1R - 426-28

REPORTS

DATE:

6-4-13

Rice Environmental Consulting & Safety
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

CERTIFIED MAIL
RETURN RECEIPT NO. 7007 2560 0003 0320 5518

June 4th, 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: **Corrective Action Plan (CAP) Report and Termination Request**
Rice Operating Company – BD SWD System
BD B-16 (1R426-28): UL/B sec. 16 T22S R37E

Mr. Hansen:

RICE Operating Company (ROC) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site in the BD Salt Water Disposal (SWD) system. ROC is the service provider (agent) for the BD 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 and Previous Work

The site is located approximately 2.5 miles south of Eunice, New Mexico at UL/B, Sec. 16, T22S, R37E as shown on the Site Location Map (Figure 1). Groundwater at this site is located approximately 78 +/- feet below ground surface (bgs).

In 2002, ROC initiated work on the former BD B-16 junction box prior to it being replaced by a new, watertight junction box at the site. The site was delineated using a backhoe and soil samples were screened at regular intervals for both hydrocarbons and chlorides. The excavation reached dimensions of 20 x 20 x 17 feet bgs where composite samples were collected for laboratory verification. Laboratory tests of the site showed chloride readings of 144 mg/kg for the remediated backfill, 3,200 mg/kg in the sidewall composite and 4,200 mg/kg on the bottom composite. Gasoline range organics (GRO) showed non-detect in the remediated backfill and bottom composite and 36.3 mg/kg in the sidewall composite. Diesel range organics (DRO) measured 18.2 mg/kg in the remediated backfill, 869 mg/kg in the sidewall composite and 434 mg/kg in the bottom composite. At 17 feet bgs, a 1 ft thick clay layer was installed to inhibit further chloride migration. The soils were blended on site and the remediated soil was returned to the excavation and contoured to the surrounding landscape. NMOCD was notified of potential groundwater impact on January 31st, 2003, and a junction box disclosure report was submitted to NMOCD with all the 2002 junction box closures and disclosures.

An Investigation and Characterization Plan (ICP) was submitted to the NMOCD on July 7th, 2010 and approved on July 15th, 2010. The plan proposed additional investigation of the soils surrounding the former junction box and the installation of monitoring well(s) to delineate groundwater quality.

As per the ICP, six soil bores were advanced through the former junction box site on July 28th, 2010. ROC personnel field tested the soil for chlorides and screened in the field with a photo-ionization detector (PID) for hydrocarbons. Representative samples from the bore were taken to a commercial laboratory for confirmation of chloride and hydrocarbon field numbers. Laboratory chloride readings showed that in each soil bore, the chloride values decreased with depth with the peak chloride readings between 40 ft and 60 ft bgs in all soil bores.

On October 26th, 2010, two monitor wells were installed at the site to a depth of 90 ft. MW-1, the near-source monitor well, and MW-2, the up gradient monitor well, were field tested for chlorides and screened in the field with a photo-ionization detector (PID) for hydrocarbons. Two samples from MW-1 were taken to a commercial laboratory for confirmation of field numbers and returned laboratory chloride readings of 880 mg/kg at 20 ft bgs and 16 mg/kg at 75 ft bgs. Both samples had GRO and DRO readings of non-detect.

On January 28th, 2011, due to time restraints and resource management, a trench was installed 10 ft north of SB-6. Representative samples from the trench were taken to a commercial laboratory for confirmation of chloride and hydrocarbon field numbers. Laboratory readings showed chloride numbers of 1,070 mg/kg at 3 ft bgs and 592 mg/kg at 5 ft bgs. Laboratory readings for GRO and DRO showed non-detect.

Five additional soil bores were installed at the site on March 22nd and 23rd, 2011. Representative samples from SB-7 and SB-11 were taken to a commercial laboratory for confirmation of chloride and hydrocarbon field numbers. Laboratory readings in SB-7 showed chloride numbers of 1,180 mg/kg at 5 ft bgs, 608 mg/kg at 40 ft bgs and 160 mg/kg at 55 ft bgs. Laboratory readings in SB-11 showed chloride readings of 576 mg/kg at 5 ft bgs and 96 mg/kg at 25 ft bgs. Laboratory readings for GRO and DRO showed non-detect in both soil bores.

On May 7th, 2012, an ICP Report and Corrective Action Plan (CAP) was submitted to NMOCD and approved on June 6th, 2012. In the report, RECS recommended that ROC plug and abandon the two monitor wells at the site, since six quarter of monitor well sampling data showed no impact to groundwater. ROC proposed to plug and abandon both monitor wells with a 1-3% bentonite/concrete slurry with a 3 ft cement cap.

In addition, the site had an existing clay liner measuring 20 ft x 20 ft at 17 ft bgs. ROC proposed to install a 20-mil, reinforced poly liner at 4-5 ft bgs measuring 77 ft x 76 ft. The extended liner would cover all the soil bore points, the north trench, and the existing liner installed at 17 ft bgs. The liner will provide a barrier that will inhibit the downward migration of chlorides to groundwater. The soils placed above the liner would have a

laboratory chloride reading no greater than 500 mg/kg and a field PID measurement below 100 ppm. Excavated soil would be evaluated for use as backfill, and any soil requiring disposal would be properly disposed of at a NMOCD approved facility. The surface soils over and surrounding the site would be prepared with soil amendments, as needed, and then seeded with a native vegetative mix. Vegetation above the liner will also provide a natural infiltration barrier for the site since plants capture water through their roots thereby reducing the volume of water moving through the vadose zone to groundwater.

Corrective Action Plan Report

On July 12th, 2012, RECS personnel were at the site to plug and abandon MW-1 and MW-2 (Figure 2). Both monitor wells were plugged and abandoned with a 1-3% bentonite/concrete slurry with a 3 ft concrete cap (Appendix A).

RECS personnel began excavating for liner installation beginning on April 16th, 2013. The site was excavated to 77 ft x 76 ft to a depth of 5 ft bgs (Figure 2). A total of 1,560 yards of excavated soil was taken to a NMOCD approved facility for disposal. Blow sand was imported to the site to serve as a six inch sand pad at the base of the 5 ft excavation. A 20-mil reinforce poly liner was installed and properly seated into the excavation and a one foot sand pad was installed over the liner. A sample of the blow sand was field tested for hydrocarbons using a PID meter and returned a result of 1.2 ppm. The sample was then taken to a commercial laboratory for analysis of chlorides, which returned a result of 48 mg/kg. The excavation was then backfilled to 2 ft bgs with imported caliche. A sample of the caliche was field tested for hydrocarbons using a PID meter, which returned a result of 0.0 ppm. The sample was then taken to commercial laboratory for analysis of chlorides, which returned a result of 160 mg/kg. The top two feet of the excavation was backfilled with imported top soil. A sample of the top soil was field tested for hydrocarbons with a PID meter, which returned a result of 0.0 ppm. The sample was then taken to a commercial laboratory for analysis of chlorides, which returned a result of non-detect.

A silt net fence was placed around the excavation to prevent soil erosion and maintain seed integrity. On May 28th, 2013, soil amendments were added to the topsoil and the site was seeded with a blend of native vegetation.

Documentation for these activities can be found in Appendix B.

Given that ROC has fulfilled the CAP requirements by plugging and abandoning the monitor wells with a 1-3% bentonite/concrete slurry with a 3 ft concrete cap, and installing the 20-mil poly liner measuring 77 ft x 76 ft, ROC, respectfully requests 'remediation termination' or similar closure status of the site.

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

Sincerely,

Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

Figure 1 – Site Location Map
Figure 2 – NMOCD Approved Liner and Plugged MWs
Appendix A – Plug and Abandonment of MW-1 and MW-2
Appendix B – Liner Installation Documentation

Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Site Location

RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC

RECS

BD B-16

NMOCD Case #: 1R426-28

Legals: UL/B sec. 16
T22S R37E

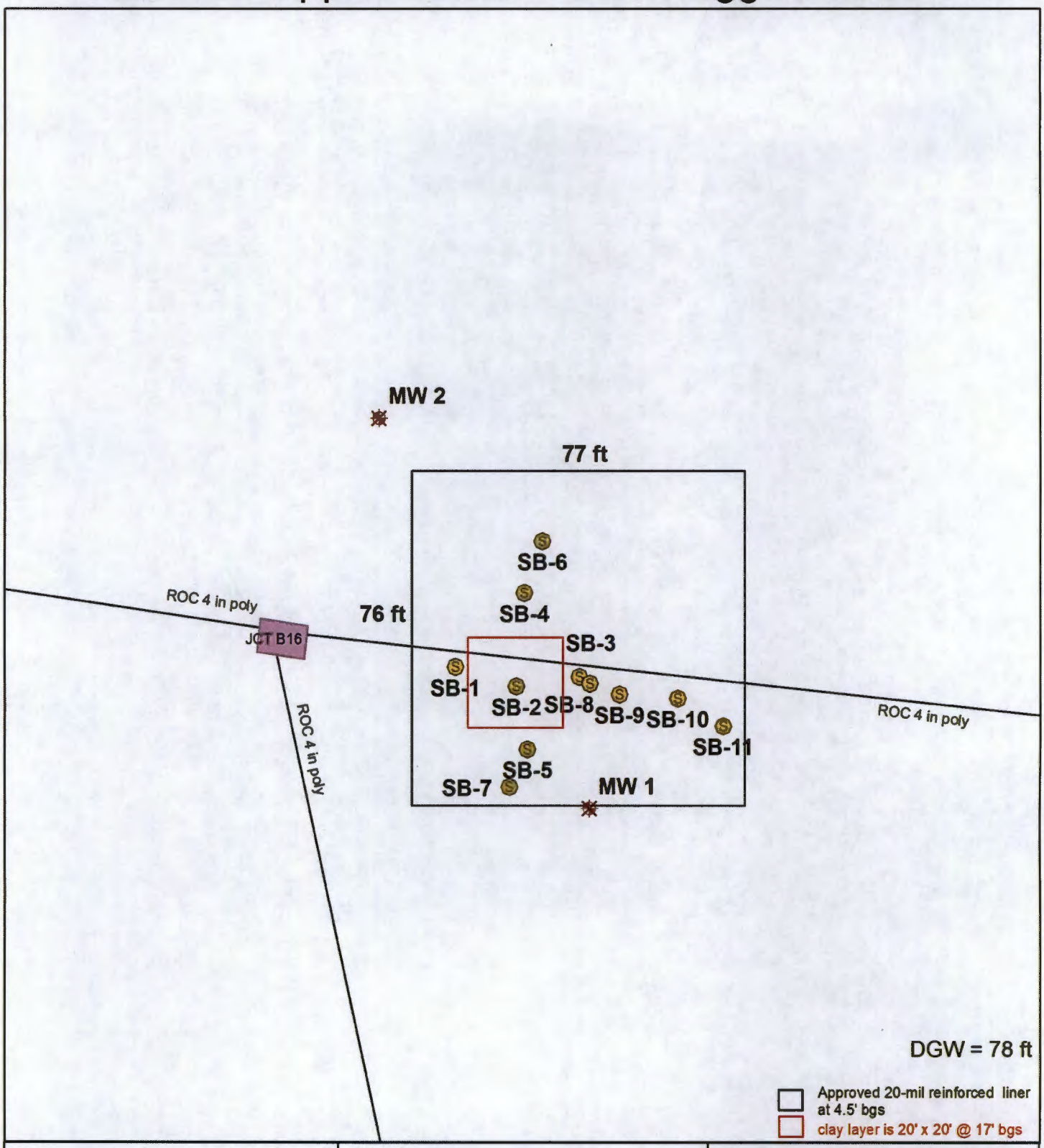
Figure 1

N
W E
S

0 0.175 0.35 0.7
Miles

Drawing date: 11-15-11
Drafted by: L. Weinheimer

NMOCD Approved Liner and Plugged MWs



RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

BD B-16

Legals: UL/B sec. 16
T22S R37E

NMOCD Case #: 1R426-28

Figure 2

N W E S

0 15 30 60 Feet

Drawing date: 5-14-13
Drafted by: L. Weinheimer

Appendix A

Plug and Abandonment of MW-1 and MW-2

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

HARRISON & COOPER, INC.

Drilling & Pump Professionals

7414 85th Street, Lubbock, Texas 79424-4951

P.O. Box 96, Wolfforth, Texas 79382-0096

Ph: (806) 866-4026 Fax: (806) 866-4044 hcidrill.com

Plugging Report

Client	Rice Operating
Contractor	Harrison & Cooper
Date Completed	7/12/2012
Site	BD B-16
Well ID	MW-1
Casing Diameter	2"
Well Depth	93'
Casing Material	PVC
Plugging Material	Portland/Bentonite Slurry
Slurry Interval	3'-93'
Cement Interval	0'-3'

Copies: File
Email (Rice)

HARRISON & COOPER, INC.

Drilling & Pump Professionals

7414 85th Street, Lubbock, Texas 79424-4951

P.O. Box 96, Wolfforth, Texas 79382-0096

Ph: (806) 866-4026 Fax: (806) 866-4044 hcidrill.com

Plugging Report

Client	Rice Operating
Contractor	Harrison & Cooper
Date Completed	7/12/2012
Site	BD B-16
Well ID	MW-2
Casing Diameter	2"
Well Depth	93'
Casing Material	PVC
Plugging Material	Portland/Bentonite Slurry
Slurry Interval	3'-93'
Cement Interval	0'-3'

Copies: File
Email (Rice)

BD B-16 (1R426-28)
Unit B, Section 16, T-22-S, R-37-E

Pulling MW-1, facing south 7/12/12

Plugging MW-1 with a 1-3% bentonite/concrete slurry with a 3 ft concrete cap, facing south 7/12/12

MW-1 plug and abandonment completed, facing south 7/12/12

Pulling MW-2, facing south 7/12/12

Plugging MW-2 with a 1-3% bentonite/concrete slurry with a 3 ft concrete cap, facing south 7/12/12

MW-2 plug and abandonment completed, facing south 7/12/12

Appendix B

Liner Installation Documentation

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

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
BD	B-16	B	16	22S	37E

SAMPLE ID	PID	SAMPLE ID	PID
Blowsand	1.2		

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

SIGNATURE: _____ DATE: 4/29/2013

CARDINAL Laboratories

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

May 01, 2013

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD B-16 VENT

Enclosed are the results of analyses for samples received by the laboratory on 04/29/13 16:50.

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:	04/29/2013	Sampling Date:	04/29/2013
Reported:	05/01/2013	Sampling Type:	Soil
Project Name:	BD B-16 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: BLOWSAND (H301014-01)

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	04/30/2013	ND	416	104	400	3.77	

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	05/01/2013	ND	194	97.1	200	4.64	
DRO >C10-C28	<10.0	10.0	05/01/2013	ND	192	96.2	200	5.81	

Surrogate: 1-Chlorooctane	*78.6 %*	*65.2-140*
Surrogate: 1-Chlorooctadecane	*89.0 %*	*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:	Rice & Pegasus	**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:	BD B-16 Vent	**Phone #:**	
Sampler Name:		**Fax #:**	

ANALYSIS REQUEST

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING			
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
H30 1014																
1	Blowsand	G	1			1					1		4/29/13	9:39	1	1

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:** 4/29/13	**Received By:** Jodi Henson	**Phone Result:** ☐ Yes ☐ No **Add'l Phone #:**
	Time: 4:30		**Fax Result:** ☐ Yes ☐ No **Add'l Fax #:**
Relinquished By:	**Date:**	**Received By:**	**REMARKS:** Hack Conder Email All Zach Conder Bruce Baker Kyle Norman
	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

#54

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
BD	B-16	B	16	22S	37E

SAMPLE ID	PID	SAMPLE ID	PID
Caliche	0.0		

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

SIGNATURE: _____ DATE: 5/3/2013

CARDINAL Laboratories

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

May 06, 2013

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD B-16 VENT

Enclosed are the results of analyses for samples received by the laboratory on 05/03/13 16:35.

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:	05/03/2013	Sampling Date:	05/03/2013
Reported:	05/06/2013	Sampling Type:	Soil
Project Name:	BD B-16 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: CALICHE (H301063-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	05/06/2013	ND	416	104	400	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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	RICE 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:	BD B-16 Vent	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														
H31D1063 -1	Caliche	C	1			1					1		5/3/13	3:40	1														

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: 5/3/13	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Time: 4:35	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
	Date:		REMARKS: Email All
	Time:		

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)
3°C		

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

#511

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
BD	B-16	B	16	22S	37E

SAMPLE ID	PID	SAMPLE ID	PID
Topsoil	0.0		

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

SIGNATURE: _____ DATE: 5/6/2013

CARDINAL Laboratories

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

May 07, 2013

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD B-16 VENT

Enclosed are the results of analyses for samples received by the laboratory on 05/06/13 16:30.

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Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

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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:	05/06/2013	Sampling Date:	05/06/2013
Reported:	05/07/2013	Sampling Type:	Soil
Project Name:	BD B-16 VENT	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: TOPSOIL (H301073-01)

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	05/07/2013	ND	416	104	400	3.77	

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

Cardinal Laboratories

*=Accredited Analyte

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:	RT-CE 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:	BD B-16 Vent	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		
H301073															C1	
1	Topsoil	C	1			1					1		5/6/13	3:50	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 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: 5/6/13	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 4:30		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Email All
	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

#54

RICE ENVIRONMENTAL
RECS
CONSULTING & SAFETY, LLC

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

REVEGETATION FORM

1. General Information

Site name: BD B-16						
U/L B	Section 16	Township 22S	Range 37E	County Lea	Latitude 32*23'53.173"N	Longitude 103*09'50.349" W
Contact Name: Hack Conder						
Email: hconder@rice-ecs.com						
80 x 130		10,400 sq ft		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: 5/7/2013				

3. Bioremediation

Fertilizer ☐	Hay ☐	Other ☒ 20 bags of Restore inhance, 2 bags of manure, 10 bags of potting soil
Type:		Describe:
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: 15lbs. Lea County Mix, 15lbs. Race Horse Oats, 15lbs. Sudan Grass	Seeding date: 5/28/2013
Broadcast ☒ mechanical seeder Method:			
Soil conditions during seeding: Dry ☒ Damp ☐ Wet ☐			
Photos attached ☐ Number of photos:	Observations: Seed was tilled into 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: 5/28/2013
Signature:		

BD B-16 (1R426-28)
Unit Letter B, Section 16, T22S, R37E

Site prior to excavation,
facing north 9/19/2012

Excavating site,
facing east 4/18/2013

Exporting soil,
facing east 4/18/2013

Importing blow sand,
facing north 4/29/2013

Installing 6" bottom sand pad,
facing northeast 4/29/2013

Installing 76'x77', 20-mil reinforced plastic liner
at 5' bgs, facing west 4/29/2013

BD B-16 (1R426-28)
Unit Letter B, Section 16, T22S, R37E

Installing a 1' sand pad above liner,
facing east 4/29/2013

Backfilling site,
facing north 5/3/2013

Backfilling site with top soil,
facing south 5/6/2013

Spreading amendments,
facing west 5/28/2013

Spreading seed,
facing southwest 5/28/2013

Site complete,
facing north 5/28/2013