1R-425-67

REPORTS

DATE:

7-7-11

L. Peter Galusky, Jr. Ph.D., P.G.
Texerra

627 Forest View Way Monument, Colorado 80132
Tel: 917-339-6791 E-mail: lpg@texerra.com

July 7th, 2011

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: Project Update
Rice Operating Company – Vacuum SWD System
Vacuum F-34 Vent Boot UL F, Sect 34, Township 17S, Range 35E
NMOCD Case Number 1R425-67

Sent via E-mail and U.S. Mail Certified Return Receipt No. 7011 0110 0001 5863 4868

Mr. Hansen:

Rice Operating Company (ROC) has completed the installation of a double synthetic subsurface soil liner and surface restoration as the vadose zone protective remedy for the Vacuum F-34 Vent Boot project (location map given in Figure 1), as summarized in the previously submitted (November 26th, 2010) Notification of Groundwater Impact and Addendum submitted December 22, 2010. This work, which was completed in April and May of this year, is summarized, below:

- Soils were excavated to 4.5 ft bgs over an area of approximately 75 by 45 ft, encompassing the surface footprint of the affected area. Large rocks were sifted and removed to Sundance Disposal.
- Additional soil material was excavated to a depth of 16 ft bgs from two separate excavations, each encompassing an area of approximately 10 by 10 ft and surrounding the soil borings, which previously indicated more significant subsurface chloride contamination (SB-2 and SB-4).
- Six inches of clean blow sand (PID = 3.1, lab chlorides < 16 mg/kg) was added as padding to the bottoms of these two, deeper excavations and a 20 mil reinforced liner was installed into each one. The liner was then padded with six inches of clean blow sand and blended backfill (PID = 38.3, lab chlorides 1,650 mg/kg) was backfilled into each 10 by 10 ft excavation to the base of the larger excavation (at 4.5 ft bgs). Six inches of clean blow sand was added as padding over the 75 by 45 ft area.
- A 20 mil reinforced liner was installed over the 75 by 45 ft excavation and six inches of clean blow sand was added as padding above it. Clean, pond-bottom soil (PID = 1.8, lab chlorides = 16 mg/kg) was then backfilled to near the surface and clean blow sand was added and contoured to the original ground surface.
- Silt fencing was installed around the restored area. 850 lbs of bioNhance and 4 bales of peanut hay were added as soil amendment. Following this, the site was seeded with 10 lbs of warm season mix, 7.5 lbs of blue gramma grass and 20 lbs of race horse oats. The soil amendments and seed were incorporated into the soil using a tractor.

A photographic chronology of this work is given in Figure 2. A total of 520 cubic yards of rock and contaminated soil material was hauled to and disposed at Sundance Disposal. A total of 608 cubic yards of blow sand and pond bottom soil was imported and used as liner padding and backfill. Field PID

analysis of hydrocarbons and laboratory analyses of chlorides and the revegetation form are given in the Appendix.

We submit that the installation of the double-liner system and the restoration of the soil surface serve as a remedy to protect groundwater from potential future leaching of residual soil chlorides from the unsaturated zone beneath this location. We will continue to monitor groundwater through the end of this calendar year, subsequently prepare and submit an analysis of historical groundwater impacts and determine if a remedy is warranted for the saturated zone.

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

Please call either myself or Hack Conder of Rice Operating Company if you have any questions or wish to discuss this matter. Thank you for your consideration.

Sincerely,

L. Peter Galusky, Jr. Ph.D., P.G.

Copy: Rice Operating Company

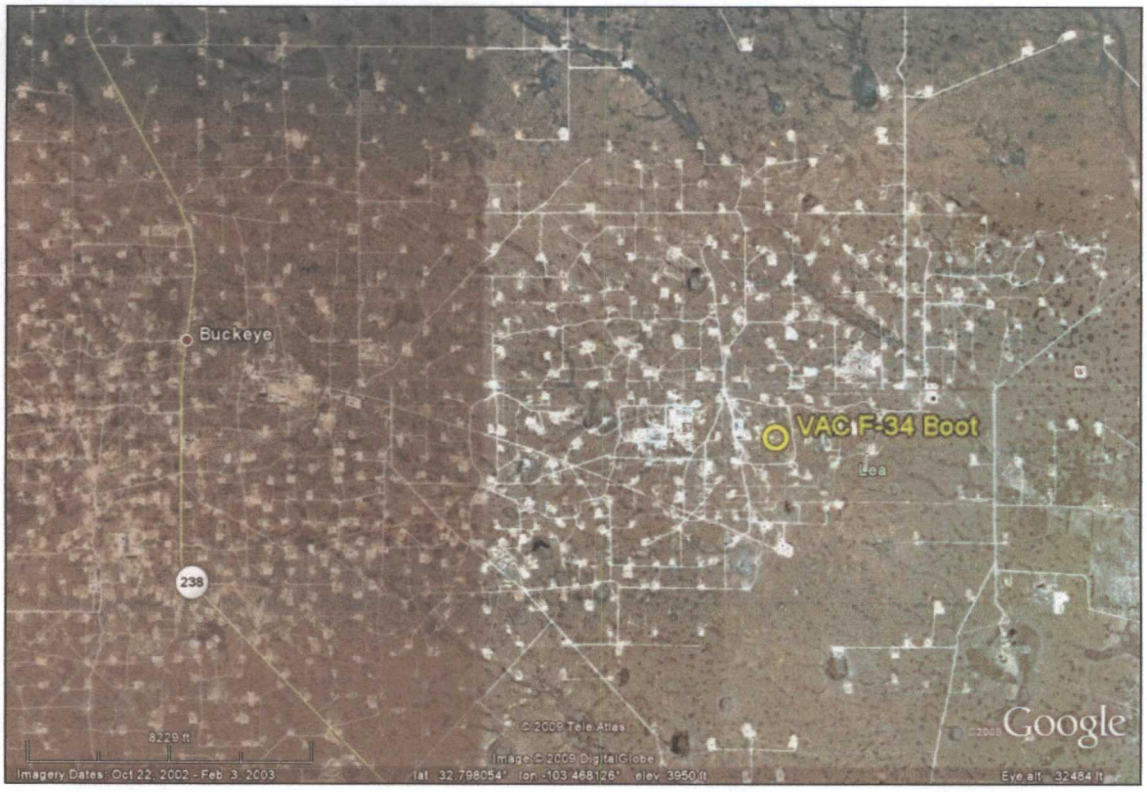

Figure 1 – VAC F-34 Vent Boot location. The general topographic gradient and presumed water table gradient is toward the southeast.

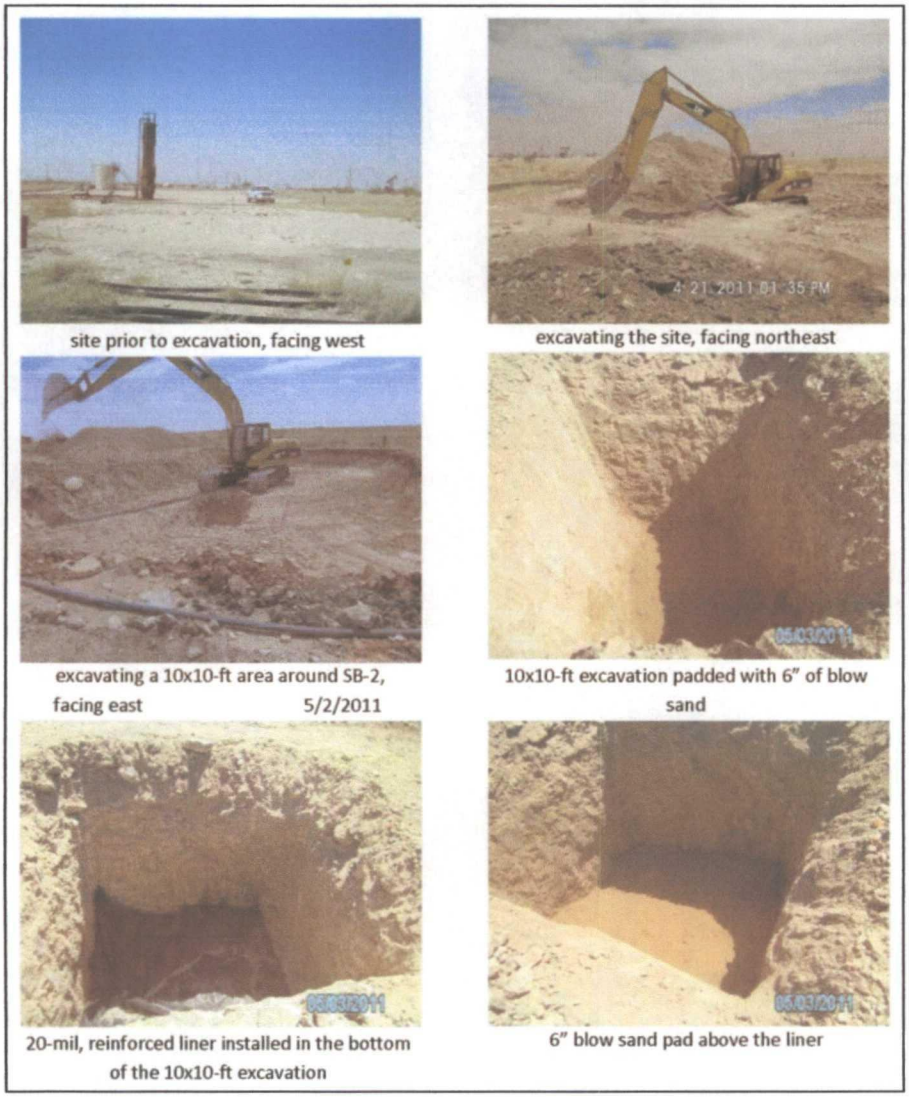

Figure 2a – Photo-chronology of double-liner installation and soil restoration.

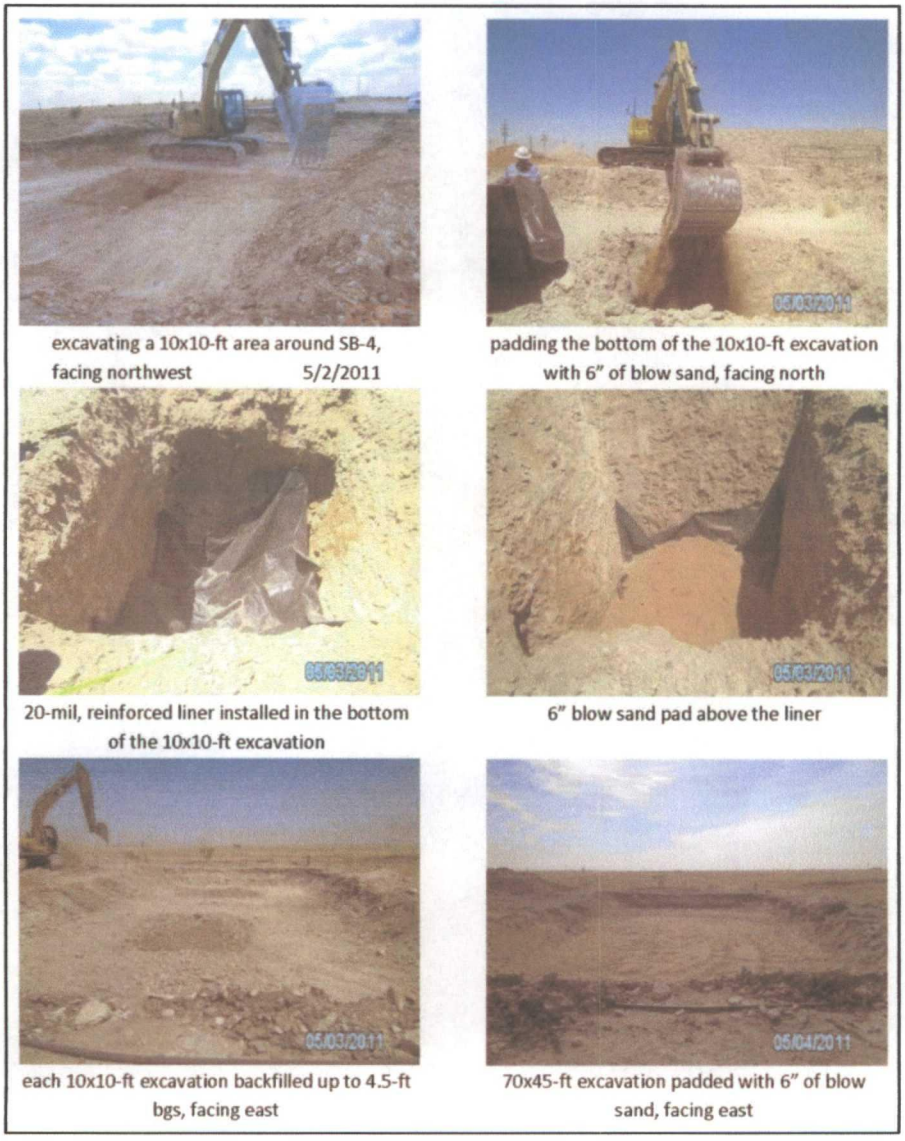

Figure 2b – Photo-chronology of double-liner installation and soil restoration.

installing the 20-mil, reinforced liner at 4-ft bgs, facing east

padding the liner with 6" of blow sand, facing north

backfilling the excavation, facing east 5/5/2011

hauling off soil to Sundance, facing east 5/5/2011

importing blow sand for a top cap, facing northeast

spreading imported blow sand across the backfilled site, facing east 5/10/2011

Figure 2c – Photo-chronology of double-liner installation and soil restoration.

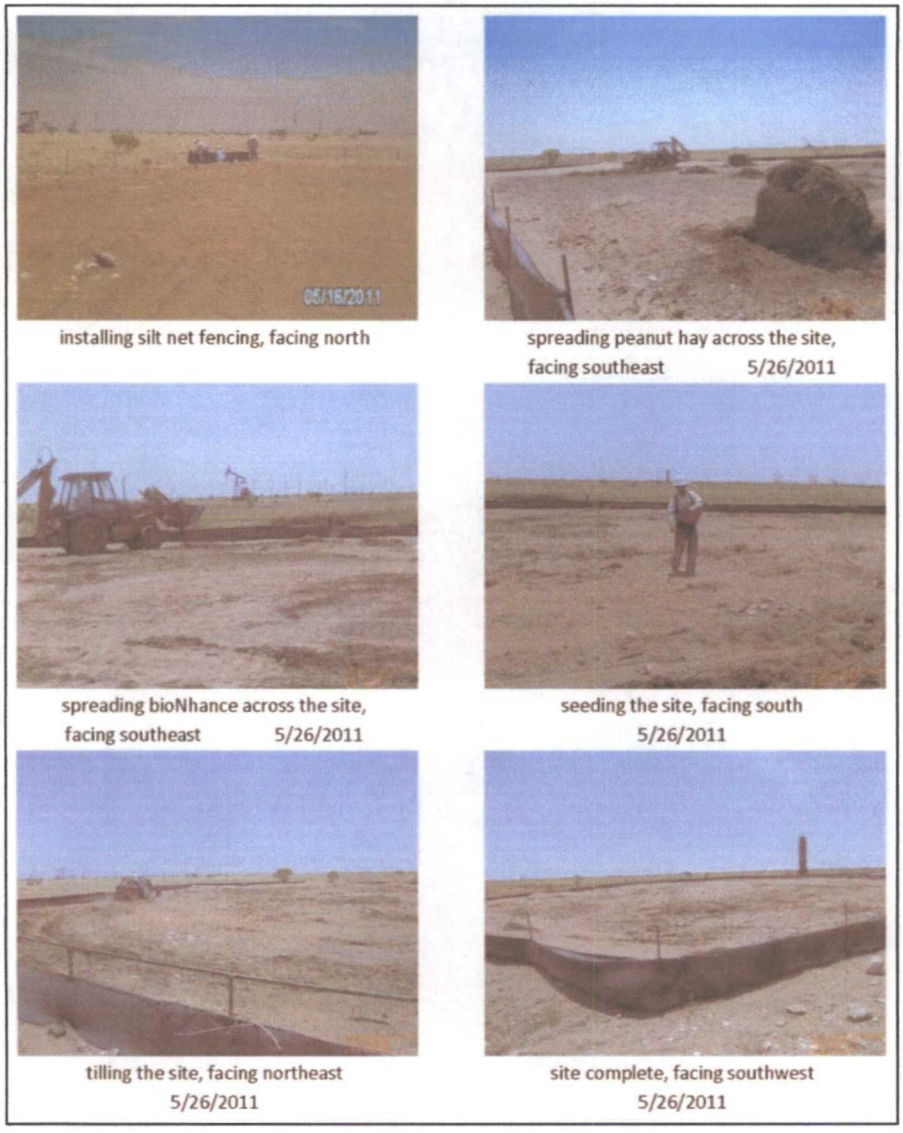

Figure 2d – Photo-chronology of double-liner installation and soil restoration.

APPENDIX

Contents

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	
	MODEL: PGM 7320	SERIAL NO: 592-903318	
	MODEL: PGM 7300	SERIAL NO: 590-000183	

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT NO: 98204	EXPIRATION DATE: 11-16-12
METER READING ACCURACY:	100 ppm

ACCURACY: +/- 2%

COMPANY
RICE Operating

SITE	UNIT	SECTION	TOWN SHIP	RANGE
Vacuum F-34	F	34	17	35

SAMPLE ID	PID	SAMPLE ID	PID
BACKFILL	38.3		

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

SIGNATURE: [signature] DATE: 4-26-11

Appendix A-1: Blended backfill field PID reading.

Appendix A-2: Blended backfill laboratory chloride analysis (page 1 of 5).

CARDINAL Laboratories

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

May 02, 2011

Bruce Baker

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM F-34 BOOT

Enclosed are the results of analyses for samples received by the laboratory on 04/27/11 8:05.

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

Page 1 of 5

Appendix A-2: Blended backfill laboratory chloride analysis (page 2 of 5).

CARDINAL Laboratories

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

Analytical Results For:

Rice Operating Company
Bruce Baker
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	04/27/2011	Sampling Date:	04/26/2011
Reported:	05/02/2011	Sampling Type:	Soil
Project Name:	VACUUM F-34 BOOT	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: BLENDED BACKFILL (H100866-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1650**	16.0	04/29/2011	ND	448	112	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 5

Appendix A-2: Blended backfill laboratory chloride analysis (page 3 of 5).

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Page 3 of 5

Appendix A-2: Blended backfill laboratory chloride analysis (page 4 of 5).

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: Bruce Baker
Address: 122 W. Taylor
City: Hobbs State: NM Zip: 88240
Phone #: 575-393-9174 Fax #: 575-397-1471
Project #: Project Owner:
Project Name: Vacuum F-34 Boot
Project Location:
Sampler Name: Bob Harris

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

ANALYSIS REQUEST

Lab I.D.	Sample I.D.	(C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Chlor
H10086 6-1	Bottom	G	1			X							8/5/11	7:55	X

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 sample. 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: 8/5/11	Received By:
	Time: 2:30	
Relinquished By:	Date: 8/5/11	Received By: Jodi Henson
	Time: 8:05	

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: E-Mail Results To:
K Evans @ RiceSud.com
Baker " " "
Keaney " " "
D Harris " " "

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

#26

Appendix A-2: Blended backfill laboratory chloride analysis (page 5 of 5).

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Rice Operating Company	BILL TO	
Project Manager:	Bruce Baker	P.O. #:	
Address:	122 W. Taylor	Company:	
City:	Hobbs	State: NM Zip: 88240	Attn:
Phone #:	575-393-9174	Fax #: 575-397-1471	Address:
Project #:		Project Owner:	City:
Project Name:	Vacuum F-34 Boot		State: Zip:
Project Location:			Phone #:
Sampler Name:	Bob Harris		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	ANALYSIS REQUEST: Cl-
H10056-1	Blended* 5/2/11 Backfill	C	1			✓							4/26/11	9:30	✓

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: 4/27/11 Time: 7:30	Received By:	Phone Result: ☐ Yes ☐ No	Add'l Phone #:
Relinquished By:	Date: 4/27/11 Time: 8:05	Received By: Jodi Henson	Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: E-Mail Results To: IKJones@Ricesud.com; BBaker " " "; ACgarza " " "; DHarris " " "

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

#26

*Sample name changed as per Zack. 5/2/11 ch

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	
	MODEL: PGM 7320	SERIAL NO: 592-903318	
	MODEL: PGM 7300	SERIAL NO: 590-000183	

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT NO: 93080	EXPIRATION DATE: 5/24/2013
METER READING ACCURACY:	99.9

ACCURACY : +/- 2%

COMPANY
RICE - F-34 BOOT

SYSTEM	JUNCTION	UNIT	SECTION	TOWN SHIP	RANGE
VAC	F-34	F	34	17S	35E

SAMPLE ID	PID	SAMPLE ID	PID
Imported blow sand	3.1		

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

SIGNATURE: [signature] DATE: 5/9/11

Appendix A-3: Imported blow sand field PID reading.

Appendix A-4: Imported blow sand field laboratory chloride analysis (page 1 of 4).

CARDINAL Laboratories

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

May 10, 2011

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM F-34 BOOT

Enclosed are the results of analyses for samples received by the laboratory on 05/09/11 15:00.

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

Page 1 of 4

Appendix A-4: Imported blow sand field laboratory chloride analysis (page 2 of 4).

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:	05/09/2011	Sampling Date:	05/09/2011
Reported:	05/10/2011	Sampling Type:	Soil
Project Name:	VACUUM F-34 BOOT	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: IMPORTED BLOWSAND (H100932-01)

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	05/10/2011	ND	448	112	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 4

Appendix A-4: Imported blow sand field laboratory chloride analysis (page 3 of 4).

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

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Page 3 of 4

Appendix A-4: Imported blow sand field laboratory chloride analysis (page 4 of 4).

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:	KICE	BILL TO	
Project Manager:	HACIE CONNER	P.O. #:	
Address:	122 W. Taylor	Company:	
City:	Hobbs. State: NM Zip: 88240	Attn:	
Phone #:	575 393 9174 Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	VACUUM F-34 Boot	State: Zip:	
Project Location:		Phone #:	
Sampler Name:	T. GRIECO	Fax #:	

ANALYSIS REQUEST: CHLORIDE

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	CHLORIDE
H100932-1	Imported blowsand	✓	1			✓					✓		5/2/11	12:30	✓

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: 5/9/11	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 3:00	Jackie Henson	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: hconder@riceswd.com kjones@riceswd.com bbecker@riceswd.com lweinheimer@riceswd.com
	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 505-393-2476

#26

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
		MODEL: PGM 7320	SERIAL NO: 592-903318
		MODEL: PGM 7300	SERIAL NO: 590-000183

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT NO: 930737	EXPIRATION DATE: 6-16-2013
METER READING ACCURACY: 100ppm	

ACCURACY : +/- 2%

COMPANY
Rice Operating

SITE	UNIT	SECTION	TOWN SHIP	RANGE
Vacuum F-34 Boat	F	34	17	35

SAMPLE ID	PID	SAMPLE ID	PID
Imported Pond Bottom Soil	1.8		

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

SIGNATURE: Robert Lyon DATE: 5-6-2011

Appendix A-5: Imported pond bottom soil field PID reading.

Appendix A-6: Imported pond bottom soil laboratory chloride analysis (page 1 of 4).

CARDINAL Laboratories

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

May 10, 2011

Bruce Baker

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM F-34 BOOT

Enclosed are the results of analyses for samples received by the laboratory on 05/06/11 16:25.

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

Page 1 of 4

Appendix A-6: Imported pond bottom soil laboratory chloride analysis (page 2 of 4).

CARDINAL Laboratories

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

Analytical Results For:

Rice Operating Company
Bruce Baker
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	05/06/2011	Sampling Date:	05/06/2011
Reported:	05/10/2011	Sampling Type:	Soil
Project Name:	VACUUM F-34 BOOT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: IMPORTED SOIL POND BTTM (H100924-01)

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	05/09/2011	ND	448	112	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 4

Appendix A-6: Imported pond bottom soil laboratory chloride analysis (page 3 of 4).

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

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Page 3 of 4

Appendix A-6: Imported pond bottom soil laboratory chloride analysis (page 4 of 4).

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

Company Name:	Rice Operating	BILL TO	
Project Manager:	Brilee Baker	P.O. #:	
Address:	122 W. Taylor	Company:	
City:	Hobbs State: NM Zip: 88240	Attn:	
Phone #:	575-393-9174 Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	Nicolina F-34 Boot	Phone #:	
Sampler Name:	Robert	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	ANALYSIS REQUEST: Cl-
H10924-1	Imported Soil Pond Bottom	C	1			✓					✓		5-6-11	10:15	---

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: 5/6/11 Time: 4:25	Received By:	Jodi Henson
Relinquished By:	Date: Time:	Received By:	
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:

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

#26

New Mexico State Land Office

Field Operations Division

(505) 827-5723	P.O. Box 1148	Santa Fe, NM 87504
(575) 392-8736	2702-D N. Grimes	Hobbs, NM 88240
(575) 885-1323	N. Canal, Suite B	Carlsbad, NM 88220
(575) 623-4979	1001 S. Atkinson	Roswell, NM 88210
(575) 763-0796	105 E. 6th St.	Clovis, NM 88101

REVEGETATION FORM

1. General Information

Site name: **Vacuum F-34 vent boot**				Lease No.:		
U/L or Qtr/Qtr	Section	Township	Range	County	Latitude	Longitude (NAD83)
F	**34**	**17S**	**35E**	**LEA**	**32°47'41.352"N**	**103°26'58.144W**
Company Name: **RICE OPERATING**				Contact Name: **HACK CONDER**		
Phone no.: **(575) 393-9174**		Email:	**hconder@riceswd.com**			
Address: **122 W. TAYLOR HOBBS, NM 88240**						
Spill / Release ☐		P&A Well ☐		Pit Closure ☐	Facility Closure ☒	Other ☐
OCD Spill No.		API No.			Type: **JUNCTION BOX**	
Site size:		acres	**16965**	square feet	Map detail of site attached ☐	
Additional information:						

3. 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: **SANDY**	Describe soil & subsoil: **SAND OVER CALICHE**				
Soil prep methods:	Rip ☐ Depth(in):	Disc ☒ Depth (in): **8**	Rollerpack ☐		
Date completed: **5/26/11**	Photos attached ☒	Number of photos:			

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: **10 LBS WARM SEASON MIX 7.5 LBS BLUE GRAMA 20 LBS RACE HORSE OATS**	Seeding date: **5/26/11**
Is seed mix divided into submixes based on seed size?		Yes ☐ No ☒	
Drill Seeder ☐ Drill Type:		Broadcast ☒ Method: **HAND CRANKED SPREADER**	Hydroseeding ☐
Soil conditions during seeding:	Dry ☒	Damp ☐	Wet ☐
Photos attached ☐ Number of photos:	Observations:		

5. Additional Methods

Mulching ☒ Crimping ☐ Mulch type: **PEANUT HAY 4 BALES** Tons/acre:		Fertilizer ☐ Type: Lbs/acre:	Other ☒ Describe: **850 LBS BIO-ENHANCE**
Photos attached ☐ Number of photos:	Observations:		

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: **TONY GRIECO**	Title: **ENVIRONMENTAL TECH**	Date: **6/1/11**
Signature:		

Version 20080925

Appendix A-7: Revegetation form.