1R - 423-07

REPORTS

DATE:

9-18-13

RICE *Operating Company*

2013 SEP 23 P 1:35

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

CERTIFIED MAIL
RETURN RECEIPT NO. 7008 1140 0001 3070 5986

September 18, 2013

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

RE: CAP Report and Termination Request
Justis E-26 (1R423-07): Unit Letter E, Section 26, T24S, R37E
RICE Operating Company – Justis SWD System

Mr. Hansen:

Rice Operating Company (ROC) submits the following CAP Report and Termination Request for the Justis E-26 site, located in Unit Letter E, Section 26, T24S, R37E in Lea County, New Mexico. See Figure 1 for site location. Rice Operating Company (ROC) is the service provider (agent) for the Justis Saltwater Disposal (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.

Background

On June 27, 2003, as part of the Junction Box Upgrade Workplan for the Justis E-26 site, the junction box was removed and a new, watertight junction box was installed 25 feet south of the former junction box. The former junction box was excavated to a depth of 12 feet with a backhoe. Photo-ionization detector (PID) readings and chloride field tests were conducted at regular intervals. Based on the field PID readings and the chloride field tests, both the total petroleum hydrocarbon (TPH) and chloride concentrations did not exhibit a decrease with depth. Upon completion of the excavation, the site was backfilled with clean imported soils and brought up to surface grade. In March 2004, ROC submitted a Junction Box Disclosure Report to the New Mexico Oil Conservation Division (NMOCD).

In order to determine the vertical extent of hydrocarbon and chloride impacts, on March 18, 2004, a soil boring (SB-1) was drilled in the former junction box location to a depth of 67 feet below ground surface (bgs). Analytical results from the drilling indicate the TPH concentrations decreased with depth, while the chloride concentrations did not exhibit a significant decline with depth. The chloride concentration was 587 milligrams per kilograms (mg/kg) at 67 feet bgs. Upon completion of the drilling, the soil boring was plugged with bentonite to the ground surface.

Between March 18 and 22, 2010, six additional soil borings (SB-2 through SB-7) and one monitor well (MW-1) were installed in the vicinity of the former junction box in order to delineate the chlorides/TPH within the soil and determine if groundwater was impacted. In the six soil borings, chloride readings decreased with depth. See Figure 3 for boring locations and analytical results. Groundwater chloride concentrations in monitor well MW-1 were elevated ranging from 1,560 to 2,200 mg/L Groundwater at the site is located at a depth of approximately 68 feet below ground surface. See attached Tables for groundwater analytical results.

On October 24, 2011, an up-gradient monitor well (MW-2) was installed northwest of the former junction box. Since the MW-2 monitor well installation, chloride analytical results have ranged from 1,460 to 1,580 mg/L, which is comparable with results found in monitor well MW-1 indicating there is an up-gradient source contributing to the degradation of groundwater quality.

In order to complete delineation of the soils at the site, two additional soil borings (SB-8 and SB-9) were installed north of SB-7 on April 24, 2012. See Appendix A for Boring Logs. The chloride concentration of the soil in SB-8 decreased from 4,960 mg/kg at 10 feet bgs to 1,920 mg/kg at 60 feet bgs. In addition, the chloride concentration of the soil in SB-9 decreased from 2,920 mg/kg at 20 feet bgs to 96 mg/kg at 40 feet bgs.

On August 7, 2012, monitor well MW-1 was plugged and replaced with a 4 inch recovery well (RW-1). The 2-inch PVC casing was removed and the wellbore was filled from 76 feet bgs to 3 feet bgs with a 1% to 3% bentonite slurry mixture. A concrete cap was placed from 3 feet to the surface to complete the capping of the well. RW-1 was installed approximately 10 ft southeast of MW-1.

On October 24, 2012, a CAP was submitted to the NMOCD, and a subsequent Addendum was submitted on November 26, 2012. The CAP and Addendum proposed removing a chloride mass of 861 kg from RW-1. Also proposed was the installation of a 113 ft by 43 ft, 20-mil reinforced liner at a depth of 4-5 ft bgs. The excavation would be backfilled with soil containing a chloride concentration <500 mg/kg and a field PID reading <100 ppm. Then the backfilled site would be seeded with a blend of native vegetation. NMOCD approved the CAP and Addendum on November 27, 2012.

Liner Installation

Beginning March 6, 2013, field personnel were onsite to excavate this site to dimensions of 113 ft by 43 ft, to a depth of 5 ft bgs, as shown on the attached Figure 2. Approximately 1,376 yards of excavated soil was properly disposed of at a NMOCD approved facility, and approximately 164 yards of blow sand was imported to serve as padding for the liner. A composite sample of the imported blow sand was field tested for hydrocarbons, resulting in a PID reading of 0.0 ppm. The sample was subsequently sent to commercial laboratory for analysis of chloride, resulting in a chloride concentration of 48 mg/kg. Six inches of blow sand were placed in the bottom of the excavation to serve as padding, and a 20-mil reinforced liner was properly seated at a depth of 4.5 ft bgs. An additional six inches of blow sand were placed above the liner. Approximately 936 yards of top soil were imported to serve as backfill for the excavation. A composite sample of the imported topsoil was field tested for hydrocarbons, resulting in a PID reading of 0.0 ppm. The sample was sent to commercial laboratory for analysis of chloride, resulting in a concentration of <16 mg/kg. The excavation was backfilled to ground surface, contoured to the surrounding area, and silt net fencing was placed around the site. On May 30, 2013, amendments were added to the soil, and the site was seeded with a blend of native vegetation. Lab results and a PID sheet for the imported soil, revegetation form, and photographs are attached in Appendix A.

Chloride Mass Removal

Groundwater recovery began from RW-1 on April 22, 2013 and continued through August 2, 2013. During that time, 1,500 barrels of chloride impacted groundwater were removed. With a chloride concentration of 4,200 mg/L, this equates to 1,002 kg of chloride removed. Removed groundwater was utilized for pipeline and well maintenance. A Groundwater withdrawal log and the most recent laboratory result for RW-1 is included in Appendix B.

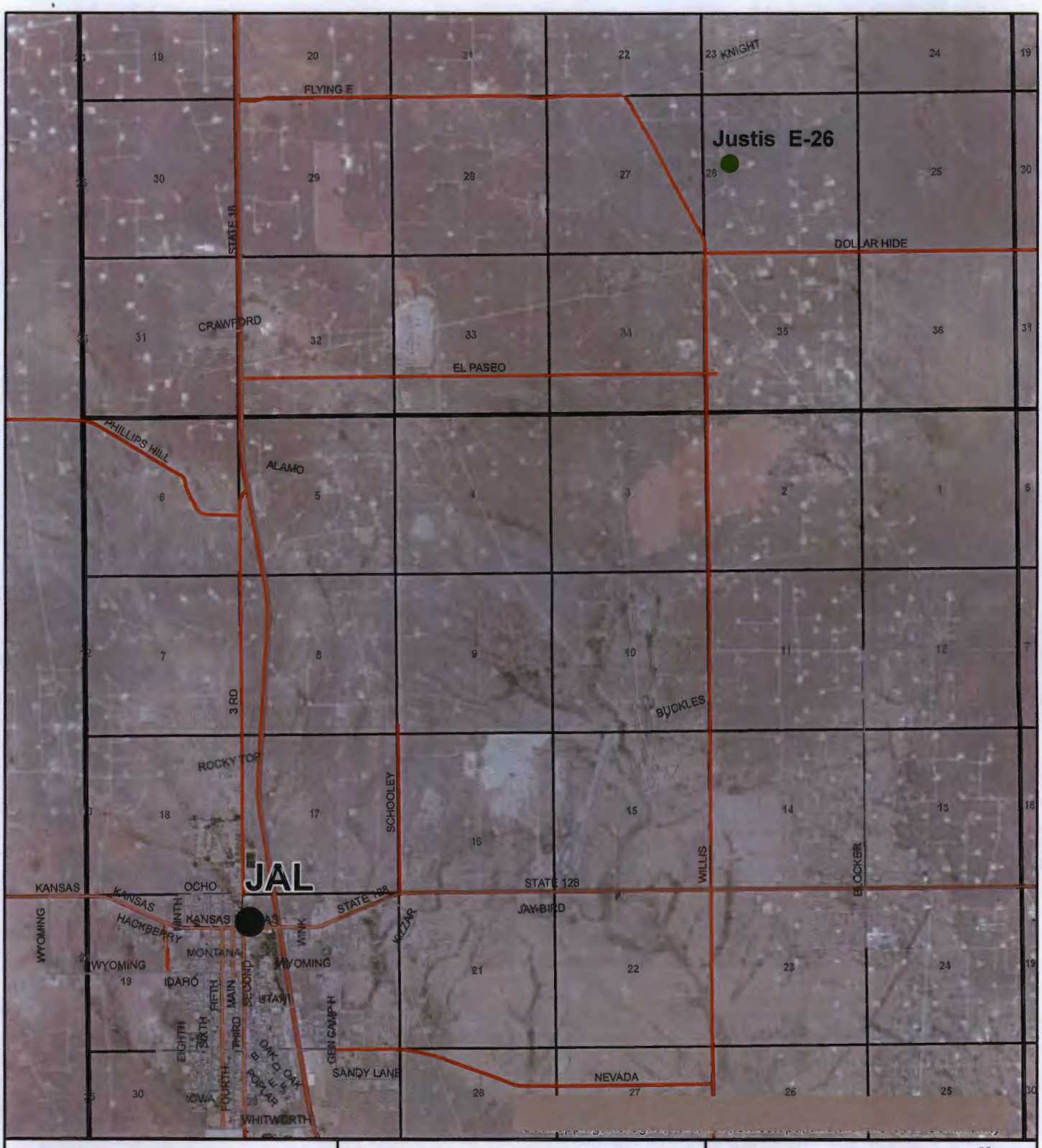
Based on the completion activities performed at the site, ROC acknowledges they have met the requirements of 19.15.29 NMAC for this project. Upon NMOCD approval, the recovery well (RW-1) and monitor well (MW-2) will be plugged and abandoned using a cement grout with 1 to 3% bentonite and a 3-foot cap of cement to the surface. The groundwater recovery system has been dismantled and the area will be seeded, if necessary. Upon completion of these activities, a Monitor Well Plugging Report will be submitted to the NMOCD.

Please contact me at (575) 631-6432 if you have any questions or wish to discuss this site. Thank you for your time and consideration.

Sincerely,
RICE Operating Company

Hack Conder
Environmental Manager

enclosures



RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC

Justis E-26

LEGALS: UL/E sec. 26
T24S R37E

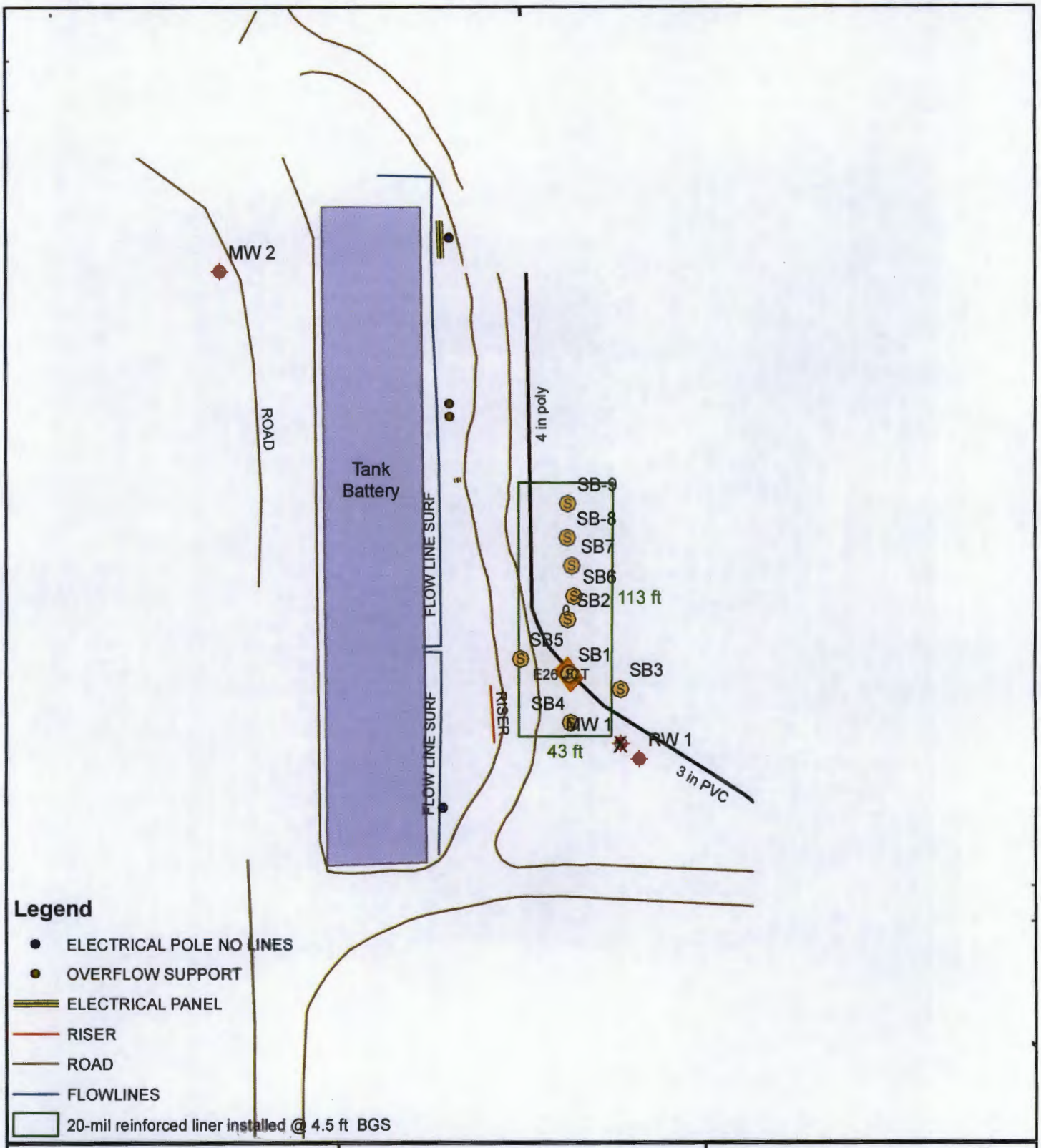
NMOCD Case #: 1R423-07

Figure 1

N
W E
S

0 0.25 0.5 1
Miles

Drawing date: 1/9/13
Drafted by: L. Weinheimer



RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC

RECS

Justis E-26

LEGALS: UL/E sec. 26
T24S R37E

NMOCD Case #: 1R423-07

Figure 2

N
W E
S

0 15 30 60
Feet

Drawing date: 5/16/12
Drafted by: L. Weinheimer

DGW = 68 ft

APPENDIX A

CARDINAL Laboratories

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

April 04, 2013

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: JUSTIS JUNCTION E-26

Enclosed are the results of analyses for samples received by the laboratory on 04/01/13 9:25.

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:	04/01/2013	Sampling Date:	03/28/2013
Reported:	04/04/2013	Sampling Type:	Soil
Project Name:	JUSTIS JUNCTION E-26	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T24S-R37E-SEC26 E - LEA CTY., NM		

Sample ID: BLOW SAND (H300757-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	04/02/2013	ND	432	108	400	0.00	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/02/2013	ND	191	95.5	200	2.72	
DRO >C10-C28	<10.0	10.0	04/02/2013	ND	198	99.2	200	7.84	

Surrogate: 1-Chlorooctane	*88.9 %*	*65.2-140*
Surrogate: 1-Chlorooctadecane	*108 %*	*63.6-154*

Sample ID: TOP SOIL (H300757-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/02/2013	ND	416	104	400	7.41	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/02/2013	ND	191	95.5	200	2.72	
DRO >C10-C28	<10.0	10.0	04/02/2013	ND	198	99.2	200	7.84	

Surrogate: 1-Chlorooctane	*80.7 %*	*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

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
(575) 393-2326 FAX (575) 393-2476

Company Name:	RTCE Operating	BILL TO	
Project Manager:	Hack Conder	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	Justis Jct E-26	Phone #:	
Sampler Name:		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	CL	TPH
H300757																
1	Blow sand	G	1			1					1		3/28/13	3:30	1	1
2	Top Soil	G	1			1					1		3/28/13	3:35	1	1

Relinquished By:	Date: 4/1/13	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 9:25		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Hack Conder, Zack Conder, Bruce Baker, Lara W, Laura Pena, Katie Jones
	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 (575) 393-2326

#710

RICE ENVIRONMENTAL CONSULTING & SAFETY

122 West Taylor Hobbs, NM 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471
PID METER CALIBRATION & FIELD REPORT FORM

CK. MODEL NO.		MODEL: PGM 7300	SERIAL NO: 590-000508
		MODEL: PGM 7300	SERIAL NO: 590-000504
	X	MODEL: PGM 7320	SERIAL NO: 592-903318
		MODEL: PGM 7300	SERIAL NO: 590-000183

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT NO: HAL-248-100-1	EXPIRATION DATE: 7/1/2015
METER READING ACCURACY: 100	

ACCURACY : +/- 2%

COMPANY
RICE OPERATING

SYSTEM	JUNCTION	UNIT	SECTION	TOWN SHIP	RANGE
JUSTIS	E-26	E	26	T-24-S	R-37-E

SAMPLE ID	PID	SAMPLE ID	PID
BLOWSAND	0		
TOP SOIL	0		

I verify that I have calibrated the above instrument in accordance to the manufacture operation manual.

SIGNATURE: _____ DATE: 3/28/2013

PO Box 5630
Hobbs, NM 88241
Phone: (575) 393-4411
Fax: (575) 393-0293

REVEGETATION FORM

1. General Information

Site name: Justis Jct. E-26						
U/L E	Section 26	Township T24S	Range R37E	County LEA	Latitude N32*11.350'	Longitude W103*08.345'
Contact Name: Hack Conder						
Email: hconder@rice-ecs.com						
100 X 110' sq ft 11.000			Map detail of site attached ☐			
Additional information:						

2. Soils **Do not rip caliche subsoils; caliche rocks brought to the surface by ripping shall be removed*

Salvaged from site ☐	Bioremediated ☐	Imported ☒	Blended ☒	Depth (in):
Texture: Sand	Describe soil & subsoil:	Blow Sand		
Soil prep methods:	Rip ☐ Depth(in):	Disc ☒ Depth (in): 3"		Rollerpack ☐
Date completed: 3/28/2013				

3. Bioremediation

Fertilizer ☐	Hay ☐	Other ☒ 22 Bags Restore
Type:		Describe: Nhance/2 Bags Manure/ 12 Bags Potting Soil
Lbs/acre:		

4. Seeding **Attach seed bag tags to this form. Seed bag tags shall contain the site name and S-T-R.*

Custom seed mix ☒	Prescribed mix ☐	Seed mix name:11 lbs. of Doom mix seed	Seeding date: 5/30/13
Broadcast ☒ Method: Mechanical Seeder			
Soil conditions during seeding: Dry ☒ Damp ☐ Wet ☐			
Photos attached ☐ Number of photos:	Observations: The seed was tilled into the ground.		

5. Certification I hereby certify that the information in this form and attachments is true and complete to the best of my knowledge and belief.

Name: Roderick Williams	Title: Environmental Tech	Date:5/30/13
Signature:	5-30-13	

Justis E-26 (1R423-07)
Unit E, Section 26, T24S, R37E

Site prior, facing west 6/21/2012

Excavating, facing south 3/8/2013

Hauling off spoil pile, facing east 3/13/2013

Padding the completed excavation, facing northwest 3/21/2013

Hauling in blow sand, facing south 3/25/2013

Padding excavation, facing west 3/25/2013

Installing the 20-mil, reinforced liner at approximately 4.5 ft bgs, facing northwest 3/27/2013

Backfilling, facing east 3/27/2013

Silt net installed, facing south 4/11/2013

Spreading amendments, facing north 5/30/2013

Seeding, facing north 5/30/2013

Site complete with vegetation starting to grow, facing west 7/31/2013

APPENDIX B

Record of Groundwater Withdrawal
Site Name: Justis E-26 (1R423-07)

Date	Fluid Hauled (bbls)		Lab Chloride Conc (ppm)	Remarks
4/1/2013			6,100	RW-1
4/22/2013				Started Pumping
4/26/2013	130			
Total For April	130	bbls		
	5460	gallons		
5/10/2013	100			
5/14/2013			5,400	RW-1
5/17/2013	130			
5/30/2013	130			
Total For May	360	bbls		
	15120	gallons		
6/14/2013	130		4,450	RW-1
6/21/2013	130			
6/28/2013	130			
Total For June	390	bbls		
	16380	gallons		
7/8/2013	130			
7/12/2013	110			
7/19/2013	100		4,200	RW-1
7/25/2013	110			
Total For July	450	bbls		
	18000	gallons		
8/1/2013	130			
8/2/2013	40			
Total For August	170	bbls	Total kg of Cl-	1,002
	6800	gallons	Removed	
Total For Project	1500	bbls		
	60000	gallons		

CARDINAL Laboratories

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

September 09, 2013

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: JUSTIS E-26 (24/37)

Enclosed are the results of analyses for samples received by the laboratory on 07/19/13 14:30.

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
KATIE JONES
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	07/19/2013	Sampling Date:	07/19/2013
Reported:	09/09/2013	Sampling Type:	Water
Project Name:	JUSTIS E-26 (24/37)	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: RW-1 (H301704-01)

Chloride, SM4500Cl-B **mg/L** **Analyzed By: DW**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**4200**	4.00	07/22/2013	ND	100	100	100	0.00	

Cardinal Laboratories

*=Accredited Analyte

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, Lab Director/Quality Manager

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	RICE Operating
Project Manager:	Katie Jones
Address:	112 W. Taylor
City:	Hobbs
State:	NM
Zip:	88240
Phone #:	
Fax #:	
Project #:	
Project Owner:	
Project Name:	
Project Location:	JUSTIS E-26
Sampler Name:	Edward Cesareo

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	TDS
H3D1704	JUSTIS E-26																			
1	~~MW-2~~ ~~MW-1~~ RW-1 *	G	1	✓									7-19-13	11:20	✓					

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:	Date: 7-19-13 Time: 2:30	Received By:	Jodi Henson
Relinquished By:	Date:	Received By:	
	Time:		

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

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

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

email results
hconder@rice-ecs.com; Lweinheimer@rice-ecs.com;
kjones@riceswd.com; Lpena@riceswd.com;
knorman@rice-ecs.com; ecesareo@rice-ecs.com

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

#54

* Changed as per Lara. 9/9/13.