

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:

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.

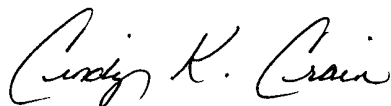
On June 3, 2010, blow sand was hauled to the site and 6" of sand was placed at the bottom of the 25' x 25' excavation. A 20 mil plastic liner was installed above the sand, and another 6" of blow sand was installed above the plastic liner to prevent puncturing. The excavation was then backfilled with 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



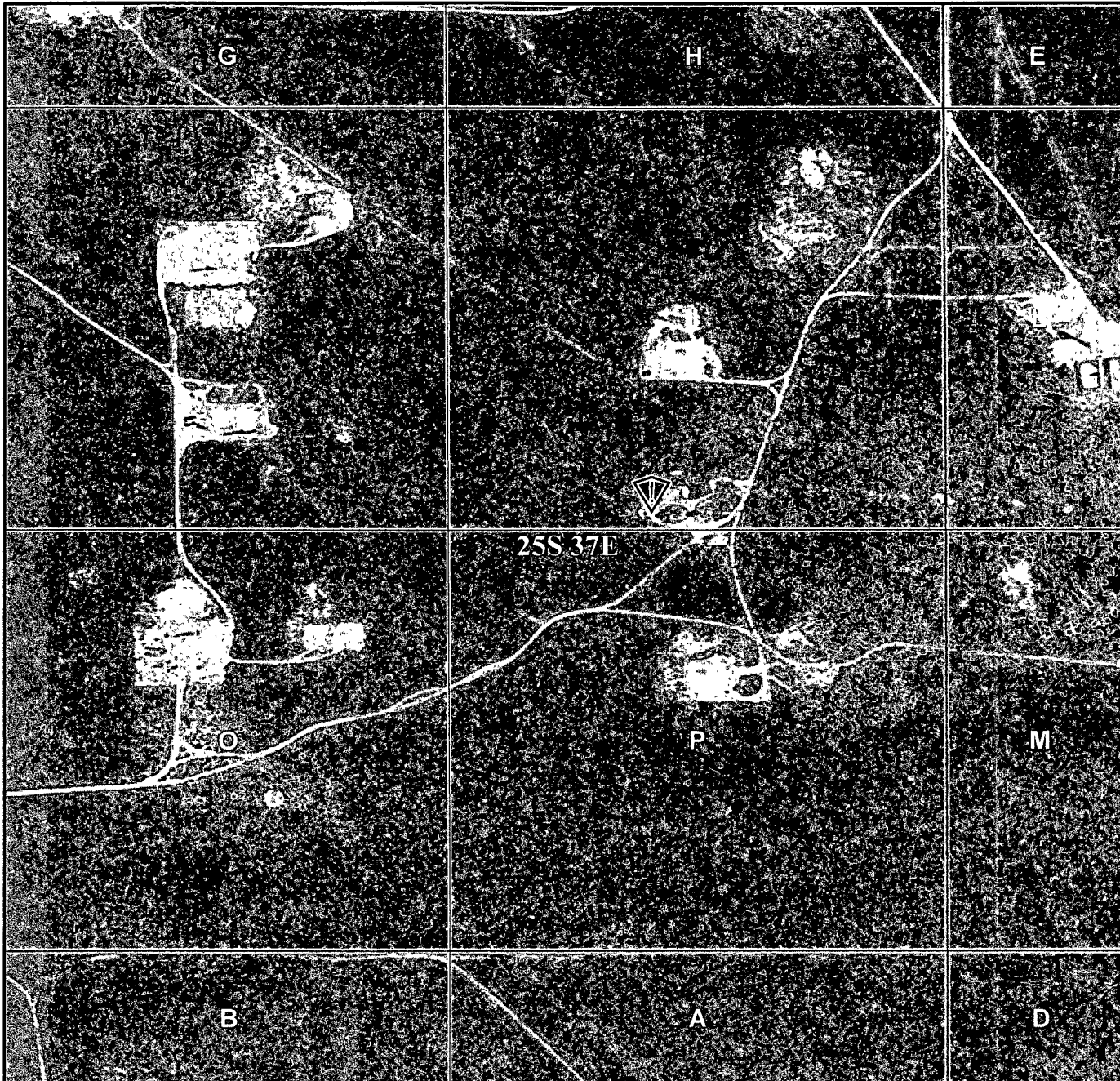
Cindy K. Crain, P.G.
Environmental Manager

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

Justis P-2 leak

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

Owner: State

Drawing date:
Revision date:
Drafted by:

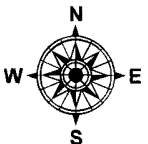


FIGURE 1

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

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	Contact	Tony Grieco
Address	122 W. Taylor St., Hobbs, NM 88240	Telephone No.	(575) 393-9174
Facility Name	Pipeline (Justis P-2 Leak)	Facility Type	Salt Water Gathering System

Surface Owner:	George Willis	Mineral Owner:	State	API No.	30-025-24761
----------------	---------------	----------------	-------	---------	--------------

LOCATION OF RELEASE

Unit Letter I, P	Section 2	Township 25S	Range 37E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
---------------------	--------------	-----------------	--------------	---------------	------------------	---------------	----------------	---------------

Latitude N 32°09'21.55931" Longitude W 103°07'39.52001" (NAD 83)

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	17 bbl	Volume Recovered	15 bbl
Source of Release	Pipeline	Date and Hour of Occurrence	Unknown	Date and Hour of Discovery	11/10/09 9:00 am
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Larry Johnson, OCD, Hobbs		
By Whom?	Cindy Crain, Agent for Rice Operating	Date and Hour	11/11/09 12:30 pm		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

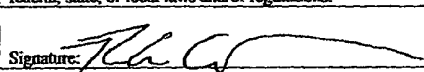

Describe Cause of Problem and Remedial Action Taken.*

Pipeline was broken during hand-spotting operations. The broken segment of line has been replaced as a permanent repair.

Describe Area Affected and Cleanup Action Taken.*

6,736 sq ft were affected, consisting of unvegetated areas related to an old, removed junction box and removed tank battery. After the leak was discovered, a crew was sent to repair the line, and a water truck was dispatched to remove and properly dispose of fluids. A one-call has been made and impacted surface soil will be excavated on November 16, 2009. Soil samples will be collected for laboratory analysis of chlorides, and a final C141 report will be submitted to the OCD following remediation of the spill area.

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: Tony Grieco	Approved by District Supervisor ENVIRONMENTAL ENGINEER	
Title: Environmental Tech	Approval Date: 5.6.10	Expiration Date: 7.6.10
E-mail Address: tgrieco@riceswd.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 11/12/09 Phone: (575) 393-9174	Submit Final C-141 w/DOCS B4	ITP# 10.5.2508

* Attach Additional Sheets If Necessary

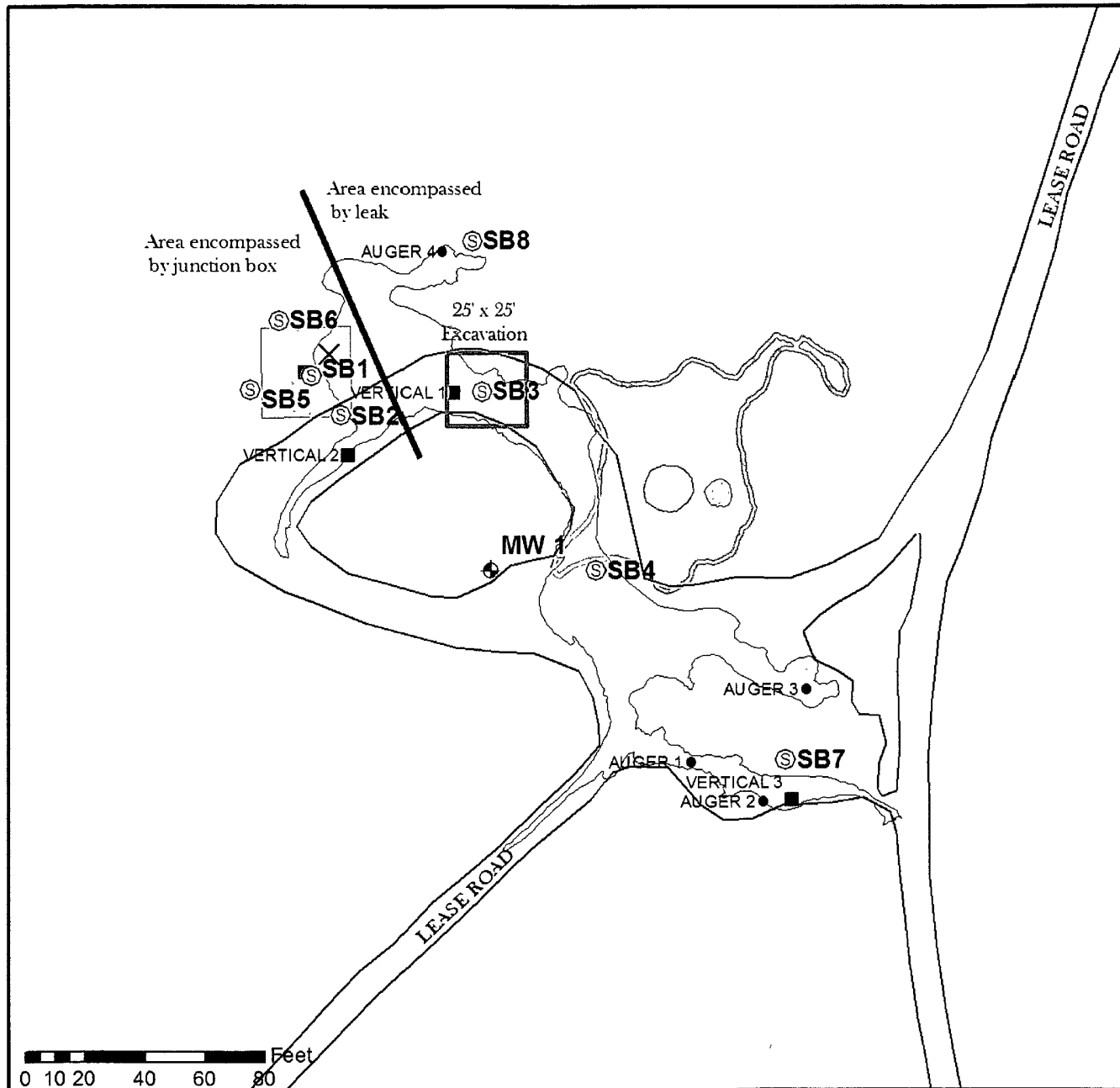
Figure 2

INC. n LWJ 1015523216

AAO- PLWJ 1015533791



Site Map



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

Justis Jct P-2 and Leak

Legals: UL/P SEC 2 T25S R37E

NMOCD Case #: 1R423-18

Owner: State

Legend

- SOIL BORE
- MONITOR WELL
- CLAY MARKER
- SOURCE
- CLAY LINER
- HEAVY ASPHALTINE
- OLD TREATER BASE
- OLD TANK BASE
- LEAK AREA

Drawing date: 4/22/10

Revision date: 7/2/10

Drafted by: T. GRIECO

L. WEINHEIMER

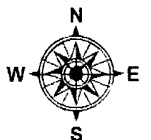


FIGURE 3

APPENDIX A

**LABORATORY DATA AND
CHAIN OF CUSTODY DOCUMENTATION**

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

[illegible]

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 analysis. All claims, including those for negligence and any other cause whatsoever that 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 causes or otherwise.

Relinquished By:		Date:	Received By:	Phone Result:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Robert T Egans		Time:		Fax Result:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date:	Received By:	REMARKS:		
		5/28/10	Chick Keene	E-Mail Results To:		
		Time:		KJones@RiceSWd.com		
		5:04		Baker " " "		
Delivered By: (Circle One)		Sample Condition		CHECKED BY:		
Sampler - UPS - Bus - Other:		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		(Initials)		
		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		Cpk		
				Aegans " " "		

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

#26



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

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

METHOD: Standard Methods

4500-CIB

Note: Analysis performed on a 1:4 w:v aqueous extract.
Not accredited for Chloride.

Chad Keene
Chemist

October
Date

H20016 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 whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of 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.



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

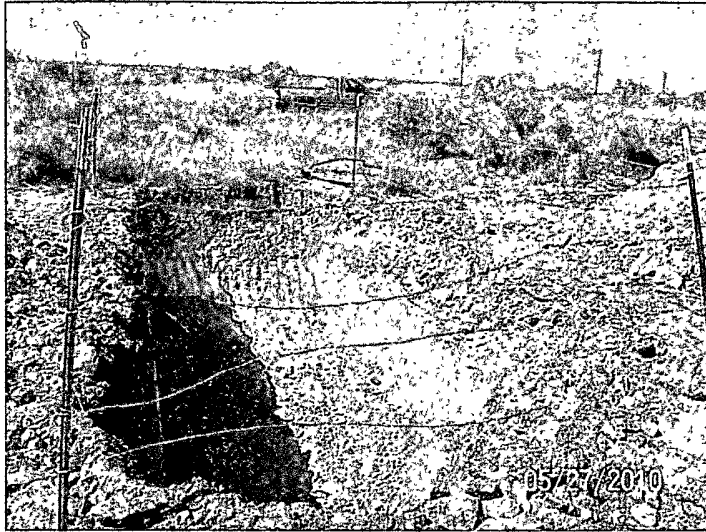
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

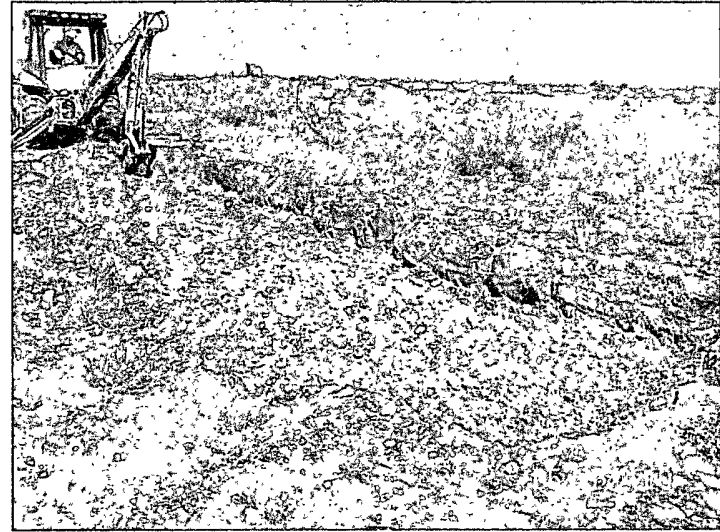
[illegible]

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

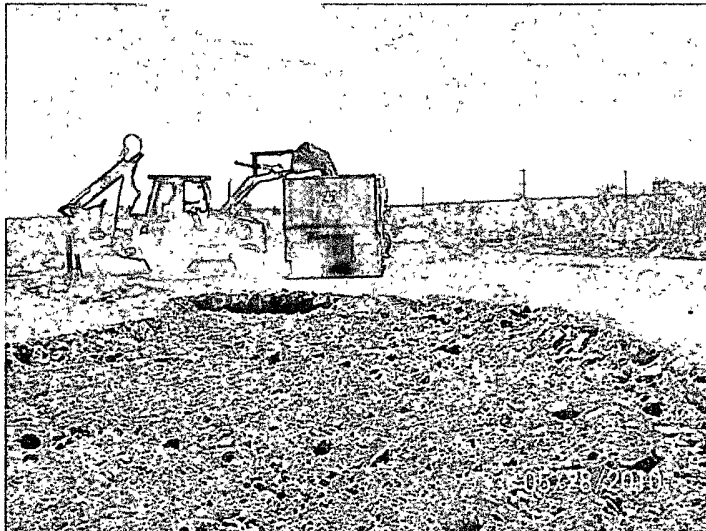
APPENDIX B
PHOTOGRAPHS



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



scrapping the leak area in the vicinity of SB-8



hauling off scrapped soil for disposal



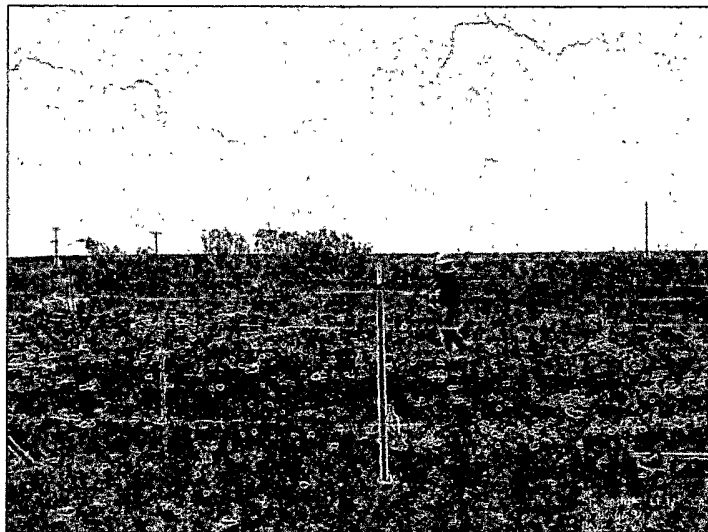
blow sand padding beneath the 20-mil poly liner



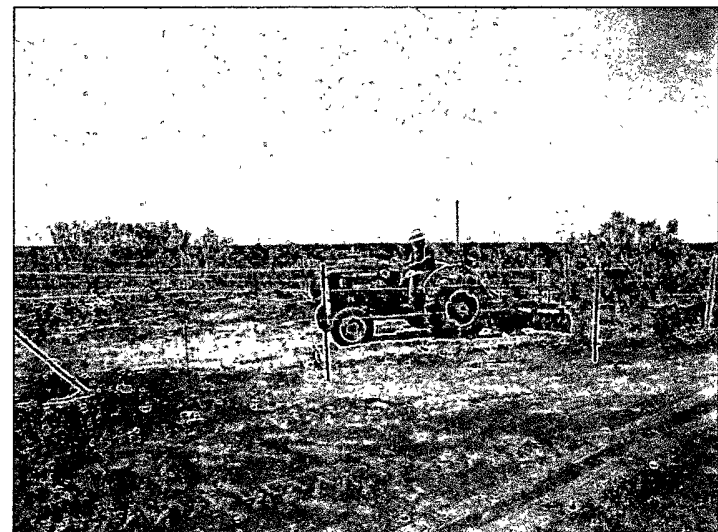
blow sand padding above the 20-mil poly liner



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



seeding the backfilled site



tilling in the seed

FINAL C-141

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

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	Contact	Hack Conder
Address	122 W. Taylor St., Hobbs, NM 88240	Telephone No.	(575) 393-9174
Facility Name	Pipeline (Justis P-2 Leak)	Facility Type	Salt Water Gathering System

Surface Owner:	George Willis	Mineral Owner:	State	1RP # 2508 API # 30-025-24761
----------------	---------------	----------------	-------	----------------------------------

LOCATION OF RELEASE

Unit Letter I, P	Section 2	Township 25S	Range 37E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
---------------------	--------------	-----------------	--------------	---------------	------------------	---------------	----------------	---------------

Latitude N 32°09'21.55931" Longitude W 103°07'39.52001" (NAD 83)

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	17 bbl	Volume Recovered	15 bbl
Source of Release	Pipeline	Date and Hour of Occurrence	Unknown	Date and Hour of Discovery	
				11/10/09 9:00 am	
Was Immediate Notice Given?		If YES, To Whom?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required		Larry Johnson, OCD, Hobbs			
By Whom? Cindy Crain, Agent for Rice Operating		Date and Hour 11/11/09 12:30 pm			
Was a Watercourse Reached?		If YES, Volume Impacting the Watercourse.			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					

If a Watercourse was Impacted, Describe Fully.*


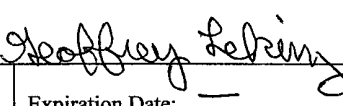
Describe Cause of Problem and Remedial Action Taken.*

Pipeline was broken during hand-spotting operations. The broken segment of line has been replaced as a permanent repair.

Describe Area Affected and Cleanup Action Taken.*

6,736 sq ft were affected, consisting of unvegetated areas related to an old, removed junction box and removed tank battery. After the leak was discovered, a crew was sent to repair the line, and a water truck was dispatched to remove and properly dispose of fluids. Impacted soil was removed from the site until confirmation chloride analyses reported concentrations remaining in soil to be less than 1,000 mg/kg. A detailed Remediation Report and Termination Request is attached to this C-141.

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	ENV. ENGR: Approved by District Supervisor: 	
Title: Environmental Manager	Approval Date: 08/19/10	Expiration Date: —
E-mail Address: hconder@riceswd.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 7/14/10 Phone: (575) 393-9174		1RP-10-5-2508

* Attach Additional Sheets If Necessary