

Mr. Larry Johnson

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

RE: Rice Operating Company Justis P-2 Leak REMEDIATION REPORT and TERMINATION REQUEST Unit Letters I & P, Sec. 2, T25S, R37E Lea County, New Mexico

Mr. Johnson,

RICE Operating Company (ROC) has retained Crain Environmental (CE) to address environmental concerns at the above-referenced site in the Justis SWD system. ROC is the service provider (operator) for the Justis 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/usage basis.

Background and Previous Work

The site is located approximately 5 miles northeast of Jal, New Mexico in Unit Letters I & P, Sec. 2, T25S, R37E as shown on the Site Location Map (Figure 1). On November 10, 2009, ROC discovered an accidental discharge of approximately seventeen barrels of produced water released from a point within 30 ft of the eliminated Justis P-2 vent junction box. Fifteen barrels of fluid were recovered and properly disposed. The line was permanently repaired on November 10, 2009. ROC submitted an initial C-141 on November 13, 2009 (Figure 2).

ROC submitted an Investigation & Characterization Plan (ICP) to the NMOCD on March 10, 2010, proposing investigative work at the site to determine if there was potential for groundwater degradation from residual chlorides and/or hydrocarbons.

On April 28, 2010, an Investigation Report and Remediation Workplan was submitted to the NMOCD, that detailed investigation and remediation activities at the Justis P-2 Leak site. It was noted in that Report that the spill area located west of boring SB-3 will be addressed in the remediation for the Justis P-2 vent. One (1) monitoring well (MW-1) was installed during the Investigation of the site, and will continue to be monitored as part of the Justis P-2 vent remediation. The Remediation Workplan was approved by the NMOCD on May 6, 2010.

Remediation Activities

On May 26, 2010, approved remediation activities commenced at the Justis P-2 Leak site. (Figure 3 shows the spill area and soil boring locations.) Soil was scraped from the areas around soil borings SB-7, SB-4 and SB-8 to a depth of one (1) foot below ground surface (bgs) and hauled to Sundance Disposal. Five point composite samples were collected from those areas on May 28, 2010 and laboratory tested for chloride concentrations. Field test results were as follows:

 2925 East 17th Street, Odessa, TX 79761

 Phone: (432) 530-9797
 Fax: (432) 272-0304

Mr. Larry Johnson Page 2 July 15, 2010

SB-7 Scraped Area	Cl = 240 mg/kg
SB-8 Scraped Area	Cl = 160 mg/kg
SB-4 Scraped Area	Cl = 384 mg/kg

Laboratory data and chain of custody documentation is included in Appendix A.

A 25' x 25' area of soil was excavated from around the soil boring SB-3 location to a depth of five (5) feet bgs. A portion of the excavated soil was hauled to Sundance Disposal. The remaining excavated soil was blended to reduce chloride concentrations below 1,000 mg/kg. An eight-point composite sample of the blended soil was collected on May 28, 2010 for laboratory analysis of chlorides. The laboratory reported a chloride concentration of 416 mg/kg. Laboratory data and chain of custody documentation is included in Appendix A.

On June 3, 2010, blow sand was hauled to the site and 6" of sand was placed at the bottom of the 25' x 25' excavation. A 20 mil plastic liner was installed above the sand, and another 6" of blow sand was installed above the plastic liner to prevent puncturing. The excavation was then backfilled with blended soil, from a depth of 5' bgs to 3' bgs. Peanut hay was blended with additional imported soil and used to backfill the excavated areas around soil borings SB-7, SB-4 and SB-8, as well as the upper 3' of the 25' x 25' excavation. All backfilled areas were graded to surface and the entire site was re-seeded with a blend of native vegetation on June 14, 2010. A total of 312 yards of chloride impacted soil was hauled to Sundance Disposal, and a total of 310 yards of clean soil was imported to the site for backfill purposes. Photographs of the remediation activities are included in Appendix B.

All remediation has been completed as approved by the NMOCD and a final C141 for site termination is attached as the last page of this report. ROC respectfully requests that this site be terminated as per NMOCD standards.

I appreciate the opportunity to work with you on this project. Please call me at (432) 530-9797 or Hack Conder at (575) 393-9174 if you have any questions or need additional information.

Sincerely, Crain Environmental

undy K. Crain

Cindy K. Crain, P.G. Environmental Manager

cc: Hack Conder, ROC

Attachments: site location map, initial C-141, site map, laboratory documentation, photographs, final C-141

FIGURES

Location of site





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

U Justis P-2 leak

Legals: UL: I and P sec. 2 T25S R37E

Owner: State

Drawing date: Revision date: Drafted by:

FIGURE 1



<u>District </u> 625 N. Freach Dr., Hobbs, NM 88240		te of New M					Form C-1				
District II 301 W. Grand Avenue, Artesia, NM 88210	~		ural Resources		Revised October 10, 2003						
District III 000 Rio Brazos Road, Aztec, NM 87410		onservation			Submit 2 Copies to appropriate District Office in accordance						
<u>District IV</u> 220 S. St. Francis Dr., Santa Fe, NM 87505		•••••••	th St. Francis Dr.				with Rule 116 on back side of form				
		nta Fe, NM 8					Side of it	orm			
Re	elease Notifica			/			_				
Name of Company Rice Operating		Contact	ATOR	y Grieco	🛛 Initia	Report	[] Final Re	sport			
Address 122 W. Taylor St., Hobbs, 1	NM 88240	Telephor		5) 393-91	74						
Facility Name Pipeline (Justis P-2 Leal	k)	Facility	Гуре Sa	lt Water (Jathering	System					
Surface Owner: George Willis	Mineral Ov	NDEF. S	State		API No.	30.0	25.2476	6			
i	LOCA	TION OF R	ELEASE								
Unit Letter Section Township Range 1, P 2 25S 37E		North/South Liv	Feet from the	East/W	est Line	County Lea	<u>,</u>	1			
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		URE OF RE				Arr AR	PRON 100	88			
Type of Release Produced Water	1011	Votum	of Release 17 bb		Volume R	ecovered	15 661	Ť			
Source of Release Pipeline			d Hour of Occurren	nce		lour of Disc	overy				
Was Immediate Notice Given?		Unknow If YES	To Whom?	l	11/10/09	9:00 am					
	🗌 No 📋 Not Req		ohnson, OCD, Hob	bs							
By Whom? Cindy Crain, Agent for Rice Op	the second s	d Hour 11/11/09									
Was a Watercourse Reached?	f YES, Volume Impacting the Watercourse.										
L) Yes	🖾 No	и на,	, i oranio mitraciniti	5 010 11 110	icoarse.						
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Site Map



APPENDIX A

LABORATORY DATA AND CHAIN OF CUSTODY DOCUMENTATION

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

Receiving Date: 05/28/10 Reporting Date: 06/02/10 Project Owner: NOT GIVEN Project Name: NOT GIVEN Project Location: JUSTIS P-2 LEAK SITE Analysis Date: 06/01/10 Sampling Date: 05/28/10 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: CK Analyzed By: HM

		CL
LAB NO.	SAMPLE ID	(mg/kg)
H20001-1	SB-7 1' SCRAPED AREA 5 PT. COMP.	240
H20001-2	SB-8 1' SCRAPED AREA 5 PT. COMP.	160
H20001-3	SB-4 1' SCRAPED AREA 5 PT. COMP.	384
		· ··· · · · · · · · · · · · · · · · ·
Quality Contr	ol	500
True Value Q	2C	500
% Recovery		100
Relative Perc	cent Difference	< 0.1

METHOD: Standard Methods4500-CI'BNote: Analysis performed on a 1:4 w:v aqueous extract.Not accredited for Chloride.

hemist

H20001 Rice

PLEASE NOTE: Liability and Damages Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoover shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for inordential or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiltates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whother such claim is based upon any of the above-stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories ARDINAL 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				T	BILL TO ANALYSIS REQUEST																			
Project Manage	er: Bruck Baker							P.O. #:										-						
Address: 12	Address: 122 W. Taylor				Con	npa	ny:																	
City: Hob	bs State: MM	Zip): ž	\$ 8	324	0	1	Attn	·····			. <u></u>												
	75-393-9174 Fax#: 575							Add		s:		-							[
Project #:	Project Owner						[·	City		<u> </u>														
Project Name:		·						Stat			7	Zip:									-			
	on: Justis P-2 Leak Si		 •		17 1 minu			Pho		#.		<u>lip.</u>												
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FOR LAB USE ONLY	T robert Egans	[T	T	M	ATRI	COLUMN TO A		_	SERV	λĨ	SAMPLI	NG											
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PLEAGE NOTE: Lability and Damages. Catchnai's listility and clearly exclusive remedy for any claim mining whether based in contract or tart, shall be limited to the emount paid by the client for the analyses. All claims including those for negligence and any other cause whethose whethose held be deemed walved unless made in witing and received by Cordinal within 30 days after completion of the applicable

cardee. In no event shall Cardinal be liable for incidential or consequental damages, including willneut Birthalien, business interruptione, loss of use, or less of profits incurred by elisit, its subsidiaries

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Cardinal, regardless of whother such claim is based upon any of the above stated reasons or otherwi

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Robert Egans	Time:	1	REMARKS: E-Mail Results TO:
Relinguished By:	52/10	Rocelved/By:	KIONES @ Rice Sund COM
	Time: Of	1. V. Molne	B baker is it it
Delivered By: (Circle One)		Sample Condition CHECKED BY:	Legang 11 L'
Sampler - UPS - Bus - Other:		Cool Intact (Initials) D'Yes Vyes (Y.) No No No	
			1

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476 #2(0





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

Receiving Date: 06/02/10 Reporting Date: 06/02/10 Project Owner: NOT GIVEN Project Name: JUSTIS P-2 LEAK SITE Project Location: NOT GIVEN

Analysis Date: 06/02/10 Sampling Date: 05/28/10 Sample Type: SOIL Sample Condition: INTACT Sample Received By: JH Analyzed By: AB

	CI
LAB NO. SAMPLE ID	(mg/kg)
H20016-1 8 PT. BLENDED BACKFILL	416
Anna Angle Man and Anna ang ang ang ang ang ang ang ang ang	
Quality Control	500
True Value QC	500
% Recovery	100
Relative Percent Difference	< 0.1

METHOD: Standard Methods 4500-CI'B Note: Analysis performed on a 1:4 w:v aqueous extract. Not accredited for Chloride,

Chemist

H20016 Rice

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim ansing, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors ansing 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. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories · ک ۲۰

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603

(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FA	AX (325)673-7020			
Company Name: Rice Operating Com	PARY	BILL TO	AV. E. N. HISKOOL Franklingenska	ANALYSIS	S REQUEST
Project Manager: Bruck Baker		P.O. #:			
Address: 122 W. Taylor		Company:			
City: Hobbs State: NM Zip: Phone #: 575-393-9174 Fax #: 575-39	88240	Attn:			
Phone #: 575-393-9174 Fax #: 575-39	7-1471	Address:			
Project #: Project Owner:		City:			
Project Name: Justis P-2 Leaks	ile	State: Zip:			
Project Location:		Phone #:			
Sampler Name:		Fax #:			
FOR LAB USE ONLY	MATRIX	PRESERV. SAMPLI	IG		
(C)OMP					
Lab I.D. Sample I.D.	ATEF ATEF	<u>ب</u> نن			
Laut.D. Sample I.D.		ER: BAS COO COO			
Lab I.D. Sample I.D. Build Back F. I.C.	# CUNIAINERS GROUNDWATER WASTEWATER SOIL OIL SUUDGE	OTHER : ACID/BASE: ICE / COOL OTHER : ALVO			
H2DD16-1 Spt. Blended BackFillC		x 5/28/10	2:45 1		

					· · · · · · · · · · · · · · · · · · ·
PLEASE NOTE: Lability and Damages, Cardina's Bability and clont's acclusive remark for any claim	arking whether based by contract	t or tori, shall be limited to the emount pel	by the client for the		
ansiyees. Aš cisims including those for negligence and any other cause wheteoover shell be deemed « service, in he event shall Cordinal be lipble for incidental or consequental damages, including without il	Initation, business Interruptions,	loss of use, or loss of profits incurred by a	tent, its subsidiaries		
affiliates or successaria whishig out of an related to the performance of services hereunder by Gardinal, or Relinquished By: Date: Rec	egardleas of whether such cialm		Phone Result: 17 Yes 17 No.	Add'l Phone	#:
	-		Phone Result: Fax Result: REMARKS:	Add'l Fax #:	
Fil total			E-Mail R	2541+5	10:
Refinquished By: Pater 2/10 Rec	elved By:		K-TOARS @ RICESUM	·COM	RIGHI
148° 38 (au I	mon	B baker it	(1	Chan.
Delivered By: (Circle One)	Sample Condit Cool Intact	Ion CHECKED BY:	Fax Result: Ves No REMARKS: E-Mail K K-Toges & Ricesus B baker " Legang "	1	1
Sampler - UPS - Bus - Other:					

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

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APPENDIX B

PHOTOGRAPHS



excavating a 25x25x5-ft area for the installation of a 20-mil poly liner



hauling off scrapped soil for disposal



scrapping the leak area in the vicinity of SB-8



blow sand padding beneath the 20-mil poly liner



blow sand padding above the 20-mil poly liner



seeding the backfilled site



blending clean, imported soil with hay to be utilized as backfill



tilling in the seed

FINAL C-141

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notifie	cation a	and Co	rrective A	ction					
	C	PERAT	OR		Initia	al Report	\boxtimes	Final Report	
Name of Company Rice Operating	Co	Contact Hack Conder							
Address 122 W. Taylor St., Hobbs, NM 88240	****	elephone N		393-9174					
Facility Name Pipeline (Justis P-2 Leak)	Fa	cility Type	e Salt	Water Ga	thering	System			
Surface Owner: George Willis Mineral C	Owner:	State	;			RP # 2508 60-025-247	61		
LOCATION OF RELEASE									
Unit Letter Section Township Range Feet from the	North/So		Feet from the	East/Wes	t Line	County			
I, P 2 25S 37E						Lea			
Latitude N 32°09'21.55931	<u>1"</u> Long	gitude <u>W</u>	103°07'39.520	01" (NAI	<u>) 83)</u>				
NAT	FURE O	FRELE	CASE						
Type of Release Produced Water			Release 17 bbl	V	olume R	lecovered	15 bb)	1	
Source of Release Pipeline			our of Occurrenc			Hour of Dis			
		Unknown	1	11	1/10/09	9:00 am			
Was Immediate Notice Given?		lf YES, To Larry Johns	Whom? son, OCD, Hobbs	;					
By Whom? Cindy Crain, Agent for Rice Operating		Date and H	our 11/11/09	12:30 p	m				
Was a Watercourse Reached?		lf YES, Vo	lume Impacting t						
🗌 Yes 🖾 No									
If a Watercourse was Impacted, Describe Fully.*	.		1-4-4	•					
Describe Cause of Problem and Remedial Action Taken.*									
Pipeline was broken during hand-spotting operations. The broket	en segment o	of line has b	een replaced as a	ı permanen	t repair.				
Describe Area Affected and Cleanup Action Taken.*				<u></u>					
6,736 sq ft were affected, consisting of unvegetated areas related	to an old r	removed inn	ection boy and ret	noved tank	hatterv	After the l	eak was	discovered	
a crew was sent to repair the line, and a water truck was dispatche	ed to remov	ve and prope	erly dispose of flu	uids. Impa	cted soil	l was remov	ed from	the site	
until confirmation chloride analyses reported concentrations rema									
Termination Request is attached to this C-141.									
I hereby certify that the information given above is true and comp	plete to the	best of my	knowledge and u	nderstand t	hat purs	uant to NM	OCD ru	les and	
regulations all operators are required to report and/or file certain	release noti	ifications an	d perform correc	tive actions	s for rele	eases which	may en	danger	
public health or the environment. The acceptance of a C-141 rep									
should their operations have failed to adequately investigate and n or the environment. In addition, NMOCD acceptance of a C-141									
federal, state, or local laws and/or regulations.	r report doe	s not renew	e une operation of	csponsion	ity 101 0	omphanee w	ally ally	other	
5/1/			OIL CON	SERVA	TION	DIVISIC	<u>)N</u>		
Simpling Addition				· ·					
Signature: CA DAVILLE			ENV. ENGF		۸ A	Ν	^ `		
Printed Name: Hack Conder	A		District Supervis	<u> She</u>	offy	er te	ben	N	
Title: Environmental Manager	Ap	oproval Date	e: 08/19/11		oiration	Date:		8	
]			
E-mail Address: hconder@riceswd.com		onditions of	Approval:			Attached			
Date: 7/14/10 Phone: (575) 393-9174						IRP-10	1-5-2	2508	

* Attach Additional Sheets If Necessary