

APPROVED

By OCD District 1 at 12:19 pm, May 14, 2015

REVIEWED

By OCD District 1 at 12:19 pm, May 14, 2015

RICE Operating Company

112 West Taylor · Hobbs, New Mexico 88240

Phone: (575) 393-9174 · Fax: (575) 397-1471

September 24th, 2012

Mr. Geoffrey Leking

New Mexico Energy, Minerals, & Natural Resources

Oil Conservation Division, Environmental Bureau

1625 N French Drive

Hobbs, New Mexico 88240

RE: Termination Request

Rice Operating Company – Justis SWD System

Justis E-23 AD (1RP-2565): UL/E sec. 23 T24S R37E

Mr. Leking:

The site is located approximately 6 miles northeast of Jal, New Mexico at UL/E sec. 23 T24S R37E (Figure 1). NM OSE records indicate that groundwater will likely be encountered at a depth of approximately 75 +/- feet.

ROC is the service provider (agent) for the Justis 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.

On June 17th, 2010, a 3 in PVC pipeline cracked and produced water was released, affecting approximately 6,480 sq ft of pasture and approximately 4,175 sq ft of roadway. A vacuum truck was immediately dispatched to collect and properly dispose of the standing water. The impacted pasture area was scraped to a depth of 8-12 inches and approximately 144 yards of soil were disposed of at a NMOCD approved facility. An initial C-141 was submitted to NMOCD District 1 Office on June 21st, 2010 (Appendix A). Five verticals were installed to determine the depth of contamination and samples were field tested for chlorides and hydrocarbons. Representative samples were taken to a commercial laboratory for analysis.

Based on the vertical data, three soil bores were installed at the site on July 29th, 2010. As the bores were advanced, samples were taken and field tested for chlorides and hydrocarbons. Representative samples from each bore were then taken to a commercial laboratory for confirmation of field sampling numbers. In SB-1, laboratory chlorides readings dropped from 4,320 mg/kg at 27 ft bgs to 272 mg/kg at 66 ft bgs. In SB-2, laboratory chloride readings dropped from 7,440 mg/kg at 27 ft bgs to 2,040 mg/kg at 65 ft bgs, and in SB-3, laboratory chloride readings dropped from 4,240 mg/kg at 6 ft bgs to

80 mg/kg at 18 ft bgs. Gasoline Range Organics (GRO) and Diesel Range Organics (DRO) readings were non-detect at all depths in all bores.

To inhibit the downward migration of chlorides through the vadose zone, ROC proposed installing a 20-mil reinforced poly liner at the site measuring 20 ft x 67 ft. The liner would be placed at approximately 4-5 ft bgs and cover all three soil bores. The excavated soil would be disposed of at a NMOCD approved facility and clean, imported soil would be used as backfill material. NMOCD Office agreed with the liner dimensions on June 20th, 2012, and NMOCD District 1 office approved the vadose zone remedy on June 27th, 2012.

On July 2nd, 2012, the site was excavated for liner installation. The site was excavated to 20 ft x 67 ft x 4-5 ft deep and a total of 600 yards of excavated soil was taken to a NMOCD approved facility for disposal. 600 yards of clean soil was imported to the site to serve as padding and backfill. A six inch sand pad was placed at the base of the excavation to protect the liner from punctures and a 20-mil reinforced poly liner was installed and properly seated into the base of the excavation. Another six inch sand pad was placed above the liner to protect the liner from punctures. On September 13th and 14th, 2012, the site and surrounding area were prepared with soil amendments and seeded with a blend of native vegetation. Documentation of these activities can be found in Appendix B.

Two additional soil bores were installed on July 10th, 2012 as requested by NMOCD – Santa Fe Office. SB-4 and SB-5 were installed just north of the liner and as the bores were advanced samples were taken for field testing of chlorides and hydrocarbons. Representative samples were taken from SB-5 to a commercial laboratory for confirmation of field numbers. Laboratory chloride readings dropped from 7,730 mg/kg at 5 ft bgs to 208 mg/kg at 65 ft bgs. GRO and DRO readings were non-detect in the bore.

On July 20th, 2012, ROC submitted a Multimed file that was run for the site. An average of all soil bore data in and near the installed liner (SB-1, SB-2, SB-3, SB-4, SB-5, and Vertical 3 (2,200 mg/L) was used for the initial concentration. For the points where data did not reach 70 ft bgs, the data for the last field test was extrapolated throughout and an infiltration rate of 0.01524 m/yr (clay/poor liner) was used. Multimed yielded a maximum concentration of 212.4 mg/L at 143 years. The Multimed model demonstration was approved by NMOCD Santa Fe Office on September 4th, 2012 (Appendix C).

ROC has completed the actions as approved by NMOCD by installing and properly seating a 20-mil reinforced poly liner measuring 20 ft x 67 ft at a depth of 4-5 ft bgs and by demonstrating via Multimed the maximum chloride concentrations could not potentially affect groundwater. Therefore, ROC requests that the site be granted 'remediation termination' status of the regulatory file. The final C-141 can be found in Appendix D.

ROC appreciates the opportunity to work with you on this project. Please call me at (575) 393-9174 if you have any questions or wish to discuss the site.

Sincerely,

A handwritten signature in black ink, appearing to read 'H. Conder', with a stylized, flowing script.

Hack Conder
Environmental Manager
ROC
(575) 393-9174

Attachments:

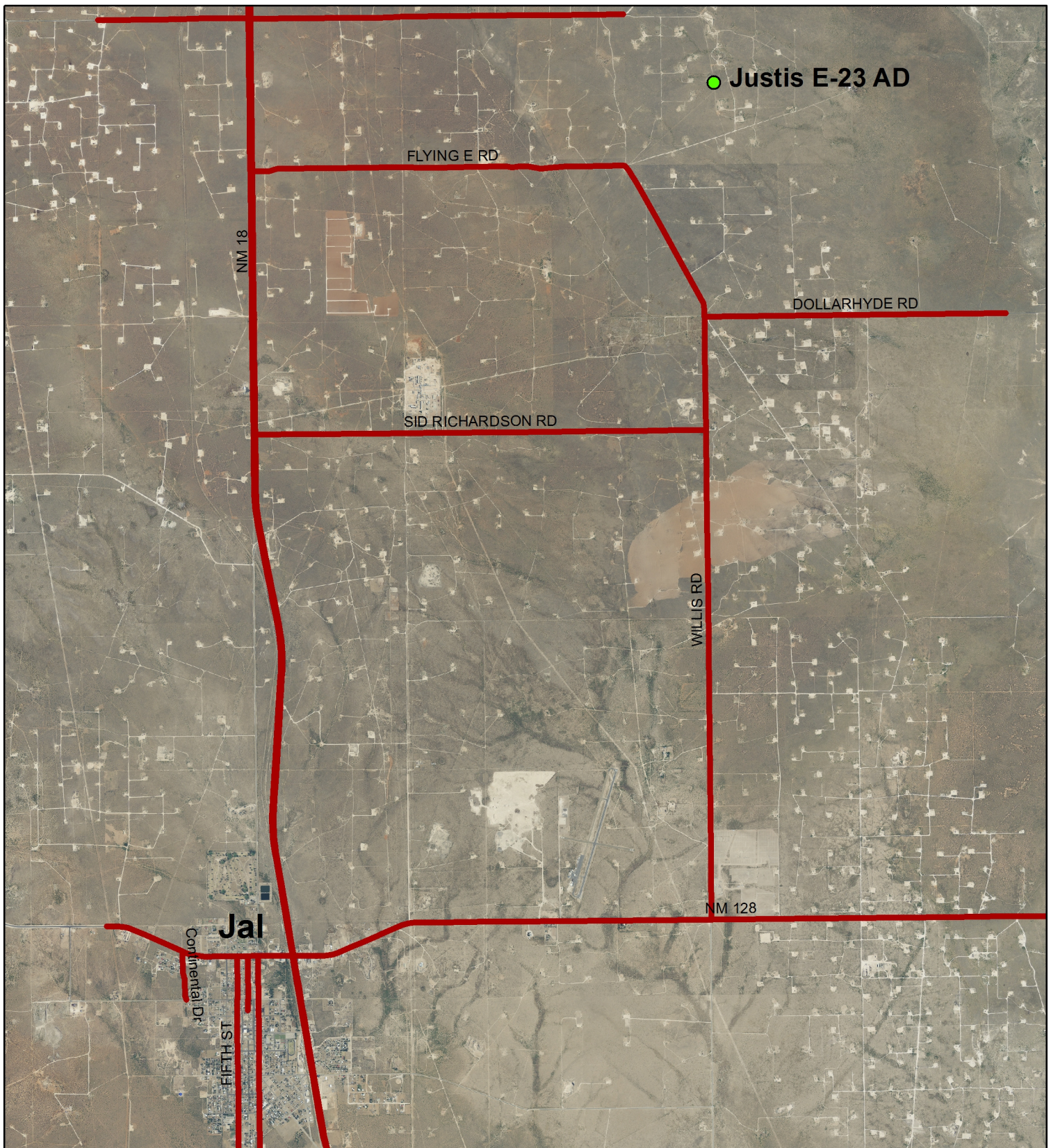
- Figure 1 – Site Location Map
- Appendix A – Initial C-141
- Appendix B – Liner Installation Documentation
- Appendix C – NMOCD Multimed Demonstration Approval
- Appendix D – Final C-141

Figures

RICE Operating Company (ROC)

112 West Taylor Hobbs, NM 88240
Phone 575.393.9174 Fax 575.397.1471

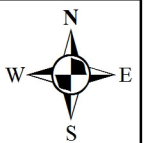
Site Location



JUSTIS E-23 AD

Legals: UL/E SEC. 23
T-24-S R-37-E
Case number: 1RP-2565

Figure 1



0 0.5 1
Miles

Drawing date: 5/22/12
Drafted by: L. Weinheimer

Appendix A

Initial C-141

RICE Operating Company (ROC)

112 West Taylor Hobbs, NM 88240
Phone 575.393.9174 Fax 575.397.1471

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 21 2010

HOBBSDOCD

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	Facility Type Salt Water Gathering System
Surface Owner: Doom Ranch	Mineral Owner API No. 30-025-24761

LOCATION OF RELEASE

Unit Letter E	Section 23	Township 24S	Range 37E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
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Latitude N. 32°12'12.49 Longitude W. 103°8'26.667

NATURE OF RELEASE

Type of Release : Produced water	Volume of Release 70	Volume Recovered 45
Source of Release : Pipeline	Date and Hour of Occurrence 6/17/10	Date and Hour of Discovery 6/17/10 9:26 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, NMOCD	
By Whom? Hack Conder	Date and Hour 6/17/2010; 3:30	
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.*


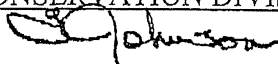
A 3 in PVC pipeline cracked. The damaged section of pipe was replaced as a permanent repair.

Describe Area Affected and Cleanup Action Taken.*

10,655 sq ft was affected, 6,480 sq ft of which was pasture and 4,175 ft was roadway. A vacuum truck was immediately dispatched to collect and properly dispose all standing water. The impacted pasture was scraped to a depth of 8-12 in and approximately 144 yards of soil were hauled to the NMOCD approved disposal facility Sundance.

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

OIL CONSERVATION DIVISION

Signature: 	Approved by District  ENVIRONMENTAL ENGINEER	
Printed Name: Tony Grieco	Approval Date 6.21.10	Expiration Date: 8.23.10
Title: Environmental Tech	Conditions of Approval: <input checked="" type="checkbox"/> Attached <input type="checkbox"/>	
E-mail Address: tgrieco@riceswd.com	Date: 6.21.10 Phone: (575) 393-9174	

* Attach Additional Sheets If Necessary

n LWS 1017354245

p LWS 1017254893

• LEAK MUST BE DELINEATED VERTICALLY TO
CLEAN (250 PPM) & REMOVED

Appendix B

Liner Installation Documentation

RICE Operating Company (ROC)

112 West Taylor Hobbs, NM 88240
Phone 575.393.9174 Fax 575.397.1471

Justis E-23 AD (1RP-2565)
Unit Letter E, Section 23, T24S, R37E



Excavating, facing east

6/26/2012



Exporting soil, facing west

6/27/2012



Installing 6" bottom sand pad, facing west

6/27/2012



Sand installed, facing east

6/28/2012



Installed 20' x 67' 20-mil reinforced liner at 4-5
ft bgs, facing south

6/28/2012



Installed 20' x 67' 20-mil reinforced liner at 4-5
ft bgs, facing south

6/28/2012



Installing 6" sand pad above liner, facing south
6/28/2012



Installing topsoil, facing northwest 6/28/2012



Backfilling with topsoil, facing west 6/28/2012



Backfilling with topsoil, facing west 6/29/2012



Backfill complete, facing east 6/29/2012



Backfill complete, facing east 6/29/2012



Disc before seeding, facing southeast
9/13/2012



Spreading amendments, facing east
9/13/2012



Seeding site, facing south
9/13/2012



Disc before seeding, facing east
9/14/2012



Spreading amendment, facing east
9/14/2012



Seeding site, facing east
9/14/2012



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

REVEGETATION FORM

1. General Information

Site name: Justis E-23 Leak						
U/L E	Section 23	Township T24S	Range R37E	County LEA	Latitude N. 32°12'12.49	Longitude W. 103°8'26.667
Contact Name: Bruce Baker						
Email: bbaker@rice-ecs.com						
Site size: 5,530 square feet			Map detail of site attached <input type="checkbox"/>			
Additional information:						

2. Soils

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

Salvaged from site <input type="checkbox"/>	Bioremediated <input type="checkbox"/>	Imported <input type="checkbox"/>	Blended <input type="checkbox"/>	Depth (in):		
Texture:		Describe soil & subsoil:				
Soil prep methods:	Rip <input checked="" type="checkbox"/>	Depth(in): 6"	Disc <input checked="" type="checkbox"/>	Depth (in): 3"	Rollerpack <input type="checkbox"/>	
Date completed: 9/13/12						

3. Bioremediation

Fertilizer <input type="checkbox"/>	Hay <input type="checkbox"/>	Other <input checked="" type="checkbox"/>
Type:		Describe 12 Bags Restor Nhance
Lbs/acre:		6 Bags Pete Moss

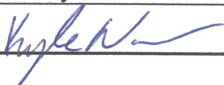
4. Seeding

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

Custom seed mix <input checked="" type="checkbox"/>	Prescribed mix <input type="checkbox"/>	Seed mix name: Dooms Mix 12 LBS.	Seeding date: 9/13/12
Broadcast <input checked="" type="checkbox"/>			
Method: Drop Seeder			
Soil conditions during seeding: Dry <input checked="" type="checkbox"/> Damp <input type="checkbox"/> Wet <input type="checkbox"/>			
Photos attached <input type="checkbox"/>	Observations:		
Number of photos:			

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: Kyle Norman	Title: Environmental Tech	Date: 9/13/2012
Signature: 		



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

REVEGETATION FORM

1. General Information

Site name: Justis E-23 Leak						
U/L E	Section 23	Township T24S	Range R37E	County LEA	Latitude N. 32°12'12.49	Longitude W. 103°8'26.667
Contact Name: Bruce Baker						
Email: bbaker@rice-ecs.com						
Site size: 3,000		square feet		Map detail of site attached <input type="checkbox"/>		
Additional information:						

2. Soils

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

Salvaged from site <input type="checkbox"/>	Bioremediated <input type="checkbox"/>	Imported <input type="checkbox"/>	Blended <input type="checkbox"/>	Depth (in):	
Texture:		Describe soil & subsoil:			
Soil prep methods:	Rip <input type="checkbox"/>	Depth(in):	Disc <input checked="" type="checkbox"/>	Depth (in): 3"	Rollerpack <input type="checkbox"/>
Date completed: 9/14/12					

3. Bioremediation

Fertilizer <input type="checkbox"/>	Hay <input type="checkbox"/>	Other <input checked="" type="checkbox"/>
Type:		Describe 6 Bags Restor Nhance
Lbs/acre:		6 Bags Pete Moss 6 Bags Manure

4. Seeding

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

Custom seed mix <input checked="" type="checkbox"/>	Prescribed mix <input type="checkbox"/>	Seed mix name: Dooms Mix 10 LBS.	Seeding date: 9/14/12
Broadcast <input checked="" type="checkbox"/>			
Method: Drop Seeder			
Soil conditions during seeding: Dry <input checked="" type="checkbox"/> Damp <input type="checkbox"/> Wet <input type="checkbox"/>			
Photos attached <input type="checkbox"/>	Observations:		
Number of photos:			

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: Kyle Norman	Title: Environmental Tech	Date: 9/14/2012
Signature:		

Appendix C

NMOCD Multimed Demonstration Approval

RICE Operating Company (ROC)

112 West Taylor Hobbs, NM 88240
Phone 575.393.9174 Fax 575.397.1471

From: [Hansen, Edward J., EMNRD](#)
To: [Leking, Geoffrey R., EMNRD](#)
Cc: [Hack Conder](#); [Laura Pena](#); [Katie Jones](#)
Subject: FW: ROC - Justis E-23 AD (1RP-2565) Multimed
Date: Tuesday, September 04, 2012 6:15:31 PM
Attachments: [Justis E-23 AD \(1RP-2565\) Multimed.inp](#)
[Justis E-23 AD \(1RP-2565\) Multimed.pdf](#)
[Justis E-23 AD \(1RP-2565\) Chloride Graph.pdf](#)
[Justis E-23 AD Soil Data.xlsx](#)

Geoff,

I have reviewed the attached demonstration that "...the discharge at such concentrations will not result in concentrations at any place of withdrawal for present or reasonably foreseeable future use in excess of the [ground water] standards..." The demonstration is acceptable to OCD.

If you have any questions, please give me a call,
Edward J. Hansen
Hydrologist
Environmental Bureau
505-476-3489

From: Laura Pena [mailto:lpna@riceswd.com]
Sent: Thursday, August 30, 2012 9:58 AM
To: Hansen, Edward J., EMNRD
Cc: Hack Conder; Katie Jones
Subject: ROC - Justis E-23 AD (1RP-2565) Multimed

Mr. Hansen,

The following details the attached Multimed file for the Justis E-23 AD (1R-2565), as requested during the meeting between ROC and NMOCD on August 7th, 2012.

This file uses the parameters submitted to NMOCD in the Multimed Study report. Site specific parameters are as follows:

- Initial Concentration: an average of all vertical and soil bore in and near the installed liner (SB-1, SB-2, SB-3, SB-4, SB-5 and Vertical 3) data of 2,200 mg/L . The top 5 ft of SB-1, SB-2, SB-3, and Vertical 3 were excavated and replaced with soil containing a chloride concentration of <250 mg/L; therefore, 250 mg/L was used at those depths to calculate the average concentration.
- Layer Thickness: an average of all soil bore depths subtracted from the depth to groundwater (75 ft – 49 ft) to yield 26 ft or 8 meters.
- An estimated area of 35 ft x 67 ft (2345 ft² or 218 m²).
- An aquifer thickness of 20 ft (6.10 meters).

The result of this model indicates that the maximum chloride concentration is approximately 212.4 mg/L at 143 years, falling below the WQCC standard of 250 mg/L. A graph depicting chloride

concentration over time is attached.

Let Hack Conder, Katie Jones or me know if you have any questions or require any additional information.

Thank you,

Laura Peña
Environmental Project Scientist
RICE Operating Company

Appendix D

Final C-141

RICE Operating Company (ROC)

112 West Taylor Hobbs, NM 88240
Phone 575.393.9174 Fax 575.397.1471

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
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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	Facility Type	Salt Water Gathering System
Surface Owner	Doom Ranch	Mineral Owner	API No. 30-025-24761

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	23	24S	37E					Lea

Latitude 32°12'12.49" Longitude 103°8'26.667"

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	70	Volume Recovered	45
Source of Release	Pipeline	Date and Hour of Occurrence	6/17/10	Date and Hour of Discovery	6/17/10 9:26 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, NMOCD		
By Whom?	Hack Conder	Date and Hour	6/17/10 3:30 PM		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

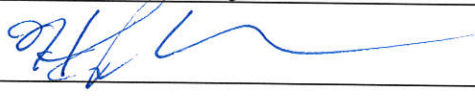
If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A 3 inch PVC pipeline cracked. The damaged section of pipe was replaced as a permanent repair.

Describe Area Affected and Cleanup Action Taken.* A total of 10,666 sq ft was affected, 6,480 sq ft of which was in the pasture. A vacuum truck was immediately dispatched to the site to collect and properly dispose of all standing water. The impacted pasture was scraped to a depth of 8-12 inches and approximately 144 yds of soil were hauled to a NMOCD approved facility. Five verticals were installed and based on the data, three soil bores were advanced at the site on July 29th, 2010. To inhibit the downward migration of chlorides to water, ROC installed a 20-mil reinforced poly liner measuring 20 ft x 67 ft at a depth of 4-5 ft bgs. NMOCD Central Office agreed with the liner dimensions on June 20th, 2012, and NMOCD District 1 office approved the vadose zone remedy on June 27th, 2012. On July 2nd, 2012, the site was excavated for liner installation. The site was excavated to 20 ft x 67 ft x 4-5 ft deep and a total of 600 yards of excavated soil was taken to a NMOCD approved facility for disposal. A 20-mil reinforced poly liner was installed and properly seated into the base of the excavation. A six inch sand pad was placed both above and below the liner to protect the liner from punctures. 600 yards of clean soil was imported to the site to serve as padding and backfill. Two additional soil bores were installed on July 10th, 2012 as requested by NMOCD Central Office. On July 20th, 2012, ROC submitted two Multimed files that were run for the site. The Multimed model demonstration was approved by NMOCD Central Office on September 4th, 2012. The site was prepared with soil amendments and seeded on September 13th and 14th, 2012.

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:		
Title: Environmental Manager	Approval Date:	Expiration Date:	
E-mail Address: Hconder@riceswd.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 9/24/2012	Phone: (575) 393-9174		

* Attach Additional Sheets If Necessary