25 kg/day. Since the total chloride mass is 2,406 mg/kg, it would take approximately 97 days to remove the chloride impact resulting from the leak. The volume of water that needs to be removed is determined by multiplying the pumping rate by the estimated removal time. This gives us a total of approximately 1,389 barrels that need to be removed from the site.

Estimated Groundwater Recovery System Removal at the EME K-6

Parameter	Unit	Value	Description
Groundwater Concentration	mg/L	10,900	Groundwater Concentration from RW-1
Groundwater Concentration	kg/gal	0.04126131	Conversion from mg/L to kg/gal
Pumping Rate	gals/min	1	Given
Extraction Rate	kg/min	0.04126131	Pumping rate x Groundwater Concentration (kg/gal)
Extraction Rate	kg/day	24.7567854	Conversion from kg/min to kg/day

Representative Total Chloride Mass	kg	2,406	From above
Volume Removal	gals	58,321	Pumping rate x Estimated Removal Time x 60 min/hour x 10 hr/day
Volume Removal	bbls	1,389	Conversion from gals to bbls
ESTIMATED REMOVAL TIME	**day**	**97**	Representative Total Chloride Mass/Extraction Rate

The corrective actions on the vadose zone are complete. Once the corrective actions on the groundwater are complete, a final report will be submitted to NMOCD with a termination request of the regulatory file.

ROC appreciates the opportunity to work with you on this project. Please call me if you have any questions or wish to discuss the site.

Sincerely,

Hack Conder
Environmental Manager
Rice Operating Company
(575) 631-6432

Copy: Glenn von Gonten (NMOCD – Santa Fe)
Edward Hansen (NMOCD – Santa Fe)

Attachments:

Figure 1 – Site Location Map
Figure 2 – EME Groundwater Contamination Map
Figure 3 – Soil Bore Installation Map (Page 1)
Figure 4 – Soil Bore Installation Map (Page 2)
Figure 5 – NMOCD Approved Liner Installation Map
Appendix A – Initial C-141
Appendix B – Soil Bore Installation Logs and Lab Confirmation
Appendix C – Path Forward Submission and Approval by BLM
Appendix D – Re-vegetation Form
Appendix E – Photo Documentation

Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Site Location Map

RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

EME K-6 LEAK

LEGALS: UL/K SEC 6
T20S R37E
NMOCD Case # 1RP-2552

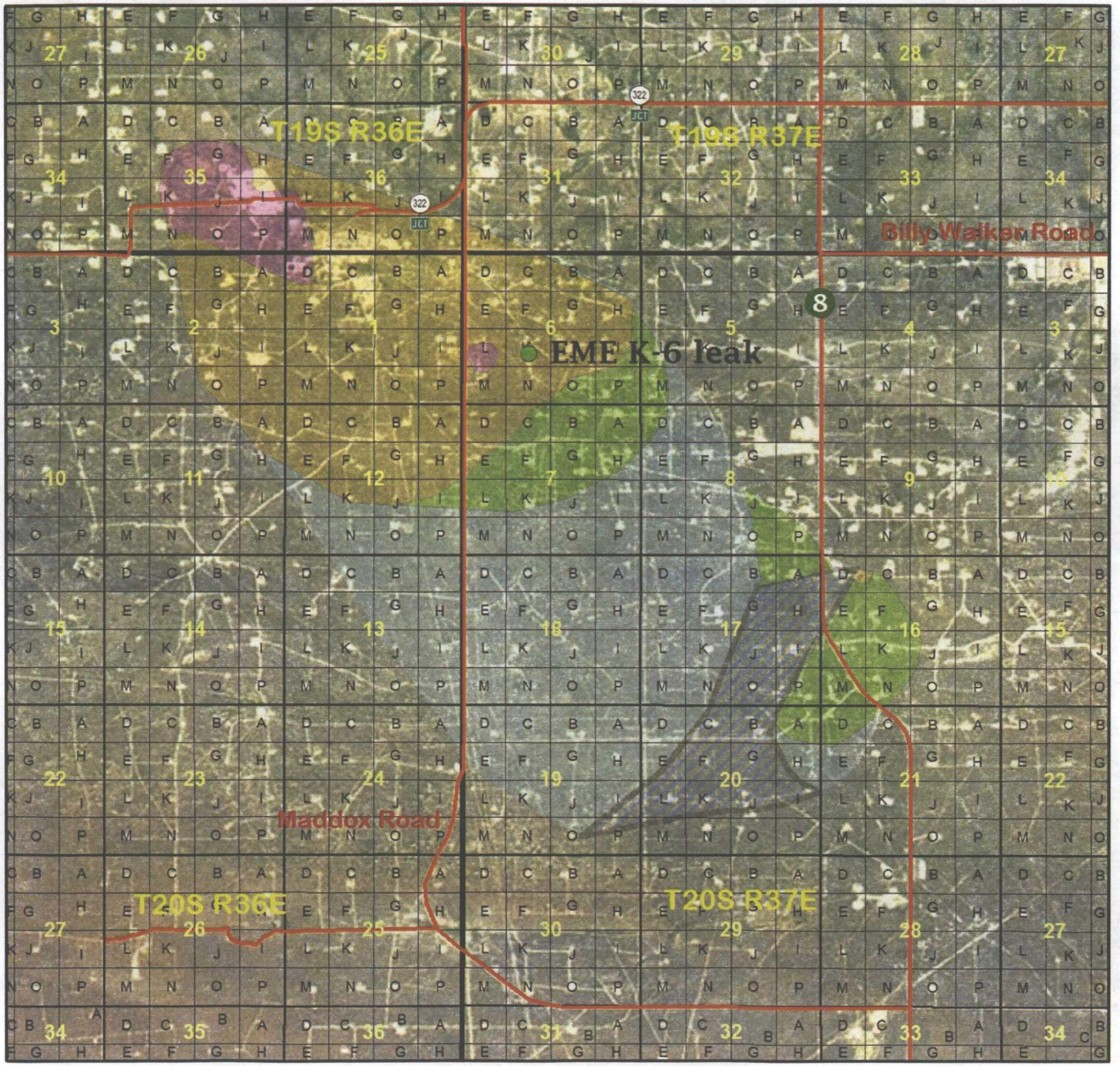
Figure 1

N
W E
S

0 0.25 0.5 1 Miles

Drawing date: 12/13/11
Drafted by: L. Weinheimer

EME Groundwater Contamination



RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC

122 W. Taylor
Hobbs, NM 88240
Phone (575) 393-9174
Fax (575) 397-1471

- Cl- concentration > 10,000
- 10,000 > Cl- concentration > 5,000
- 5,000 > Cl- concentration > 2,000
- 2,000 > Cl- concentration > 700
- Hypothetical Cl- contamination area

This map was prepared for Rice Operating Company. This map represents the known chloride impact concentrations in the groundwater as of 2011. As conditions change and/or new monitor wells are added, the contamination plume will undergo permutations that will be reflected in future maps. Rice Operating Company does not assume any responsibility for the use of this information by others.

Drawing date: 12-15-09
Revision date:9-26-11
Drafted by: Lara Weinheimer

Figure 2

Soil Bore Installation

SB-5

Depth	Cl-	LAB Cl-	GRO	DRO
surface	77			
2	73			
4	78			
6	97			
8	245			
10	615			
12	879	784	<10	<10
14	610			
16	815			
18	439			
20	403			
22	613			
24	962			
26	1230	1520	<10	<10

SB-4

Depth	Cl-	LAB Cl-	GRO	DRO
4	451			
6	290			
8	1562			
10	3064			
12	3720			
14	6689	8700	<10	<10
16	2241			
18	1023			
20	869			
22	615			
24	424			
26	953	784	<10	<10

SB-14

Depth	Cl-	LAB Cl-	GRO	DRO
2	153			
4	141			
6	333			
8	147			
10	477			
12	633	768	<10	<10
14	583			
16	596			
18	389			
20	463			
22	715			
24	769			
26	858	928	<10	<10

SB-8

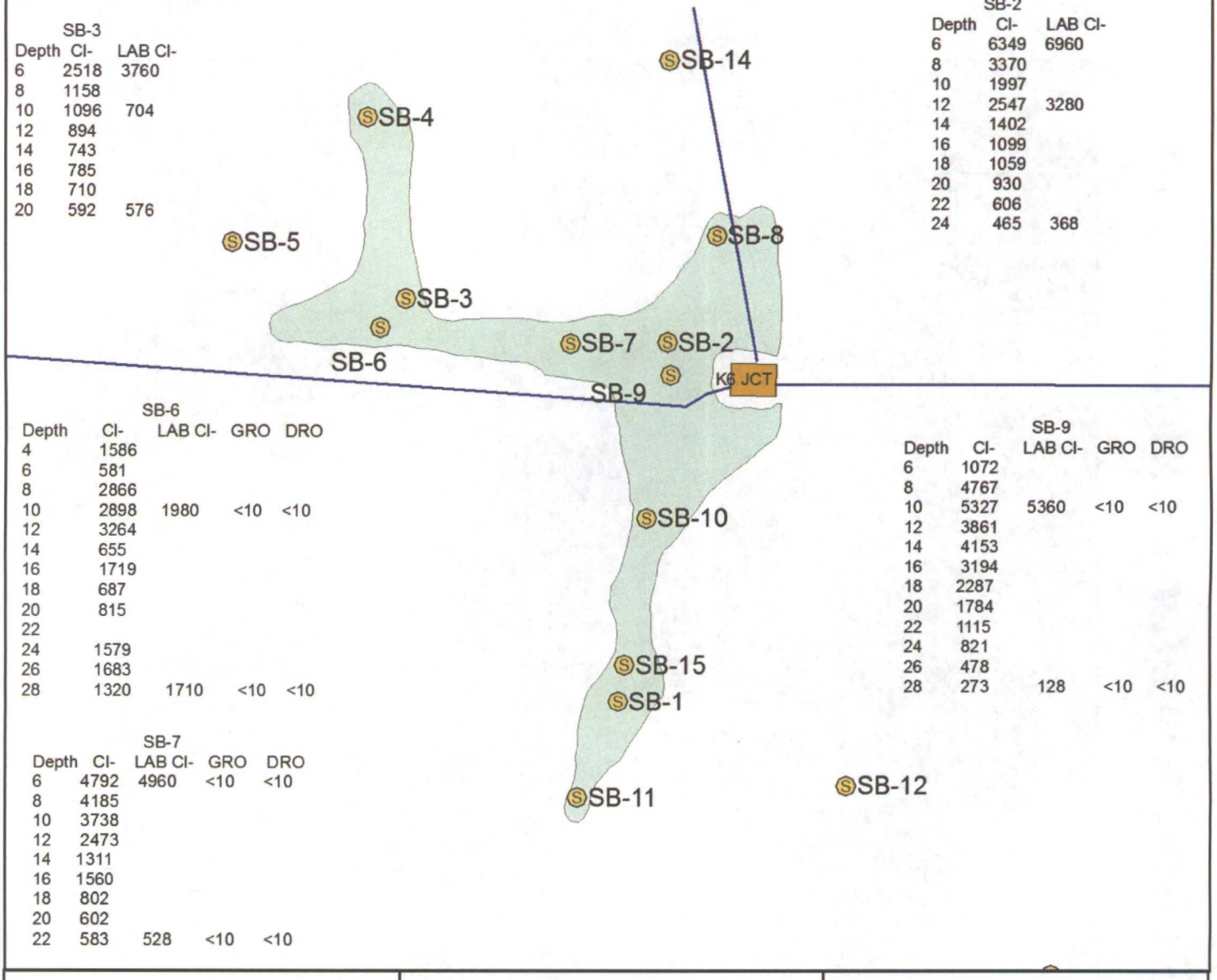
Depth	Cl-	LAB Cl-	GRO	DRO
6	2203			
8	3663			
10	4442	6080	<10	<10
12	3280			
14	1794			
16	2519			
18	1110			
20	1117			
22	721			
24	818			
26	900			
28	606			
30	741	416	<50	821

SB-3

Depth	Cl-	LAB Cl-
6	2518	3760
8	1158	
10	1096	704
12	894	
14	743	
16	785	
18	710	
20	592	576

SB-2

Depth	Cl-	LAB Cl-
6	6349	6960
8	3370	
10	1997	
12	2547	3280
14	1402	
16	1099	
18	1059	
20	930	
22	606	
24	465	368



SB-6

Depth	Cl-	LAB Cl-	GRO	DRO
4	1586			
6	581			
8	2866			
10	2898	1980	<10	<10
12	3264			
14	655			
16	1719			
18	687			
20	815			
22				
24	1579			
26	1683			
28	1320	1710	<10	<10

SB-9

Depth	Cl-	LAB Cl-	GRO	DRO
6	1072			
8	4767			
10	5327	5360	<10	<10
12	3861			
14	4153			
16	3194			
18	2287			
20	1784			
22	1115			
24	821			
26	478			
28	273	128	<10	<10

SB-7

Depth	Cl-	LAB Cl-	GRO	DRO
6	4792	4960	<10	<10
8	4185			
10	3738			
12	2473			
14	1311			
16	1560			
18	802			
20	602			
22	583	528	<10	<10

RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC
RECS

EME K-6 LEAK

LEGALS: UL/K SEC 6
T20S R37E
NMOCD Case # 1RP-2552

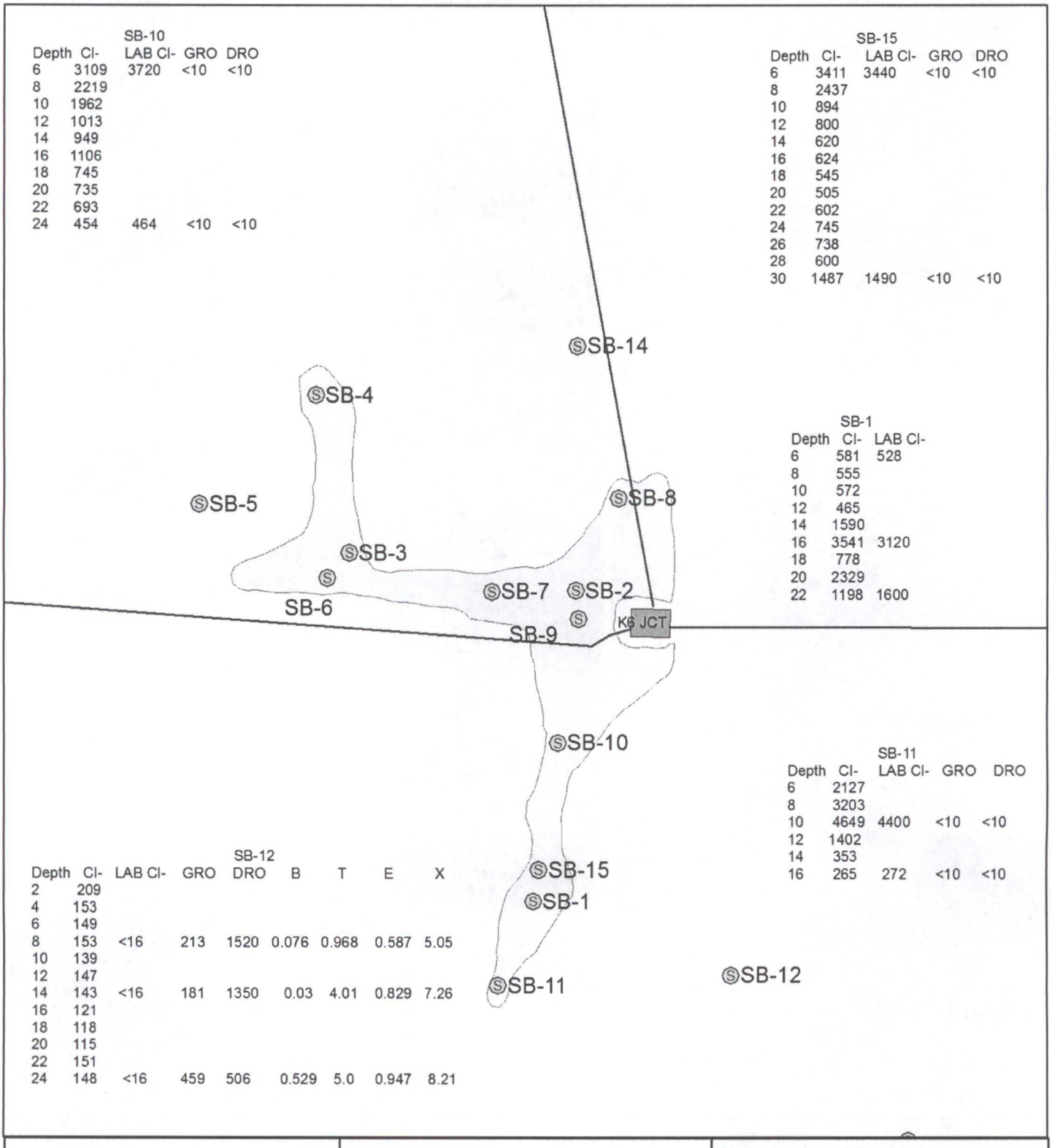
Figure 3

N W E S

0 20 40 80 Feet

Drawing date: 9/3/10
Drafted by: L. Weinheimer

Soil Bore Installation



SB-10

Depth	Cl-	LAB Cl-	GRO	DRO
6	3109	3720	<10	<10
8	2219			
10	1962			
12	1013			
14	949			
16	1106			
18	745			
20	735			
22	693			
24	454	464	<10	<10

SB-15

Depth	Cl-	LAB Cl-	GRO	DRO
6	3411	3440	<10	<10
8	2437			
10	894			
12	800			
14	620			
16	624			
18	545			
20	505			
22	602			
24	745			
26	738			
28	600			
30	1487	1490	<10	<10

SB-1

Depth	Cl-	LAB Cl-
6	581	528
8	555	
10	572	
12	465	
14	1590	
16	3541	3120
18	778	
20	2329	
22	1198	1600

SB-11

Depth	Cl-	LAB Cl-	GRO	DRO
6	2127			
8	3203			
10	4649	4400	<10	<10
12	1402			
14	353			
16	265	272	<10	<10

SB-12

Depth	Cl-	LAB Cl-	GRO	DRO	B	T	E	X
2	209							
4	153							
6	149							
8	153	<16	213	1520	0.076	0.968	0.587	5.05
10	139							
12	147							
14	143	<16	181	1350	0.03	4.01	0.829	7.26
16	121							
18	118							
20	115							
22	151							
24	148	<16	459	506	0.529	5.0	0.947	8.21

RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC

EME K-6 LEAK

LEGALS: UL/K SEC 6
T20S R37E
NMOCD Case # 1RP-2552

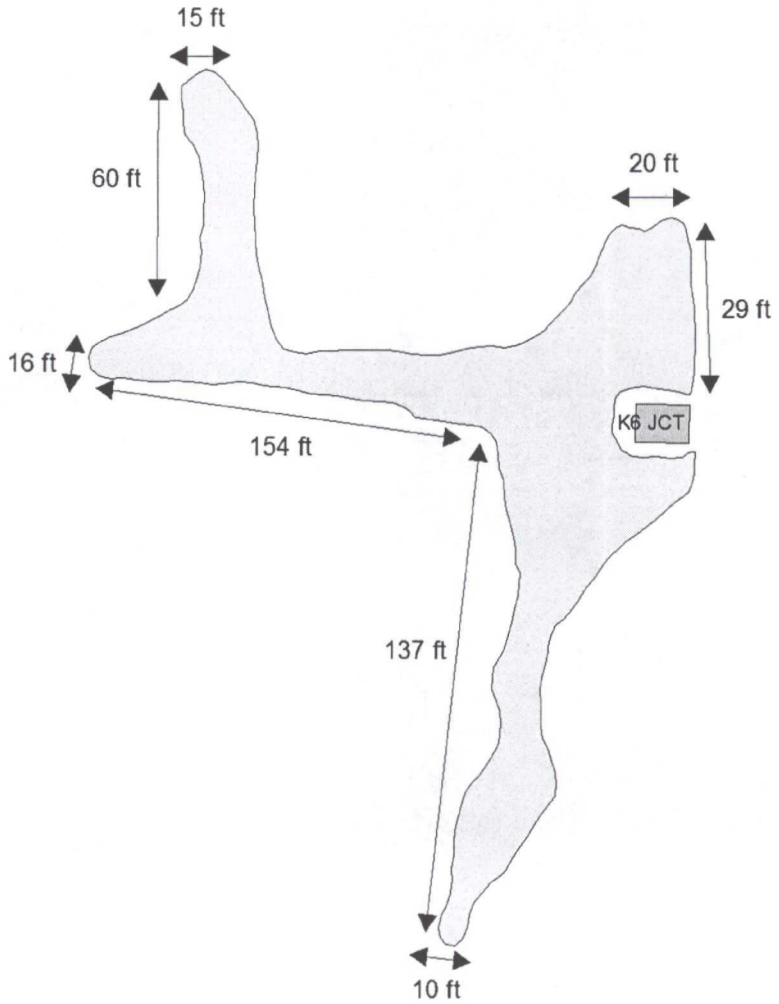
Figure 4

N
W E
S

0 20 40 80
Feet

Drawing date: 9/3/10
Drafted by: L. Weinheimer

NMOCD Approved Liner



Legend

- EME Active Boxes
- Approved Liner

RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

EME K-6 LEAK

LEGALS: UL/K SEC 6
T20S R37E
NMOCD Case # 1RP-2552

Figure 5

N W E S

0 20 40 80 Feet

Drawing date: 9/3/10
Drafted by: L. Weinheimer

Appendix A

Initial C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

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

RECEIVED
JUN 08 2010
HOBBSOCD

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company **RICE Operating Company**	Contact **Hack Conder**
Address **122 W. Taylor St., Hobbs, NM 88240**	Telephone No. **(575) 393-9174**
Facility Name **K-6**	Facility Type **Salt Water Gathering System**

Surface Owner: **BLM**	Mineral Owner	Lease No.

API Number 30-025-12800

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	**6**	**20S**	**37E**					**LEA**

Latitude: 32°35'939" Longitude: 103°17'585" (NAD 83) WTR 30'

NATURE OF RELEASE

Type of Release: **PRODUCED WATER**	Volume of Release: **700**	Volume Recovered: **600**
Source of Release: **Junction Box**	Date and Hour of Occurrence **6/7/2010**	Date and Hour of Discovery **6/7/2010 8:55 AM**
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Message left with Larry Johnson, NMOCD**	
By Whom? Hack Conder	Date and Hour 6/7/2010	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A valve connection failure in the K-6 junction caused the box to fill and overflow. Vacuum trucks were dispatched immediately to remove and properly dispose of the released water. The connection was permanently repaired.

Describe Area Affected and Cleanup Action Taken.*
8,100 sq ft of pasture was affected. Wet soil is being scrapped and hauled to an NMOCD approved facility

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: **Hack Conder**	Approved by District Supervisor: ENVIRONMENTAL ENGINEER
Title: **Environmental Manager**	Approval Date: 6.8.10 Expiration Date: 8.9.10
E-mail Address: **hconder@riceswd.com**	Conditions of Approval: Attached ☐
Date: **6/7/2010** Phone: **(575) 393-9174**	SUBMIT FINAL C-141 W/DOCS BY IRP-10.6.2552

* Attach Additional Sheets If Necessary

NCWJ 1346
PLWS 1559

Appendix B

Soil Bore Installation Logs and Lab Confirmation

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Logger:	Jordan Woodfin
Driller:	Harrison & Cooper
Consultant:	N/A
Drilling Method	Geo-Probe
Start Date:	7/1/2010
End Date:	7/1/2010

RICE OPERATING COMPANY ROC SINCE 1955

Project Name: EME K-6 leak **Well ID:** SB-1

Location: UL/K sec. 6 T20S R37E
Lat: N32°35.926' **County:** Lea
Long: W103°17.597' **State:** NM

Comments: Located 75 ft SSW of the current junction box site.

Drafted by: Lara Weinheimer

TD = 22 ft DGW = 35 ft

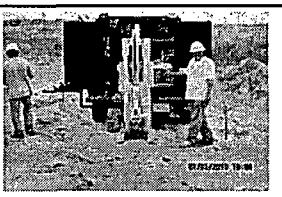
Depth (feet)	chloride field tests	LAB	PID	Description
6 ft	581	Cl- 528	0.7	4 - 8 ft SAND brown, wet, no odor
8 ft	555		0	
10 ft	572		0	8 - 14 ft CALICHE white, no odor
12 ft	465		0	
14 ft	1590		0	
16 ft	3541	Cl- 3120	0.1	14 - 16 ft CALICHE mixed brown, no odor
18 ft	778		0.1	16 - 22 ft CALICHE tan, no odor
20 ft	2393		0.1	
22 ft	1198	Cl- 1600	0	

Lithology

Well Construction

bentonite seal

Logger:	Jordan Woodfin
Driller:	Harrison & Cooper
Consultant:	N/A
Drilling Method	Geo-Probe
Start Date:	7/1/2010
End Date:	7/1/2010



RICE OPERATING COMPANY ROC SINCE 1955

Project Name: EME K-6 leak **Well ID:** SB-2

Comments: Located 15 ft NW of the current junction box site.

Drafted by: Lara Weinheimer

Location: UL/K sec. 6 T20S R37E
Lat: N32°35.942' **County:** Lea
Long: W103°17.594' **State:** NM

TD = 24 ft DGW = 35 ft

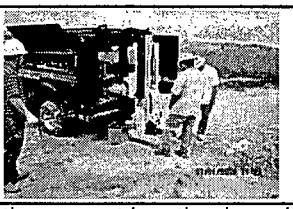
Depth (feet)	chloride field tests	LAB	PID	Description
				4 - 6 ft
				SAND
6 ft	6349	Cl- 6960	0	brown, no odor
				6 - 8 ft
				SAND
8 ft	3370		0	light brown, no odor
				8 - 10 ft
				CLAY
10 ft	1997		0	gray, wet, no odor
				10 - 12 ft
				CALICHE AND CLAY
12 ft	2547	Cl- 3280	0	interbedded, tan, no odor
14 ft	1402		0	12 - 18 ft
				CALICHE
				tan, no odor
16 ft	1099		0	
18 ft	1059		0	
				18 - 22 ft
20 ft	930		0	SAND
				brown, no odor
22 ft	606		0	
				22 - 24 ft
24 ft	456	Cl- 368	0	SAND
				light brown, no odor

Lithology

Well Construction

bentonite seal

Logger:	Jordan Woodfin
Driller:	Harrison & Cooper
Consultant:	N/A
Drilling Method	Geo-Probe
Start Date:	7/1/2010
End Date:	7/1/2010



RICE OPERATING COMPANY ROC SINCE 1955

Project Name: EME K-6 leak **Well ID:** SB-3

Location: UL/K sec. 6 T20S R37E
Lat: N32°35.943' **County:** Lea
Long: W103°17.608' **State:** NM

Comments: Located 75 ft WSW of the current junction box site.

Drafted by: Lara Weinheimer

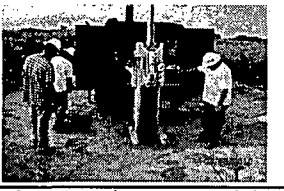
TD = 20 ft DGW = 35 ft

Depth (feet)	chloride field tests	LAB	PID	Description
6 ft	2,518	Cl-3760	0.4	4 - 10 ft SAND brown, no odor
8 ft	1,158		0	
10 ft	1,096	Cl-704	0	
12 ft	894		0	10 - 16 ft CALICHE tan, no odor
14 ft	743		0	
16 ft	785		0	
18 ft	710		0	16 - 20 ft CALICHE AND SAND red, no odor
20 ft	592	Cl-576	0	

Lithology

Well Construction: bentonite seal

Logger:	Lara Weinheimer
Driller:	Harrison & Cooper
Consultant:	RECS
Drilling Method	Geo-probe
Start Date:	8/18/2010
End Date:	8/18/2010



RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC

Project Name: EME K-6 leak **Well ID:** SB-4

Location: UL/K sec. 6 T20S R37E
Lat: 32°35'57.178"N **County:** Lea
Long: 103°17'36.618"W **State:** NM

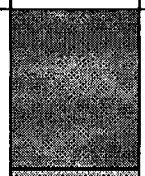
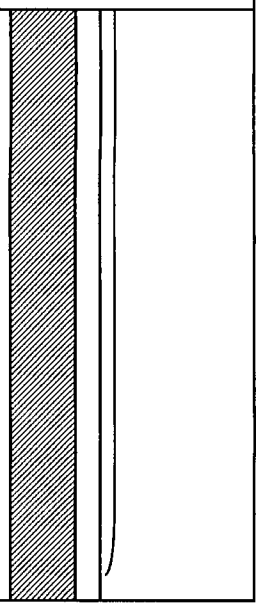
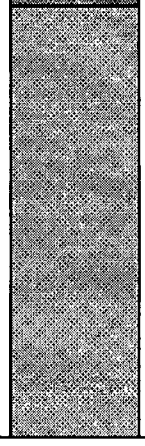
Comments: Sampling began at top of scraped area at 4 ft bgs. Located 42 ft NW of the current junction box site.
Drafted by: Lara Weinheimer
TD = 22 ft below scraped area Estimated depth to GW = 35 ft

Depth (feet)	chloride field tests	LAB	PID	Description
				Dark orangey brown very fine sand. Moist. No odor.
surface	451		0	
				Orangey dark brown fine sand. Moist. No odor.
2 ft	290		0.4	
				Dark brown very fine sand. Moist. No odor.
4 ft	1562		0.5	
				Orangey brown very fine sand. Moist. No odor.
6 ft	3064		0	
				Light orangey brown very fine sand. Slightly moist. No odor.
8 ft	3720		0	
10 ft	6689	Cl- 8700	0	
		GRO <10		Light brown very fine sand with sandstone. Dry. No odor.
		DRO <10		
12 ft	2241		0	
14 ft	1023		0	
				Orangey brown very fine sand. Slightly moist. No odor.
16 ft	869		0	

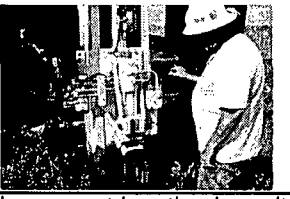
Lithology

Well Construction

bentonite seal

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Light brown very fine sand. Slightly moist. No odor.		
18 ft	615		0			
				Light orangey brown very fine sand. Slightly moist. No odor.		
20 ft	424		0			
22 ft	953	Cl-784	0			
		GRO <10				
		DRO <10				

Logger:	Lara Weinheimer
Driller:	Harrison & Cooper
Consultant:	RECS
Drilling Method	Geo-probe
Start Date:	8/18/2010
End Date:	8/18/2010



Comments: Located 49 ft WNW of the current junction box site.

Drafted by: Lara Weinheimer

TD = 26 ft Estimated depth to GW = 35 ft

Project Name: EME K-6 leak **Well ID:** SB-5

Location: UL/K sec. 6 T20S R37E

Lat: 32°35'56.817"N **County:** Lea

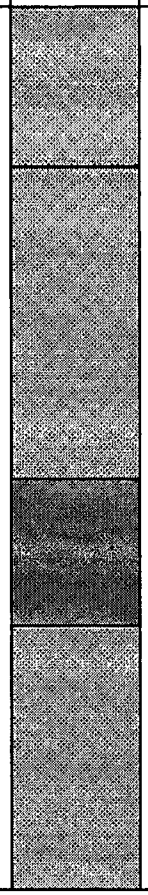
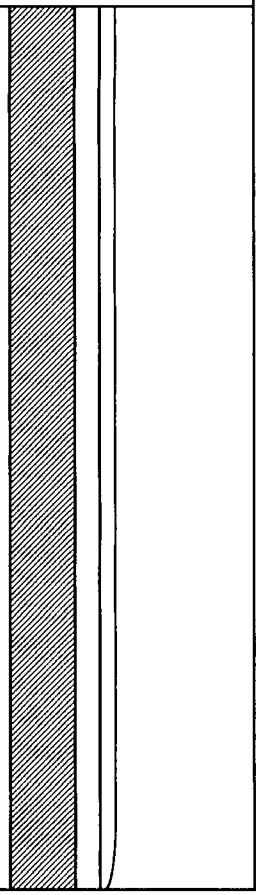
Long: 103°17'37.084"W **State:** NM

Depth (feet)	chloride field tests	LAB	PID	Description
				Dark brown very fine sand. Dry. No odor.
surface	77		0.2	
2 ft	73		0.2	
4 ft	78		0.3	
				Orangey brown very fine sand. Clayey. Dry. No odor.
6 ft	97		0.4	
8 ft	245		0.5	
				Orangey brown very fine sand. Clayey with sandstone. Slightly moist. No odor.
10 ft	615		0.6	
				Light brown very fine sand with some sandstone. Slightly moist. No odor.
12 ft	879	Cl- 784	0.7	
		GRO <10		
		DRO <10		
14 ft	610		0.6	
				Orangey brown very fine sand. Slightly moist. No odor.
16 ft	815		0.4	

Lithology

Well Construction

bentonite seal

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Light orangey brown very fine sand with sandstone. Slightly moist. No odor.		
18 ft	439		0.2			
				Orangey brown very fine sand. Slightly moist. No odor.		
20 ft	403		0.3			
22 ft	613		0.3			
				Light brown very fine sand with sandstone. Dry. No odor.		
24 ft	962		0.5			
				Orangey brown very fine sand with sandstone. Slightly moist. No odor.		
26 ft	1230	Cl-1520	0.3			
		GRO <10				
		DRO <10				

Logger:	Lara Weinheimer
Driller:	Harrison & Cooper
Consultant:	RECS
Drilling Method	Geo-probe
Start Date:	8/18/2010
End Date:	8/18/2010

RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC — RECS

Project Name: EME K-6 leak **Well ID:** SB-6

Location: UL/K sec. 6 T20S R37E

Lat: 32°35'56.568"W **County:** Lea

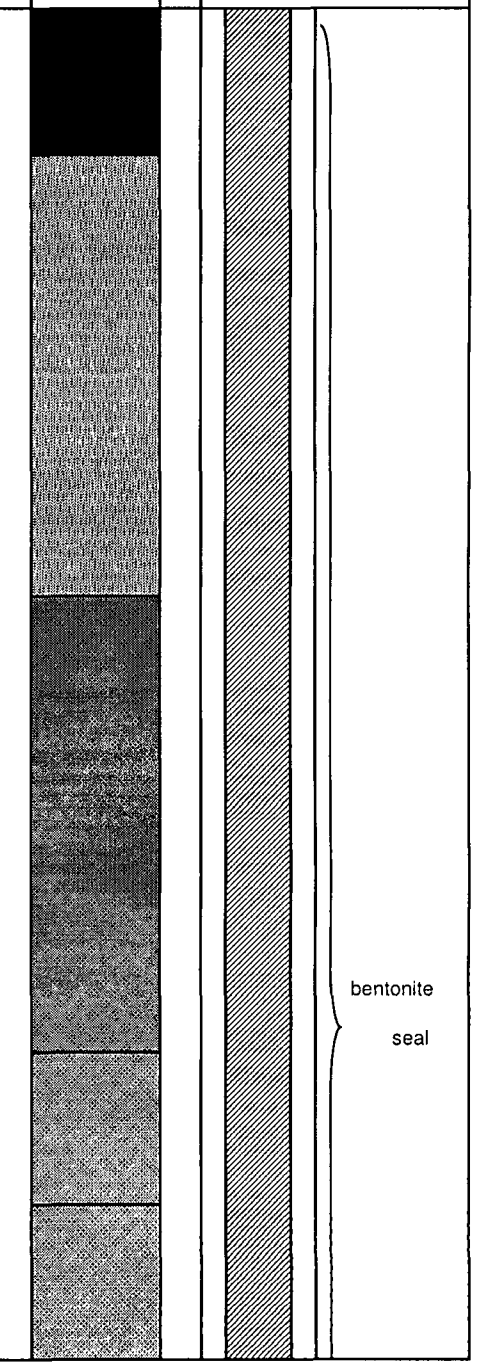
Long: 103°17'36.574"N **State:** NM

Comments: Sampling began at top of scraped area at 4 ft bgs. Located 34 ft west of the current junction box site.

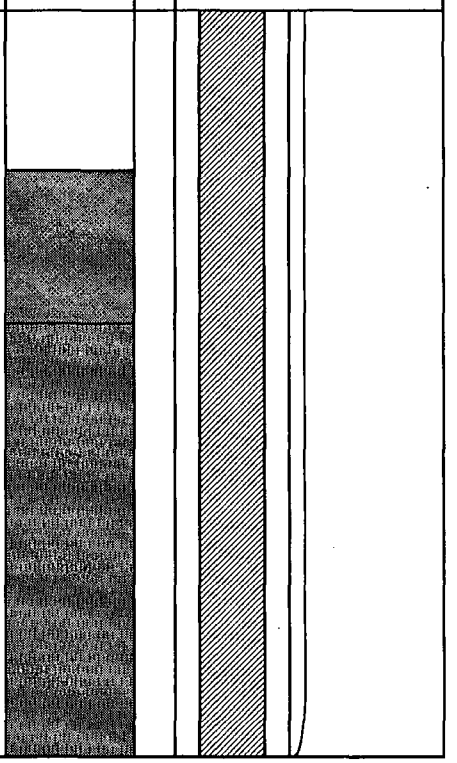
Drafted by: Lara Weinheimer

TD = 24 ft below scraped area Estimated depth to GW = 35 ft

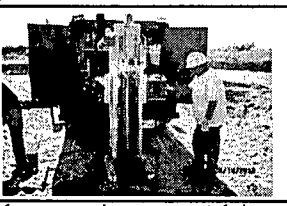
Depth (feet)	chloride field tests	LAB	PID	Description
				Dark brown very fine sand with caliche. Slightly moist. No odor.
surface	1586		0	
				Orangey brown very fine sand. Clayey. Slightly moist. No odor.
2 ft	581		0	
4 ft	2866		0	
6 ft	2898	Cl- 1980	0	
		GRO <10		Light brown very fine sand with sandstone. Dry. No odor.
		DRO <10		
8 ft	3264		0	
10 ft	655		0	
12 ft	1719		0	
				Orangey brown very fine sand with sandstone. Dry. No odor.
14 ft	687		0	
				Light orangey brown very fine sand with chert. Dry. No odor.
16 ft	418		0	



Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				No sample		
18 ft						
				Light brown very fine sand. Slightly moist. No odor.		
20 ft	1579		0			
				Light brown very fine sand with sandstone. Dry. No odor.		
22 ft	1683		0			
24 ft	1320	Cl- 1710	0			
		GRO <10				
		DRO <10				



Logger:	Jordan Woodfin
Driller:	Harrison & Cooper
Consultant:	RECS
Drilling Method	Geo-probe
Start Date:	8/19/2010
End Date:	8/19/2010



RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC

Project Name: EME K-6 leak **Well ID:** SB-7

Location: UL/K sec. 6 T20S R37E

Lat: 32°35'56.528"N **County:** Lea

Long: 103°17'35.915"W **State:** NM

Comments: Sampling began at top of scraped area at 4 ft bgs. Located 17 ft west from the current junction box site.

Drafted by: Lara Weinheimer

TD = 18 ft below scraped area Estimated depth to GW = 35 ft

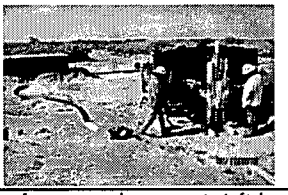
Depth (feet)	chloride field tests	LAB	PID	Description
				Brownish green fine sand. Moist
2 ft	4792	Cl- 4960	0.1	
		GRO <10		
		DRO <10		
4 ft	4185		0	
6 ft	3738		0	
				Red fine sand and tan caliche
8 ft	2473		0	
10 ft	1311		0	
12 ft	1560		0	
14 ft	802		0	
				Light red fine sand
16 ft	602		0.1	
				Brownish red fine sand
18 ft	583	Cl- 528	0.2	
		GRO <10		
		DRO <10		

Lithology

Well Construction

bentonite seal

Logger:	Jordan Woodfin
Driller:	Harrison & Cooper
Consultant:	RECS
Drilling Method	Geo-probe
Start Date:	8/19/2010
End Date:	8/19/2010



Project Name: EME K-6 leak **Well ID:** SB-8

Location: UL/K sec. 6 T20S R37E
Lat: 32°35'56.829"N **County:** Lea
Long: 103°17'35.399"W **State:** NM

Comments: Sampling began at top of scraped area at 4 ft bgs. Located 13 ft north from the current junction box site.

Drafted by: Lara Weinheimer

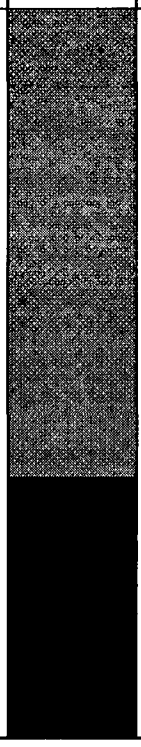
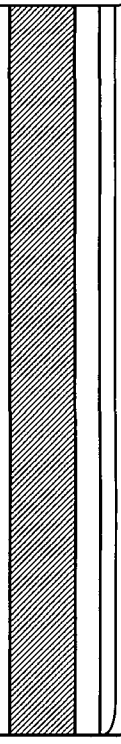
TD = 26 ft below scraped area Estimated depth to GW = 35 ft

Depth (feet)	chloride field tests	LAB	PID	Description
2 ft	2203		0.5	
				Brownish green fine sand. Moist
4 ft	3663		0	
6 ft	4442	Cl- 6080	0	
		GRO <10		
		DRO <10		
8 ft	3280		0	
				Tan caliche
10 ft	1794		0	
12 ft	2519		0	
14 ft	1110		0	
				Red fine sand and tan caliche
16 ft	1117		0	
18 ft	721		0	

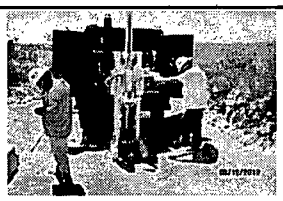
Lithology

Well Construction

bentonite seal

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Red fine sand and tan caliche		
20 ft	818		0			
22 ft	900		0			
24 ft	606		0			
				Brown fine sand		
26 ft	741	Cl- 416	28.7			
		GRO <50				
		DRO 821				

Logger:	Jordan Woodfin
Driller:	Harrison & Cooper
Consultant:	RECS
Drilling Method	Geo-probe
Start Date:	8/19/2010
End Date:	8/19/2010



RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC — RECS

Project Name: EME K-6 leak **Well ID:** SB-9

Location: UL/K sec. 6 T20S R37E
Lat: 32°35'56.427"N **County:** Lea
Long: 103°17'35.566"W **State:** NM

Comments: Sampling began at top of scraped area at 4 ft bgs. Located 7 ft north from the current junction box site.

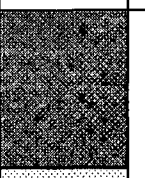
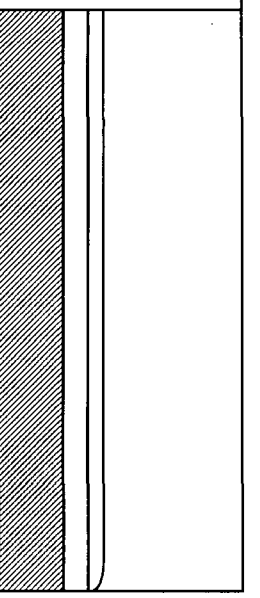
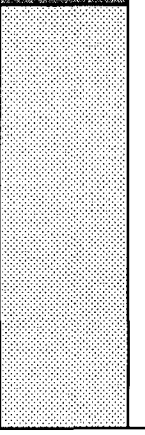
Drafted by: Lara Weinheimer

TD = 24 ft below scraped area Estimated depth to GW = 35 ft

Depth (feet)	chloride field tests	LAB	PID	Description
				Brownish green fine sand moist
2 ft	1,072		1	
4 ft	4,767		0.7	
6 ft	5,327	Cl- 5360	0.3	
		GRO <10		Tan caliche
		DRO <10		
8 ft	3,861		0.2	
10 ft	4,153		0.2	
				Red fine sand and tan caliche
12 ft	3,194		0.1	
14 ft	2,287		0	
16 ft	1,784		0	
18 ft	1,115		0	

Lithology

Well Construction: bentonite seal

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
						
20 ft	821		0			
						
22 ft	478		0			
				Tan fine sand		
24 ft	273	Cl-128	0			
		GRO <10				
		DRO <10				

Logger:	Jordan Woodfin
Driller:	Harrison & Cooper
Consultant:	RECS
Drilling Method	Geo-probe
Start Date:	8/19/2010
End Date:	8/19/2010

RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC — RECS

Project Name: EME K-6 leak **Well ID:** SB-10

Location: UL/K sec. 6 T20S R37E

Lat: 32°35'56.015"N **County:** Lea

Long: 103°17'35.657"W **State:** NM

Comments: Sampling began at top of scraped area at 4 ft bgs. Located 16 ft south west from the current junction box site.

Drafted by: Lara Weinheimer

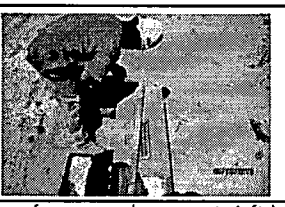
TD = 20 ft below scraped area Estimated depth to GW = 35 ft

Depth (feet)	chloride field tests	LAB	PID	Description
				Brownish green fine sand. Moist.
2 ft	3109	Cl- 3720	0.9	
		GRO <10		
		DRO <10		
4 ft	2219		0.4	
				Tan caliche
6 ft	1962		0.3	
8 ft	1013		0.2	
				Red fine sand
10 ft	949		0	
				Red fine sand and tan caliche
12 ft	1106		0	
14 ft	745		0	
16 ft	735		0	
18 ft	693		0	
20 ft	454	Cl- 464	0	
		GRO <10		
		DRO <10		

Lithology

Well Construction: bentonite seal

Logger:	Jordan Woodfin
Driller:	Harrison & Cooper
Consultant:	RECS
Drilling Method	Geo-probe
Start Date:	8/19/2010
End Date:	8/19/2010



Project Name: EME K-6 leak **Well ID:** SB-11

Location: UL/K sec. 6 T20S R37E
Lat: 32°35'55.188"N **County:** Lea
Long: 103°17'35.905"W **State:** NM

Comments: Sampling began at top of scraped area at 4 ft bgs. Located 41 ft SSW from the current junction box site.

Drafted by: Lara Weinheimer

TD = 12 ft below scraped area Estimated depth to GW = 35 ft

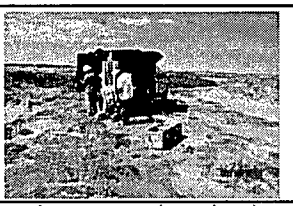
Depth (feet)	chloride field tests	LAB	PID	Description
				Brown fine sand. Moist.
2 ft	2127		1.6	
4 ft	3203		0.7	
				Tan caliche
6 ft	4649	Cl- 4400	0.3	
		GRO <10		Red fine sand and tan caliche
		DRO <10		
8 ft	1402		0.1	
10 ft	353		0.1	
				Gray rust fine sand. Clayey.
12 ft	265	Cl- 272	0	
		GRO <10		
		DRO <10		

Lithology

Well Construction

bentonite seal

Logger:	Jordan Woodfin
Driller:	Harrison & Cooper
Consultant:	RECS
Drilling Method	Geo-probe
Start Date:	8/19/2010
End Date:	8/19/2010



RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC — RECS

Project Name: EME K-6 leak **Well ID:** SB-12

Location: UL/K sec. 6 T20S R37E
Lat: 32°35'55.223"N **County:** Lea
Long: 103°17'34.961"W **State:** NM

Comments: Located 37 ft SSE from the current junction box site.

Drafted by: Lara Weinheimer

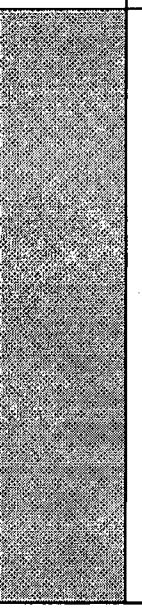
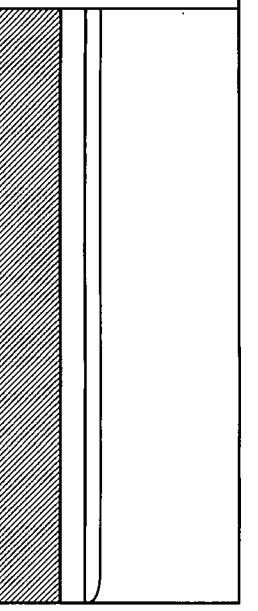
TD = 24 ft Estimated depth to GW = 35 ft

Depth (feet)	chloride field tests	LAB	PID	Description
				Asphaltine
2 ft	209		1	
4 ft	153		0.7	
				Dark grey fine sand
6 ft	149		280	
				Dark brown fine sand. Moist
8 ft	153	Cl- <16	987	
B 0.076 T 0.968		GRO 213		
E 0.587 X 5.05		DRO 1520		
10 ft	139		1740	
				Dark tan fine sand
12 ft	147		1905	
				Gray fine sand and tan caliche
14 ft	143	Cl- <16	5000	
B 0.300 T 4.01		GRO 181		
E 0.829 X 7.26		DRO 1350		
16 ft	121		5000	
18 ft	118		5000	

Lithology

Well Construction

bentonite seal

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Brown fine sand and tan caliche.		
20 ft	115		3384			
22 ft	151		3940			
24 ft	148	Cl- <16	4128			
B 0.529 T 5.00		GRO 459				
E 0.947 X 8.21		DRO 506				

Logger:	Lara Weinheimer
Driller:	Harrison & Cooper
Consultant:	RECS
Drilling Method	Geo-probe
Start Date:	8/20/2010
End Date:	8/20/2010

RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC — RECS

Project Name: EME K-6 leak **Well ID:** SB-14

Location: UL/K sec. 6 T20S R37E

Lat: 32°35'57.341"N **County:** Lea

Long: 103°17'35.561"W **State:** NM

Comments: Located 29 ft NNW from the current junction box site.

Drafted by: Lara Weinheimer

TD = 26 ft Estimated depth to GW = 35 ft

Depth (feet)	chloride field tests	LAB	PID	Description
				Dark brown very fine sand. Slightly moist. No odor.
2 ft	153		0.1	
4 ft	141		0	
				Orangey brown very fine sand. Dry. No odor.
6 ft	333		0	
				Light brown very fine sand. Dry. No odor.
8 ft	147		0	
				Light brown very fine sand with caliche particles. Dry. No odor.
10 ft	477		0.1	
12 ft	633	Cl- 768	0	
		GRO <10		Light brown very fine sand. Dry. No odor.
		DRO <10		
14 ft	583		0	
16 ft	596		0	
				Light brown very fine sand with sandstone. Dry. No odor
18 ft	389		0.7	

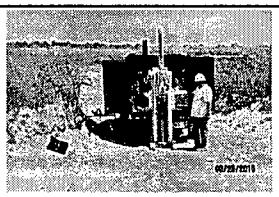
Lithology

Well Construction

bentonite seal

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
20 ft	463		0.5			
				Light orangey brown very fine sand with sandstone particles. Dry. No odor.		
22 ft	715		0.2			
				Orangey brown very fine sand with sandstone particles. Dry. No odor.		
24 ft	769		0.2			
				Orangey brown very fine sand. Very slightly moist. No odor.		
26 ft	858	Cl- 928	0.1			
		GRO <10				
		DRO <10				

Logger:	Lara Weinheimer
Driller:	Harrison & Cooper
Consultant:	RECS
Drilling Method	Geo-probe
Start Date:	8/20/2010
End Date:	8/20/2010



Project Name: EME K-6 leak **Well ID:** SB-15

Location: UL/K sec. 6 T20S R37E
Lat: 32°35'55.591"N **County:** Lea
Long: 103°17'35.783"W **State:** NM

Comments: Sampling began at top of scraped area at 4 ft bgs. Located 28 ft SSW of the current junction box.

Drafted by: Lara Weinheimer

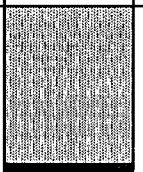
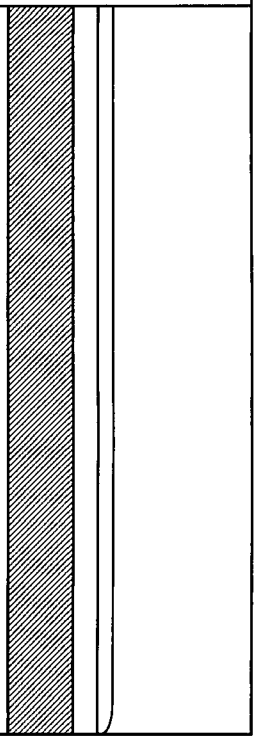
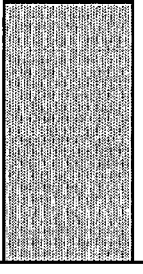
TD = 26 ft below scraped area Estimated depth to GW = 35 ft

Depth (feet)	chloride field tests	LAB	PID	Description
				Light orangey brown very fine sand. Clayey. Slightly moist. No odor.
2 ft	3411	Cl- 3440	1.4	
		GRO <10		
		DRO <10		
4 ft	2437		0.6	
				Light brown very fine sand. Slightly moist. No odor.
6 ft	894		0.5	
				Light brown very fine sand with sandstone. Slightly moist. No odor.
8 ft	800		0.7	
10 ft	620		0.4	
12 ft	624		0.4	
14 ft	545		0.3	
				Light orangey brown very fine sand with sandstone. Slightly moist. No odor.
16 ft	505		0.2	
				Orangey brown very fine with sandstone particles. Slightly moist. No odor.
18 ft	602		0.8	

Lithology

Well Construction

bentonite seal

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Light orangey brown very fine sand with sandstone particles. Slightly moist. No odor.		
20 ft	745		0.6			
				Orangey brown very fine sand with sandstone. Slightly moist. No odor.		
22 ft	738		0.5			
24 ft	600		0.3			
				Light orangey brown very fine sand with sandstone. Slightly moist. No odor.		
26 ft	1487	Cl- 1490	0.3			
		GRO <10				
		DRO <10				

CARDINAL LABORATORIES

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

July 9, 2010

Hack Conder
Rice Operating Company
112 West Taylor
Hobbs, NM 88240

Re: EME K-6 Leak

Enclosed are the results of analyses for sample number H20261, received by the laboratory on 07/01/10 at 4:35 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited though 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 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: HACK CONDER
112 WEST TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 07/01/10
Reporting Date: 07/06/10
Project Owner: NOT GIVEN
Project Name: EME K-6 LEAK
Project Location: EME K-6 LEAK

Analysis Date: 07/02/10
Sampling Date: 07/01/10
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: JH
Analyzed By: CK

LAB NO.	SAMPLE ID	Cl^- (mg/kg)
H20261-1	SB #1 @ 6 FT	528
H20261-2	SB #1 @ 16 FT	3,120
H20261-3	SB #1 @ 22 FT	1,600
H20261-4	SB #2 @ 6 FT	6,960
H20261-5	SB #2 @ 12 FT	3,280
H20261-6	SB #2 @ 24 FT	368
H20261-7	SB #3 @ 6 FT	3,760
H20261-8	SB #3 @ 10 FT	704
H20261-9	SB #3 @ 20 FT	576
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-Cl B

Note: Analyses performed on 1:4 w:v aqueous extracts.
Not accredited for Chloride.

Chemist

07/09/10
Date

H20261 Rice

CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	RICE OPERATING	**BILL TO**	
Project Manager:	HACK CONDER	P.O. #:	
Address:	122 W. TAYLOR	Company:	
City:	HOBBS State: NM Zip: 88240	Attn:	
Phone #:	393-9174 Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	EME K-6 LEAK	State: Zip:	
Project Location:	EME K-6 LEAK	Phone #:	
Sampler Name:	JORDAN WOODFIN	Fax #:	

ANALYSIS REQUEST

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	
H20261-1	SB#1 @ 6ft	g	1			✓					✓		7-1-10	9:19	✓
2	SB#1 @ 16ft	g	1			✓					✓		"	9:30	✓
3	SB#1 @ 22ft	g	1			✓					✓		"	9:45	✓
4	SB#2 @ 6ft	g	1			✓					✓		"	1015	✓
5	SB #2 @ 12ft	g	1			✓					✓		"	1030	✓
6	SB #2 @ 24ft	g	1			✓					✓		"	1045	✓
7	SB #3 @ 6ft	g	1			✓					✓		"	1115	✓
8	SB #3 @ 10ft	g	1			✓					✓		"	1130	✓
9	SB #3 @ 20ft	g	1			✓					✓		"	1145	✓
						✓									

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 the client for the 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 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: Jordan Woodfin	Date: 7-1-10 Time:	Received By:	
Relinquished By:	Date: 7/1/10 Time: 4:35	Received By: Jodi Henson	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☐ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: Email, Hack H Conder, K Jones, CWeinheimer @ Ricesweb.com, JWoodfin

FORM-006
Revision 1.0

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

#26

CARDINAL Laboratories

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

August 24, 2010

HACK CONDER

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

112 W. TAYLOR

HOBBS, NM 88240

RE: EME K-6 LEAK

Enclosed are the results of analyses for samples received by the laboratory on 08/19/10 10:37.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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 ENVIRONMENTAL CONSULTING & SAFETY
HACK CONDER
112 W. TAYLOR
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	08/19/2010	Sampling Date:	08/18/2010
Reported:	08/24/2010	Sampling Type:	Soil
Project Name:	EME K-6 LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	EME K-6 LEAK		

Sample ID: SB-4 @ 10' (H020669-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8700**	16.0	08/19/2010	ND	448	112	400	3.64	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/20/2010	ND	162	80.8	200	0.274	
DRO >C10-C28	<10.0	10.0	08/20/2010	ND	168	83.8	200	0.232	

Surrogate: 1-Chlorooctane	*96.4 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*91.4 %*	*70-130*

Sample ID: SB-4 @ 22' (H020669-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**784**	16.0	08/20/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/20/2010	ND	162	80.8	200	0.274	
DRO >C10-C28	<10.0	10.0	08/20/2010	ND	168	83.8	200	0.232	

Surrogate: 1-Chlorooctane	*83.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*79.2 %*	*70-130*

Cardinal Laboratories *=Accredited Analyte

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 ENVIRONMENTAL CONSULTING & SAFETY
HACK CONDER
112 W. TAYLOR
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	08/19/2010	Sampling Date:	08/18/2010
Reported:	08/24/2010	Sampling Type:	Soil
Project Name:	EME K-6 LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	EME K-6 LEAK		

Sample ID: SB-5 @ 12' (H020669-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**784**	16.0	08/20/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/20/2010	ND	162	80.8	200	0.274	
DRO >C10-C28	<10.0	10.0	08/20/2010	ND	168	83.8	200	0.232	

Surrogate: 1-Chlorooctane	*85.7 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*82.2 %*	*70-130*

Sample ID: SB-5 @ 26' (H020669-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1520**	16.0	08/20/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/20/2010	ND	162	80.8	200	0.274	
DRO >C10-C28	<10.0	10.0	08/20/2010	ND	168	83.8	200	0.232	

Surrogate: 1-Chlorooctane	*84.5 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*82.4 %*	*70-130*

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 ENVIRONMENTAL CONSULTING & SAFETY
HACK CONDER
112 W. TAYLOR
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	08/19/2010	Sampling Date:	08/18/2010
Reported:	08/24/2010	Sampling Type:	Soil
Project Name:	EME K-6 LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	EME K-6 LEAK		

Sample ID: SB-6 @ 6' (H020669-05)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1980**	16.0	08/20/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/20/2010	ND	162	80.8	200	0.274	
DRO >C10-C28	<10.0	10.0	08/20/2010	ND	168	83.8	200	0.232	

Surrogate: 1-Chlorooctane	*88.7 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*86.2 %*	*70-130*

Sample ID: SB-6 @ 24' (H020669-06)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1710**	16.0	08/20/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/20/2010	ND	162	80.8	200	0.274	
DRO >C10-C28	<10.0	10.0	08/20/2010	ND	168	83.8	200	0.232	

Surrogate: 1-Chlorooctane	*88.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*87.5 %*	*70-130*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

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 Operating Company RICE	**BILL TO**
Project Manager: Hack Conder	P.O. #:
Address: 122 West Taylor	Company:
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: 393-9174 Fax #: 397-1471	Address:
Project #: Project Owner:	City:
Project Name: East K-6 Tank	State: Zip:
Project Location: East K-6 Tank	Phone #:
Sampler Name: Lara Weinheimer	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
H20669-1	SB-4 @ 10'	G	1			✓					✓		8-18-10	9:12	✓	✓			
2	SB-4 @ 22'	G	1			✓					✓		"	9:33	✓	✓			
3	SB-5 @ 12'	G	1			✓					✓		"	10:01	✓	✓			
4	SB-5 @ 44'	G	1			✓					✓		"	10:37	✓	✓			
5	SB-6 @ 6'	G	1			✓					✓		"	11:08	✓	✓			
6	SB-6 @ 44'	G	1			✓					✓		"	11:19	✓	✓			

Relinquished By: L. Weinheimer	Date: 8-19-10 Time: 10:37	Received By:	Phone Result: ☐ Yes ☑ No Add'l Phone #: Fax Result: ☐ Yes ☑ No Add'l Fax #: REMARKS: email results
Relinquished By:	Date: Time:	Received By: Jodie Henson	Hconder@riceswd.com; jpurvis@riceswd.com; Lweinheimer@riceswd.com
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

NEED SAMPLES BACK, PLEASE

CARDINAL Laboratories

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

September 02, 2010

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME K-6

Enclosed are the results of analyses for samples received by the laboratory on 08/23/10 9:46.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:	08/23/2010	Sampling Date:	08/19/2010
Reported:	09/02/2010	Sampling Type:	Soil
Project Name:	EME K-6	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	EME K-6 LEAK		

Sample ID: SB 7 @ 2' (H020694-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4960**	16.0	08/24/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/01/2010	ND	163	81.7	200	2.10	
DRO >C10-C28	<10.0	10.0	09/01/2010	ND	181	90.7	200	4.83	

Surrogate: 1-Chlorooctane	*96.5 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*106 %*	*70-130*

Sample ID: SB 7 @ 18' (H020694-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**528**	16.0	08/24/2010	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AB** **S-04**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/01/2010	ND	163	81.7	200	2.10	
DRO >C10-C28	<10.0	10.0	09/01/2010	ND	181	90.7	200	4.83	

Surrogate: 1-Chlorooctane	*97.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*131 %*	*70-130*

Cardinal Laboratories *=Accredited Analyte

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:	08/23/2010	Sampling Date:	08/19/2010
Reported:	09/02/2010	Sampling Type:	Soil
Project Name:	EME K-6	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	EME K-6 LEAK		

Sample ID: SB 8 @ 6' (H020694-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6080**	16.0	08/24/2010	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AB** **S-04**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/01/2010	ND	163	81.7	200	2.10	
DRO >C10-C28	<10.0	10.0	09/01/2010	ND	181	90.7	200	4.83	

Surrogate: 1-Chlorooctane	*94.2 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*139 %*	*70-130*

Sample ID: SB 8 @ 26' (H020694-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**416**	16.0	08/24/2010	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AB** **S-06**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	09/01/2010	ND	163	81.7	200	2.10	
DRO >C10-C28	**821**	50.0	09/01/2010	ND	181	90.7	200	4.83	

Surrogate: 1-Chlorooctane	*21.2 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*36.5 %*	*70-130*

Cardinal Laboratories

*=Accredited Analyte

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:	08/23/2010	Sampling Date:	08/19/2010
Reported:	09/02/2010	Sampling Type:	Soil
Project Name:	EME K-6	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	EME K-6 LEAK		

Sample ID: SB 9 @ 6' (H020694-05)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5360**	16.0	08/24/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/01/2010	ND	163	81.7	200	2.10	
DRO >C10-C28	<10.0	10.0	09/01/2010	ND	181	90.7	200	4.83	

Surrogate: 1-Chlorooctane	*92.3 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*113 %*	*70-130*

Sample ID: SB 9 @ 24' (H020694-06)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	08/24/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/01/2010	ND	180	89.9	200	3.28	
DRO >C10-C28	<10.0	10.0	09/01/2010	ND	200	99.9	200	2.66	

Surrogate: 1-Chlorooctane	*103 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*121 %*	*70-130*

Cardinal Laboratories

*=Accredited Analyte

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:	08/23/2010	Sampling Date:	08/19/2010
Reported:	09/02/2010	Sampling Type:	Soil
Project Name:	EME K-6	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	EME K-6 LEAK		

Sample ID: SB 10 @ 2' (H020694-07)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3720**	16.0	08/24/2010	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AB** **S-04**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/01/2010	ND	180	89.9	200	3.28	
DRO >C10-C28	<10.0	10.0	09/01/2010	ND	200	99.9	200	2.66	

Surrogate: 1-Chlorooctane	*115 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*149 %*	*70-130*

Sample ID: SB 10 @ 20' (H020694-08)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**464**	16.0	08/24/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/01/2010	ND	180	89.9	200	3.28	
DRO >C10-C28	<10.0	10.0	09/01/2010	ND	200	99.9	200	2.66	

Surrogate: 1-Chlorooctane	*102 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*124 %*	*70-130*

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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:	08/23/2010	Sampling Date:	08/19/2010
Reported:	09/02/2010	Sampling Type:	Soil
Project Name:	EME K-6	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	EME K-6 LEAK		

Sample ID: SB 11 @ 6' (H020694-09)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4400**	16.0	08/24/2010	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AB** **S-04**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/01/2010	ND	180	89.9	200	3.28	
DRO >C10-C28	<10.0	10.0	09/01/2010	ND	200	99.9	200	2.66	

Surrogate: 1-Chlorooctane	*121 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*135 %*	*70-130*

Sample ID: SB 11 @ 12' (H020694-10)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**272**	16.0	08/24/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/01/2010	ND	180	89.9	200	3.28	
DRO >C10-C28	<10.0	10.0	09/01/2010	ND	200	99.9	200	2.66	

Surrogate: 1-Chlorooctane	*115 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*126 %*	*70-130*

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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:	08/23/2010	Sampling Date:	08/20/2010
Reported:	09/02/2010	Sampling Type:	Soil
Project Name:	EME K-6	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	EME K-6 LEAK		

Sample ID: SB 14 @ 12' (H020694-11)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**768**	16.0	08/24/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/01/2010	ND	180	89.9	200	3.28	
DRO >C10-C28	<10.0	10.0	09/01/2010	ND	200	99.9	200	2.66	

Surrogate: 1-Chlorooctane	*99.1 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*121 %*	*70-130*

Sample ID: SB 14 @ 26' (H020694-12)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**928**	16.0	08/24/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/01/2010	ND	180	89.9	200	3.28	
DRO >C10-C28	<10.0	10.0	09/01/2010	ND	200	99.9	200	2.66	

Surrogate: 1-Chlorooctane	*108 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*115 %*	*70-130*

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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:	08/23/2010	Sampling Date:	08/19/2010
Reported:	09/02/2010	Sampling Type:	Soil
Project Name:	EME K-6	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	EME K-6 LEAK		

Sample ID: SB 15 @ 2' (H020694-13)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3440**	16.0	08/24/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/01/2010	ND	180	89.9	200	3.28	
DRO >C10-C28	<10.0	10.0	09/01/2010	ND	200	99.9	200	2.66	

Surrogate: 1-Chlorooctane	*100 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*113 %*	*70-130*

Sample ID: SB 15 @ 26' (H020694-14)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1490**	16.0	08/24/2010	ND	416	104	400	3.77	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/01/2010	ND	180	89.9	200	3.28	
DRO >C10-C28	<10.0	10.0	09/01/2010	ND	200	99.9	200	2.66	

Surrogate: 1-Chlorooctane	*99.0 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*111 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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.
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

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 Operating Company
Project Manager:	Hack Conder
Address:	122 West Taylor
City: Hobbs	State: NM Zip: 88240
Phone #: 393-9174	Fax #: 397-1471
Project #:	Project Owner:
Project Name:	EME K-6 leak
Project Location:	EME K-6 leak
Sampler Name:	J. Woodfin

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
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	SAMPLING TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions
H20684-1	SB-7 C 2'	G				✓					✓		8-19-10	8:02	✓	✓			
2	SB-7 C 18'	G				✓					✓		"	8:44	✓	✓			
3	SB-8 C 6'	G				✓					✓		"	9:21	✓	✓			
4	SB-8 C 26'	G				✓					✓		"	9:52	✓	✓			
5	SB-9 C 6'	G				✓					✓		"	10:16	✓	✓			
6	SB-9 C 20'	G				✓					✓		"	10:57	✓	✓			
7	SB-10 C 2'	G				✓					✓		"	11:31	✓	✓			
8	SB-10 C 20'	G				✓					✓		"	12:29	✓	✓			
9	SB-11 C 6'	G				✓					✓		"	2:01	✓	✓			
10	SB-11 C 12'	G				✓					✓		"	2:34	✓	✓			

Relinquished By: J. Woodfin	Date:	Received By:	
	Time:		
Relinquished By:	Date: 8/23/10	Received By: Jodi Henson	
	Time: 4:46		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool: Yes / No; Intact: Yes / No	CHECKED BY: (Initials)	

Phone Result: ☐ Yes ☑ No Add'l Phone #:
Fax Result: ☐ Yes ☑ No Add'l Fax #:

REMARKS:

email results

Hconder@riceswd.com; Jwoodfin@riceswd.com
Lweinheimer@riceswd.com K Jones @ ↗

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

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

2

Company Name:	Rice Operating Company
Project Manager:	Hack Conder
Address:	122 West Taylor
City:	Hobbs
State:	NM
Zip:	88240
Phone #:	393-9174
Fax #:	397-1471
Project #:	
Project Owner:	
Project Name:	EME K-6 leak
Project Location:	EME K-6 leak
Sampler Name:	J. Woodfin

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

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
	~~SB-13 @ 10'~~	G				✓					✓		~~6-20-10~~	8:21	✓	✓			
	~~SB-13 @ 20'~~	G				✓					✓		"	8:45	✓	✓			
1120694-11	SB-14 @ 12'	G				✓					✓		"	9:18	✓	✓			
12	SB-14 @ 26'	G				✓					✓		"	9:36	✓	✓			
13	SB-15 @ 2'	G				✓					✓		"	10:11	✓	✓			
14	SB-15 @ 26'	G				✓					✓		"	10:11	✓	✓			

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 the client for the 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 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: J. Woodfin	Date:	Received By:	
	Time:		
Relinquished By:	Date: 6/23/10	Received By: Jodi Henson	
	Time: 9:46		
Delivered By: (Circle One)		Sample Condition: Cool Yes / No; Intact Yes / No	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:			

Phone Result: ☐ Yes ☑ No Add'l Phone #:
Fax Result: ☐ Yes ☑ No Add'l Fax #:

REMARKS:

email results

Hconder@riceswd.com; Jwoodfin@riceswd.com
Lweinheimer@riceswd.com KJones?

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

#26

CARDINAL Laboratories

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

September 02, 2010

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME K-6

Enclosed are the results of analyses for samples received by the laboratory on 08/23/10 9:47.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:	08/23/2010	Sampling Date:	08/19/2010
Reported:	09/02/2010	Sampling Type:	Soil
Project Name:	EME K-6	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	EME K-6 LEAK		

Sample ID: SB 12 @ 8' (H020696-01)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.076**	0.050	08/26/2010	ND	0.835	83.5	1.00	2.08	
Toluene*	**0.968**	0.050	08/26/2010	ND	0.885	88.5	1.00	0.968	
Ethylbenzene*	**0.587**	0.050	08/26/2010	ND	0.933	93.3	1.00	0.570	
Total Xylenes*	**5.05**	0.150	08/26/2010	ND	2.75	91.6	3.00	0.441	

Surrogate: 4-Bromofluorobenzene (PIL *103 %* *80-120*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/24/2010	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AB** **QM-07, S-06**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**213**	50.0	09/01/2010	ND	171	85.6	200	4.59	
DRO >C10-C28	**1520**	50.0	09/01/2010	ND	207	103	200	7.76	

Surrogate: 1-Chlorooctane *20.6 %* *70-130*

Surrogate: 1-Chlorooctadecane *25.6 %* *70-130*

Cardinal Laboratories *=Accredited Analyte

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:	08/23/2010	Sampling Date:	08/19/2010
Reported:	09/02/2010	Sampling Type:	Soil
Project Name:	EME K-6	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	EME K-6 LEAK		

Sample ID: SB 12 @ 14' (H020696-02)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.300**	0.100	08/26/2010	ND	0.835	83.5	1.00	2.08	
Toluene*	**4.01**	0.100	08/26/2010	ND	0.885	88.5	1.00	0.968	
Ethylbenzene*	**0.829**	0.100	08/26/2010	ND	0.933	93.3	1.00	0.570	
Total Xylenes*	**7.26**	0.300	08/26/2010	ND	2.75	91.6	3.00	0.441	

Surrogate: 4-Bromofluorobenzene (PIL *91.0 %* *80-120*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/24/2010	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AB** **QM-07, S-06**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**181**	50.0	09/01/2010	ND	171	85.6	200	4.59	
DRO >C10-C28	**1350**	50.0	09/01/2010	ND	207	103	200	7.76	

Surrogate: 1-Chlorooctane *23.0 %* *70-130*

Surrogate: 1-Chlorooctadecane *26.2 %* *70-130*

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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:	08/23/2010	Sampling Date:	08/19/2010
Reported:	09/02/2010	Sampling Type:	Soil
Project Name:	EME K-6	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	EME K-6 LEAK		

Sample ID: SB 12 @ 24' (H020696-03)

BTEX 8021B mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.529**	0.100	08/26/2010	ND	0.835	83.5	1.00	2.08	
Toluene*	**5.00**	0.100	08/26/2010	ND	0.885	88.5	1.00	0.968	
Ethylbenzene*	**0.947**	0.100	08/26/2010	ND	0.933	93.3	1.00	0.570	
Total Xylenes*	**8.21**	0.300	08/26/2010	ND	2.75	91.6	3.00	0.441	

Surrogate: 4-Bromofluorobenzene (PIL *87.7 %* *80-120*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/24/2010	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: AB** **QM-07, S-06**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**459**	50.0	09/01/2010	ND	171	85.6	200	4.59	
DRO >C10-C28	**506**	50.0	09/01/2010	ND	207	103	200	7.76	

Surrogate: 1-Chlorooctane *21.8 %* *70-130*

Surrogate: 1-Chlorooctadecane *24.8 %* *70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

Celey D. Keene

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 Operating Company	BILL TO
Project Manager: Hack Conder	P.O. #:
Address: 122 West Taylor	Company:
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: 393-9174 Fax #: 397-1471	Address:
Project #: Project Owner:	City:
Project Name: EME K-6 leak	State: Zip:
Project Location: EME K-6 leak	Phone #:
Sampler Name: J. Woodfin	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions						
H20696-1	SB-12 @ 8'	G				✓					✓		8-19-10	3:34	✓	✓	✓								
2	SB-12 @ 14'	G				✓					✓		"	3:51	✓	✓	✓								
3	SB-12 @ 24'	G				✓					✓		"	4:21	✓	✓	✓								

Relinquished By: J. Woodfin	Date:	Received By:	Phone Result: ☐ Yes ☑ No Add'l Phone #:
	Time:		Fax Result: ☐ Yes ☑ No Add'l Fax #:
Relinquished By:	Date: 8/23/10	Received By: Jodi Henson	REMARKS: email results
	Time: 9:47		Hconder@riceswd.com; Jwoodfin@riceswd.com
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	Lweinheimer@riceswd.com

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

#26

Appendix C

JPath Forward Submission and Approval by BLM

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

From: Katie Jones
To: "Paul_Evans@nm.blm.gov"
Cc: Hack Conder
Subject: EME K-6 leak (1RP-2552) Path Forward
Date: Monday, November 29, 2010 1:42:00 PM

Mr. Evans,

During the July 2010, geo-probe delineation of the EME K-6 leak (1RP-2552) located in unit letter K, section 6, T20S, R37E, ROC discussed and agreed with you on the installation of a 20-mil reinforced liner and contouring the site to the surrounding area through folding over the surrounding dunes. ROC discussed this path forward with the NMOCD-District 1 office and received verbal approval; however, NMOCD requested we receive approval from the BLM on this path forward as well. A reply to this email stating you agree with this path forward will be sufficient to allow ROC to continue with the proposed work. If you have any questions or require any additional information, please contact myself or Hack Conder at (575)631-6432.

Thank you.

Katie Jones
Environmental Project Coordinator
RICE *Operating Company*

From: Paul_Evans@blm.gov
To: Katie Jones
Subject: Re: EME K-6 leak (1RP-2552) Path Forward
Date: Tuesday, November 30, 2010 6:04:46 AM

11/30/10

Rice Operting Company
ATT: Katie Jones
122 West Tayor
Hobbs, NM 88240

Re: EME K-6 Release
Lee County, New Mexico
Unit K, Sec. 06, T20S, R37E

Ms Katie Jones:

The Bureau of Land Management (BLM) reviewed the Work Plan submitted for Rice Operting Company and referenced above. The proposal is hereby approved according to the information provided.

Please be advised that BLM approval does not relieve Rice Operting Company of any liability should operations result in pollution of surface water, ground water, or the environment. In addition, BLM approval does not relieve Rice Operting Company of responsibility for compliance with other federal, state or local laws and/or regulations.

If you have any questions or need any assistance call (505) 234-5977 or E-Mail:
Paul_Evans@nm.blm.gov

Sincerely,
Paul R Evans

Bureau of Land Management
Environmental Protection Specialist

Paul R Evans
Bureau of Land Management
Realty
Environmental Protection Specialist
Office 575-234-5972
Direct Line 575-234-5977
Mobile 575-361-7548
Fax 575-234-5927

"Katie Jones"

<kjones@riceswd.com>
11/29/2010 01:42 PM

To <Paul_Evans@nm.blm.gov>
cc "Hack Conder" <hconder@riceswd.com>
Subject EME K-6 leak (1RP-2552) Path Forward

Mr. Evans,

During the July 2010, geo-probe delineation of the EME K-6 leak (1RP-2552) located in unit letter K, section 6, T20S, R37E, ROC discussed and agreed with you on the installation of a 20-mil reinforced liner and contouring the site to the surrounding area through folding over the surrounding dunes. ROC discussed this path forward with the NMOCD-District 1 office and received verbal approval; however, NMOCD requested we receive approval from the BLM on this path forward as well. A reply to this email stating you agree with this path forward will be sufficient to allow ROC to continue with the proposed work. If you have any questions or require any additional information, please contact myself or Hack Conder at (575)631-6432.

Thank you.

Katie Jones
Environmental Project Coordinator
RICE Operating Company

Appendix D

Re-vegetation Form

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

112 West Taylor
Hobbs, NM 88240
Phone: (575) 393-9174
Fax: (575) 393-0293

REVEGETATION FORM

1. General Information

Site Name: EME K-6 leak						
U/L K	Section 6	Township 20S	Range 37E	County Lea	Latitude N 32.59890	Longitude W 103.29281
Contact Name: Bruce Baker						
Email: bbaker@riceswd.com						
Site size: (200x96) 19,200 square feet			Map detail of site attached ☐			
Additional information:						

2. Soils

Salvaged from site ☒	Bioremediated ☒	Imported ☐	Blended ☐	Depth (in.):
Texture: sandy	Describe soil and subsoil: sand			
Soil prep methods:	Rip ☐ Depth (in.):	Disc ☒ Depth (in.): 5 inches	Rollerpack ☐	
Date complete: 2/16/2011				

3. Bioremediation

Fertilizer ☐ Type: Lbs/acre:	Hay ☒	Other ☒ Describe: 750 lbs bioNhance

4. Seeding

Custom seed mix ☒	Prescribed mix ☐	Seed mix name:	Seeding date:
Broadcast ☒ Method: portable seeder			
Soil conditions during seeding: Dry ☒ Damp ☐ Wet ☐			
Photos attached ☐	Observations: 35 lbs of BLM #2 seed mix, 3 lbs winter wheat		

5. Certification

Name: Robert Harrison	Title: Environmental Tech	Date: 2/16/2011
Signature: *not available*		

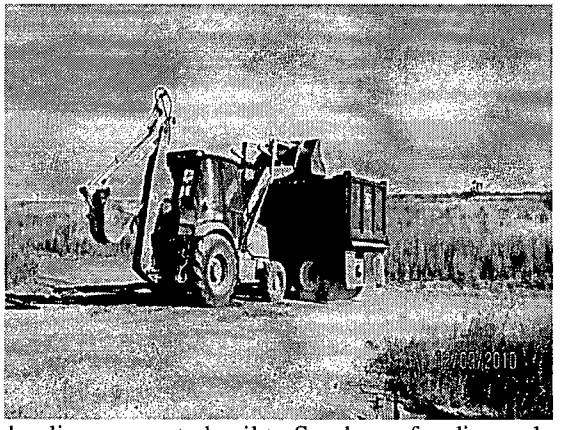
Appendix E

Photo Documentation

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

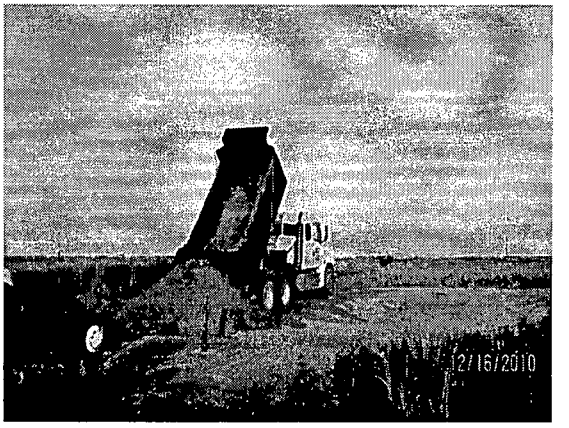
EME K-6 leak
Unit Letter K, Section 6, T20S, R37E

excavating the site



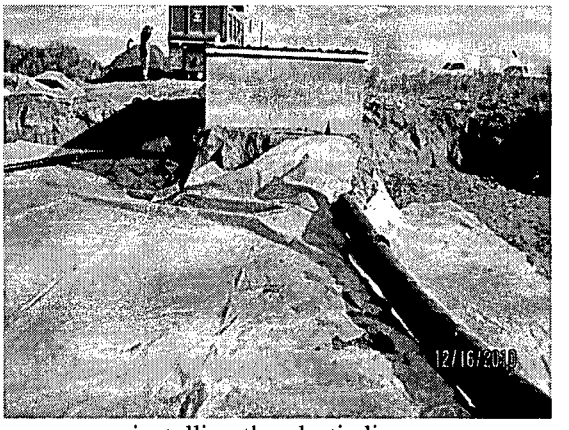
hauling excavated soil to Sundance for disposal


excavating the site



importing blow sand

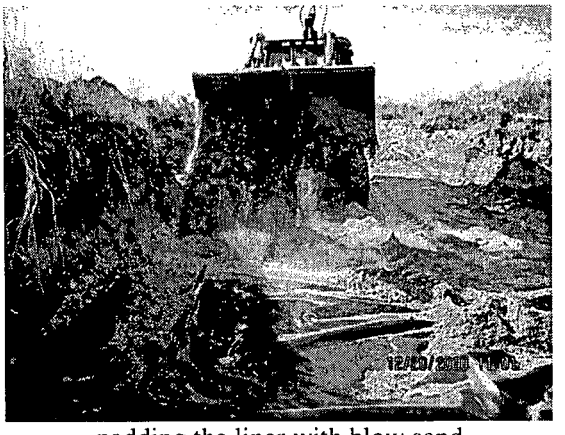
installing the plastic liner



installing the plastic liner

seaming the liners together

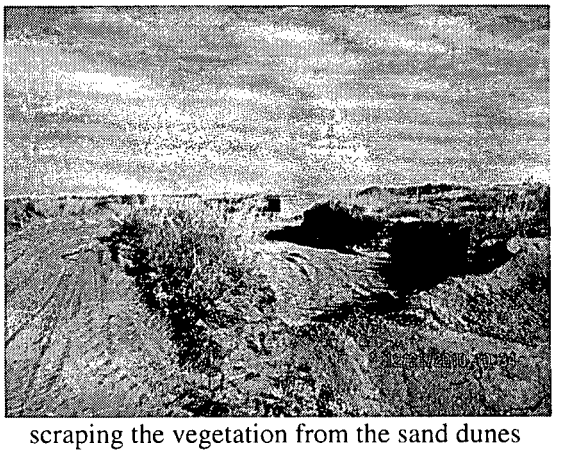
seaming the liners together



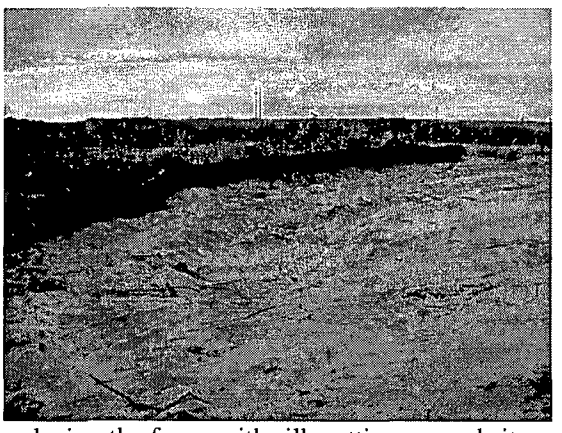
padding the liner with blow sand

padding the liner with blow sand

backfill the site with surrounding dunes

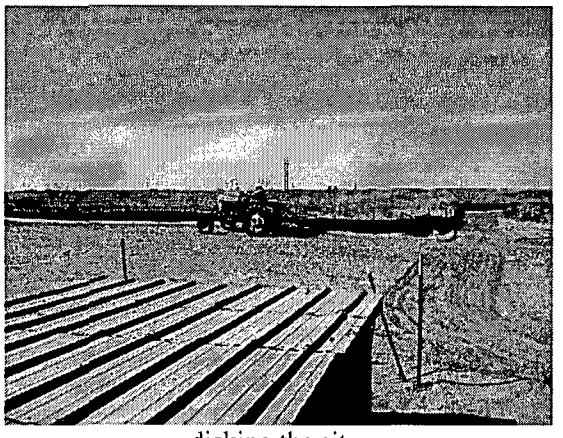


scraping the vegetation from the sand dunes

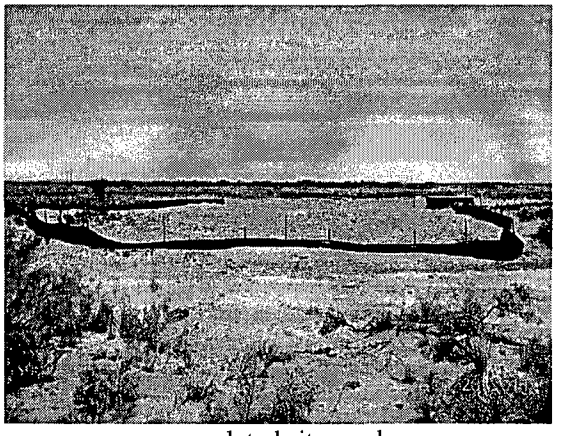


placing the fence with silk netting around site

seeding the backfilled site



disking the site



completed site work