

RICE *Operating Company*

112 West Taylor • Hobbs, New Mexico 88240

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

April 12, 2022**Bradford Billings**

Environmental Bureau, Oil Conservation Division
New Mexico Energy, Minerals, & Natural Resources Department
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

RE: Termination Request**Rice Operating Company – Vacuum SWD System****Vacuum Jct. D-31 (1R425-81): UL/D, Sec. 31, T17S, R35E**

Mr. Billings:

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. The Vacuum system is now abandoned.

Background and Previous Work

The site is located approximately 0.3 miles south of Buckeye, New Mexico at UL/D, Sec. 31, T17S, R35E as shown on the Geographic Location Map. Groundwater sampling at the site indicated the depth to groundwater is approximately 124 feet below ground surface (bgs).

In 2009, ROC initiated work on the former Vacuum D-31 junction box as part of the system abandonment. The former junction box and surrounding soil was removed from an excavation of approximately dimensions 10x30x12-ft deep. Soils samples were field analyzed at regular intervals for chloride and hydrocarbon. Representative samples were sent to a commercial laboratory for analysis. The excavated soil was blended and returned to the excavation. A 1-ft thick compacted clay barrier was installed from 4 to 5 ft bgs. Clean, imported soil was installed above the clay barrier and the surface was returned to the natural contour and seeded. NMOCD was notified of potential groundwater impact on November 11th, 2009, and a Junction Box Disclosure Report was submitted with all the 2009 junction box closures and disclosures.

On February 8th, 2013, ROC submitted an Investigation and Characterization Plan (ICP) to NMOCD which was approved on March 4th, 2013. According to the ICP, field personnel were on site April 9th-11th, 2013, to conduct soil bore investigation. Six soil bores were drilled with soil samples being collected at regular intervals and field tested for chloride and organic vapors. Representative samples from each bore were sent to a commercial laboratory for analysis of chloride and hydrocarbon. SB-1 returned a laboratory chloride result of 3,200 mg/kg at 50 ft bgs and decreased to 1,020 mg/kg at 85 ft bgs. GRO was non-detect in both samples, and DRO was 17.5 mg/kg at 50 ft bgs and 14.9 mg/kg at 85 ft bgs. In SB-2, lab analysis returned results of

3,320 mg/kg at 20 ft bgs and decreased to 912 mg/kg at 85 ft bgs. GRO and DRO readings were non-detect in both samples. In SB-3, lab analysis returned results of 320 mg/kg at the surface, 624 mg/kg at 15 ft bgs, and 128 mg/kg at 20 ft bgs. GRO and DRO results were non-detect in each sample. Lab results from samples collected from SB-4, resulted in chloride concentrations of 3,760 mg/kg at 20 ft bgs and 1,310 mg/kg at 85 ft bgs. GRO and DRO results were non-detect except for the DRO reading at 20 ft bgs, which was 30.4 mg/kg. SB-5 returned laboratory chloride readings of 2,800 mg/kg at 20 ft bgs and 432 mg/kg at 85 ft bgs. GRO and DRO results were non-detect except for the DRO reading at 20 ft bgs, which was 10.8 mg/kg. SB-6 returned laboratory chloride readings of 3,360 mg/kg at 20 ft bgs and 1,280 mg/kg at 85 ft bgs. GRO and DRO results were non-detect in both samples. Each soil bore was plugged to ground surface with bentonite.

On May 31st, 2011, an Investigation and Characterization Plan (ICP) Report and Request for Further Investigation was submitted to NMOCD and approved on July 25th, 2013. The report requested NMOCD permission to continue to investigate the site to determine the lateral extent of the chloride impact. According to the NMOCD approved report, field personnel were on site December 13th-19th, 2013 to drill an additional four soil bores. As SB-7 through SB-10 were drilled, soil samples were collected at regular intervals and field tested for chloride and organic vapors. Representative samples were sent to a commercial laboratory for analysis. SB-7 returned a laboratory chloride result of 640 mg/kg at 60 ft bgs and 336 mg/kg at 80 ft bgs. SB-8 returned a laboratory chloride result of 5,440 mg/kg at 15 ft bgs and 2,600 mg/kg at 80 ft bgs. SB-9 returned a laboratory chloride result of 1,360 mg/kg at 40 ft bgs and 2,920 mg/kg at 80 ft bgs. SB-10 returned a laboratory chloride result of 176 mg/kg at 5 ft bgs and 128 mg/kg at 20 ft bgs. A 38 ft north surface sample was taken to a commercial laboratory and returned a chloride result of non-detect. GRO and DRO results at all depths in all bores were non-detect. Each soil bore was plugged to ground surface with bentonite. On February 10th, 2014, SB-11 was drilled at the site to determine depth to groundwater. Groundwater was determined to be located at a depth of 118 ft bgs. Each soil bore was plugged to ground surface with bentonite.

On March 24th, 2014, a Corrective Action Plan (CAP) was submitted to the NMOCD and subsequently approved on January 13th, 2015. The approved CAP proposed additional vertical delineation to depths greater than 85 ft bgs, based on a depth to groundwater of approximately 118 ft bgs. The additional delineation would be conducted to determine if the residual chloride concentrations in the vadose zone could potentially affect groundwater. In order to protect groundwater quality from potential chloride migration, the report also recommended the installation of a 20-mil, reinforced liner. The site would be excavated 50x90-ft to a depth of 3 ft bgs, due to the presence of hard rock in the area. The liner would cover the existing 10x30-ft clay liner previously installed at 5-4 ft bgs. The liners would provide a barrier that will inhibit the downward migration of chlorides to groundwater. Upon completion of backfilling, the site would be seeded with a native vegetative mix and soil amendments will be added as necessary.

On May 12th, 2014, SB-1 and SB-9 were extended and drilled to a depth of 115 ft bgs. SB-1 returned laboratory chloride readings of 2,480 mg/kg at 100 ft bgs and decreased to 1,630 mg/kg at 115 ft bgs. GRO and DRO results were non-detect in both the 100 ft and 115 ft samples. SB-9 returned laboratory chloride readings of 1,960 mg/kg at 95 ft bgs and decreased to 496 mg/kg at 115 ft bgs. GRO, DRO, and BTEX results were non-detect in both the 100 ft and 115 ft samples. Each soil bore was plugged in entirety with bentonite.

On March 4th, 2015, ROC began excavating the site to a depth of 3 ft bgs. The excavated soil was rock screened, and approximately 560 yds³ excavated soil were exported to a NMOCD approved facility. Approximately 840 yds³ of clean topsoil was imported to the site. A sample of the imported topsoil was analyzed by a commercial laboratory, resulting in a chloride concentration of non-detect. The sample was also field analyzed for hydrocarbon using a PID, resulting in a reading of 0.3 ppm. The bottom of the excavation was padded with approximately six inches of the imported soil, and a 50x90-ft, 20 mil reinforced poly liner was carefully installed and properly seated at the bottom of the excavation. Approximately six inches of clean imported soil was carefully padded overtop the liner. The screened rock was returned to the excavation and the imported topsoil was used to backfill the site to ground surface and to contour the site to the surrounding area. On April 7th, 2015, the backfilled site was seeded with approximately 18 pounds of Summer Wheat, 18 pounds Blue Gramma seed, and 34 bags of custom mix amendments. A CAP Report and Soil Closure Request summarizing the liner installation work was submitted to NMOCD on August 7th, 2015. NMOCD approved the report and granted 'Soil Closure' on August 14th, 2015.

Based on the soil bore data, monitoring wells were warranted at this site. On December 8th-9th, 2015, a near-source monitoring well (MW-1) and an up-gradient monitoring well (MW-2) were installed at the site. The monitoring wells were installed per EPA and NMOCD standards. The wells were developed and have been sampled regularly since installation. Chloride and TDS concentrations in MW-1 have decreased over time and have remained below WQCC standards for eight consecutive quarters. All other constituents in MW-1 and MW-2 have remained below WQCC standards since installation.

Recommendations

Based on the eight quarters of monitoring well data being below WQCC standards in both wells, the liner installation approved by NMOCD in the CAP, recovered vegetation, and 'Soil Closure' previously granted by NMOCD, ROC respectfully requests remediation termination or similar closure status for this site. Once NMOCD grants termination, both monitoring wells (MW-1 and MW-2) will be plugged and abandoned using Portland slurry and a three-foot cap of concrete at the surface. ROC acknowledges they have met the requirements of 19.15.29 NMAC and a final C-141 is attached.

Rice Operating Company appreciates the opportunity to work with you on this project. Please contact me at (575) 393-9174 if you have any questions or wish to further discuss this site. Thank you for your time and consideration.

Sincerely,

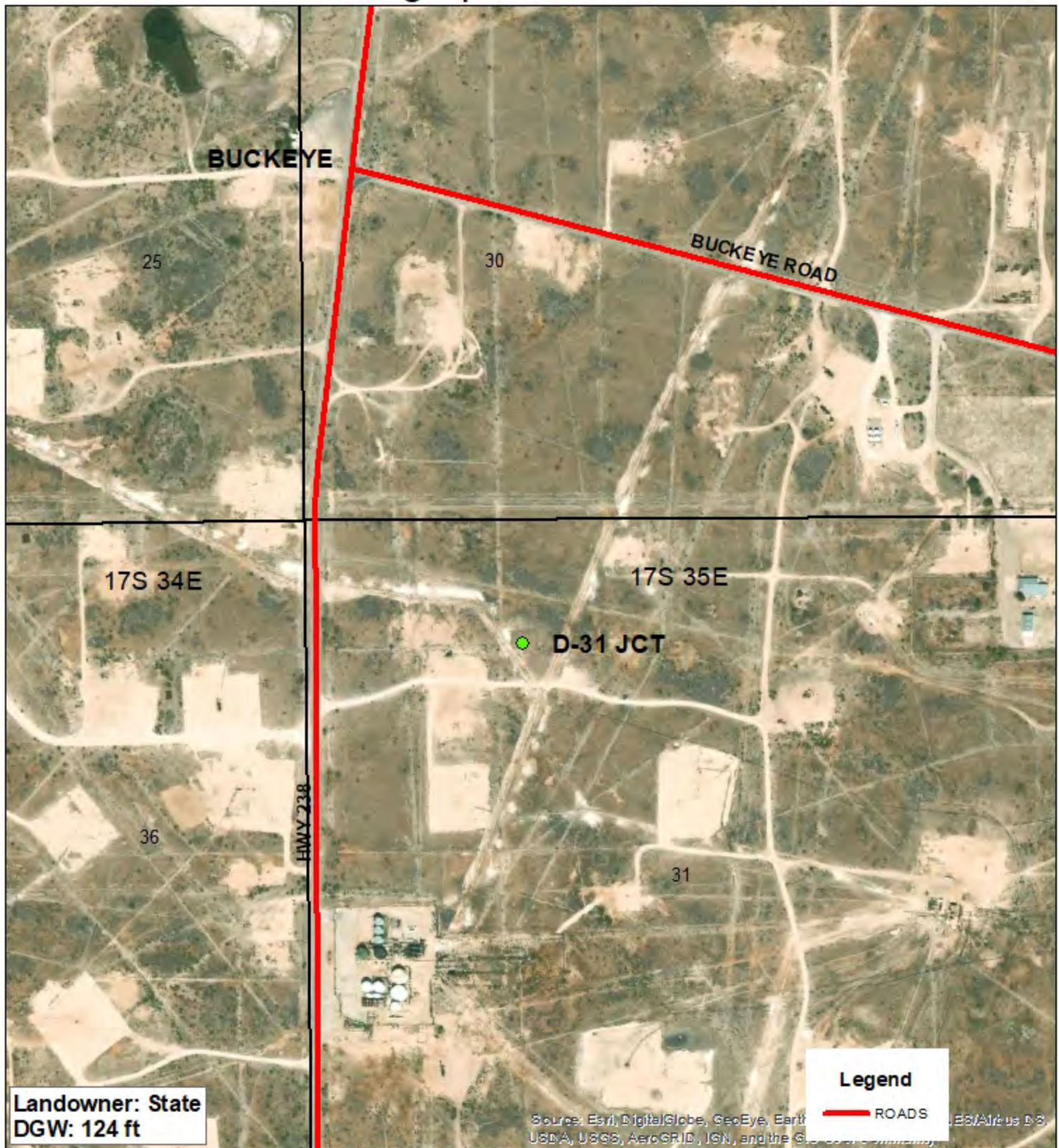


Katie Davis
Environmental Manager
RICE Operating Company

Appendix

Figures

RICE Operating Company
112 West Taylor, Hobbs, NM 88240
Phone 575.393.9174



VACUUM D-31 JCT

1R425-81

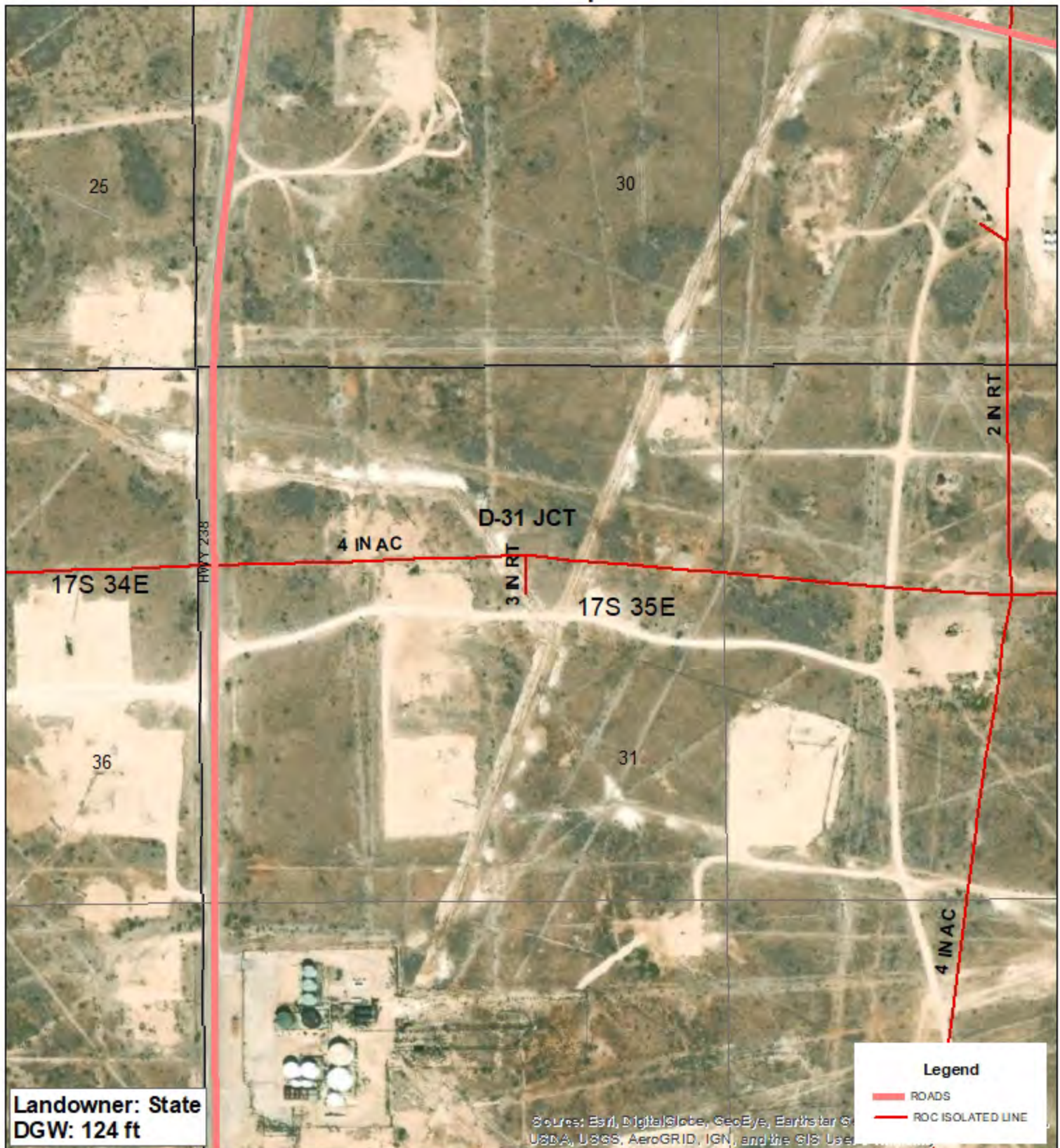
UL D SECTION 31
T-17-S R-35-E
LEA COUNTY, NM

GPS: 32.797535 -103.502785
NAD 83 STATE PLANE PROJECTION
NM EAST ZONE

0 250 500
Feet

Drawing date: 3/4/21
Drafted by: T. Grieco



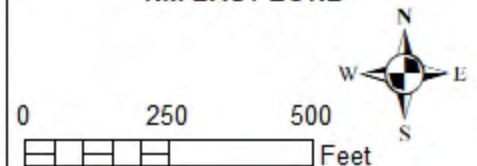


VACUUM D-31 JCT

1R425-81

UL D SECTION 31
T-17-S R-35-E
LEA COUNTY, NM

GPS: 32.797535 -103.502785
NAD 83 STATE PLANE PROJECTION
NM EAST ZONE



Drawing date: 3/28/22
Drafted by: T. Grieco

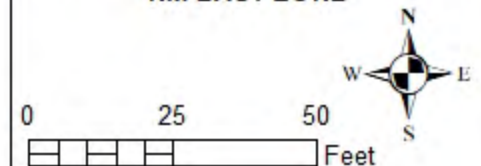


VACUUM
D-31 JCT

1R425-81

UL D SECTION 31
T-17-S R-35-E
LEA COUNTY, NM

GPS: 32.797535 -103.502785
NAD 83 STATE PLANE PROJECTION
NM EAST ZONE



Drawing date: 3/24/22
Drafted by: T. Grieco

Monitoring Well Sampling

RICE Operating Company
112 West Taylor, Hobbs, NM 88240
Phone 575.393.9174

ROC - Vacuum Jct. D-31 (1R425-81)

Unit Letter D, Section 31, T17S, R35E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	120.56	157.5	24	100	3/17/2016	450	1,040	<0.001	<0.001	<0.001	<0.003	50	Clear No odor
1	120.87	157.5	24	100	6/1/2016	600	1,310	<0.001	<0.001	<0.001	<0.003	71	Clear No odor
1	120.92	157.5	24	100	9/16/2016	460	1,100	<0.001	<0.001	<0.001	<0.003	33	Clear No odor
1	120.9	157.5	24	100	11/21/2016	490	1,150	<0.001	<0.001	<0.001	<0.003	76	Clear No odor
1	121.2	157.5	24	100	3/6/2017	540	1,260	<0.001	<0.001	<0.001	<0.003	59	Clear No odor
1	121.29	157.5	24	100	6/5/2017	680	1,530	<0.001	<0.001	<0.001	<0.003	77	Clear No odor
1	121.11	157.5	23	100	9/15/2017	650	1,720	<0.001	<0.001	<0.001	<0.003	71	Clear No odor
1	120.76	157.5	23	100	12/7/2017	284	770	<0.001	<0.001	<0.001	<0.003	45	Clear No odor
1	120.75	157.5	23	100	3/9/2018	256	658	<0.001	<0.001	<0.001	<0.003	20	Clear No odor
1	120.91	157.5	23	100	6/6/2018	312	872	<0.001	<0.001	<0.001	<0.003	61	Clear No odor
1	121.05	157.5	23	100	9/24/2018	128	398	<0.001	<0.001	<0.001	<0.003	27	Clear No odor
1	121.28	157.5	23	100	11/20/2018	268	706	<0.001	<0.001	<0.001	<0.003	31	Clear No odor
1	120.88	157.5	24	100	3/15/2019	144	481	<0.001	<0.001	<0.001	<0.003	30	Clear No odor
1	121.21	157.5	24	100	6/11/2019	68	522	<0.001	<0.001	<0.001	<0.003	190	Clear No odor
1	122.04	157.5	23	100	9/9/2019	436	1,190	<0.001	<0.001	<0.001	<0.003	43	Clear No odor
1	122.07	157.5	23	75	11/25/2019	532	1,140	<0.001	<0.001	<0.001	<0.003	41	Clear No odor
1	122.19	157.5	23	100	3/18/2020	44	345	<0.001	<0.001	<0.001	<0.003	72.3	Clear No odor
1	123.68	157.5	22	100	9/18/2020	40	355	XXX	XXX	XXX	XXX	47.7	Clear No odor
1	123.68	157.5	22	100	11/17/2020	60	414	XXX	XXX	XXX	XXX	58.4	Clear No odor
1	124.18	157.5	22	100	3/17/2021	56	384	XXX	XXX	XXX	XXX	40.7	Clear No odor
1	124.48	157.5	21	100	6/17/2021	68	360	XXX	XXX	XXX	XXX	63.3	Clear No odor
1	124.68	157.5	21	100	9/15/2021	68	368	XXX	XXX	XXX	XXX	39.8	Clear No odor
1	124.75	157.5	21	100	11/17/2021	112	441	XXX	XXX	XXX	XXX	37.4	Clear No odor
1					3/14/2022	92	457	XXX	XXX	XXX	XXX	51.8	

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	120.68	129.15	1.4	10	3/17/2016	68	414	<0.001	<0.001	<0.001	<0.003	48	Clear No odor

ROC - Vacuum Jct. D-31 (1R425-81)

Unit Letter D, Section 31, T17S, R35E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	121.12	129.15	1.4	10	6/1/2016	24	476	<0.001	<0.001	<0.001	<0.003	42	Clear No odor
2	121.13	129.15	1.4	10	9/16/2016	32	314	<0.001	<0.001	<0.001	<0.003	25	Clear No odor
2	121.11	129.15	1.4	10	11/21/2016	56	334	<0.001	<0.001	<0.001	<0.003	49	Clear No odor
2	121.44	129.15	1.2	10	3/6/2017	68	378	<0.001	<0.001	<0.001	<0.003	52	Clear No odor
2	121.54	129.15	1.2	10	6/5/2017	84	540	<0.001	<0.001	<0.001	<0.003	58	Clear No odor
2	121.37	129.15	1.2	10	9/15/2017	92	378	<0.001	<0.001	<0.001	<0.003	47	Clear No odor
2	121.03	129.15	1.3	10	12/7/2017	32	366	<0.001	<0.001	<0.001	<0.003	63	Clear No odor
2	121.05	129.15	1.3	10	3/9/2018	60	374	<0.001	<0.001	<0.001	<0.003	65	Clear No odor
2	121.21	129.15	1.3	10	6/6/2018	64	437	<0.001	<0.001	<0.001	<0.003	79	Clear No odor
2	121.75	129.15	1.2	8	9/24/2018	44	348	<0.001	<0.001	<0.001	<0.003	42	Clear No odor
2	122.01	129.15	1.1	8	11/20/2018	72	432	<0.001	<0.001	<0.001	<0.003	44	Clear No odor
2	121.19	129.15	1.3	8	3/15/2019	64	269	<0.001	<0.001	<0.001	<0.003	45	Clear No odor
2	121.51	129.15	1.2	8	6/11/2019	32	127	<0.001	<0.001	<0.001	<0.003	46	Clear No odor
2	122.36	129.15	1.1	8	9/9/2019	48	368	<0.001	<0.001	<0.001	<0.003	43	Clear No odor
2	122.35	129.15	1.1	8	11/25/2019	88	232	<0.001	<0.001	<0.001	<0.003	45	Clear No odor
2	122.5	129.15	1.1	8	3/18/2020	44	311	<0.001	<0.001	<0.001	<0.003	49.1	Clear No odor
2	124.04	129.15	0.8	8	9/18/2020	40	338	XXX	XXX	XXX	XXX	63.8	Clear No odor
2	124.04	129.15	0.8	8	11/17/2020	44	377	XXX	XXX	XXX	XXX	37.2	Clear No odor
2	124.63	129.15	0.7	8	3/17/2021	48	353	XXX	XXX	XXX	XXX	44.7	Clear No odor
2	124.91	129.15	0.7	8	6/17/2021	40	320	XXX	XXX	XXX	XXX	52.4	Clear No odor
2	125.09	129.15	0.7	8	9/15/2021	56	343	XXX	XXX	XXX	XXX	43.5	Clear No odor
2	125.15	129.15	0.6	8	11/17/2021	32	333	XXX	XXX	XXX	XXX	48.7	Clear No odor
2					3/14/2022	28	339	XXX	XXX	XXX	XXX	44.6	



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

March 21, 2022

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION D-31

Enclosed are the results of analyses for samples received by the laboratory on 03/16/22 14:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	03/16/2022	Sampling Date:	03/14/2022
Reported:	03/21/2022	Sampling Type:	Water
Project Name:	VACUUM JUNCTION D-31	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC31 D-LEA CTY, NM		

Sample ID: MONITOR WELL #1 (H221051-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	92.0	4.00	03/17/2022	ND	100	100	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	51.8	10.0	03/21/2022	ND	19.8	99.2	20.0	2.24		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	457	5.00	03/18/2022	ND	527	105	500	0.0419		

Sample ID: MONITOR WELL #2 (H221051-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	28.0	4.00	03/17/2022	ND	100	100	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	44.6	10.0	03/21/2022	ND	19.8	99.2	20.0	2.24		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	339	5.00	03/18/2022	ND	527	105	500	0.0419		

Cardinal Laboratories

*=Accredited Analyte

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 the 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.

Celey D. Keene, Lab Director/Quality Manager



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

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 the 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.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Cardinal Laboratories, Inc.

Company Name: RICE Operating Company		BILL TO Company: RICE Operating Company		PO#
Project Manager: Katie Jones		Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240		
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240		Phone#: (575) 393-9174		Fax#: (575)397-1471
Phone #: (575) 393-9174		Fax #: (575) 397-1471		
Project #:		Project Name: Vacuum Junction D-31		
Project Location: T17S-R35E-Sec31 D ~ Lea County New Mexico				
Sampler Signature:  Rozanne Johnson (575)631-9310				

LAB Order ID # _____

(Circle or Specify Method No.)

[illegible]

Relinquished by: <i>[Signature]</i> Date: <i>3/16/2022</i> Time: <i>14:10</i>	Received by: <i>[Signature]</i> Date: <i>5-16-22</i> Time: <i>14:10</i>
Relinquished by: <i>[Signature]</i> Date: <i>3/16/2022</i> Time: <i>14:10</i>	Received By: (Laboratory Staff) Date: <i>5-16-22</i> Time: <i>14:10</i>

Delivered By: (Circle One)	Sample Condition	CHECKED BY:									
UPS - Bus - Other:	<table border="1"> <tr> <td></td> <td>Cool</td> <td>Intact</td> </tr> <tr> <td>Yes</td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>No</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>		Cool	Intact	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	<input type="checkbox"/>	(Initials)
	Cool	Intact									
Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
No	<input type="checkbox"/>	<input type="checkbox"/>									

Phone Results	Yes	No
Fax Results	Yes	No Additional Fax Number:

REMARKS:

Email Results: kjones@riceswd.com
rozanne@sdacres.com



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

November 29, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION D-31

Enclosed are the results of analyses for samples received by the laboratory on 11/18/21 15:31.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	11/18/2021	Sampling Date:	11/17/2021
Reported:	11/29/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION D-31	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC31 D-LEA CTY, NM		

Sample ID: MONITOR WELL #1 (H213324-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*		112	4.00	11/19/2021	ND	100	100	100	0.00	
Sulfate 375.4		mg/L		Analyzed By: AC						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*		37.4	10.0	11/22/2021	ND	24.0	120	20.0	0.418	
TDS 160.1		mg/L		Analyzed By: AC						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*		441	5.00	11/23/2021	ND	528	106	500	2.46	

Sample ID: MONITOR WELL #2 (H213324-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	32.0	4.00	11/19/2021	ND	100	100	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	48.7	10.0	11/22/2021	ND	24.0	120	20.0	0.418		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	333	5.00	11/23/2021	ND	528	106	500	2.46		

Cardinal Laboratories

*=Accredited Analyte

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 the 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.

Celey D. Keene, Lab Director/Quality Manager



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

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 the 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.

A handwritten signature in black ink, appearing to read "C. D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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

September 24, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION D-31

Enclosed are the results of analyses for samples received by the laboratory on 09/20/21 15:41.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	09/20/2021	Sampling Date:	09/15/2021
Reported:	09/24/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION D-31	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC31 D-LEA CTY, NM		

Sample ID: MONITOR WELL #1 (H212610-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	68.0	4.00	09/21/2021	ND	100	100	100	3.92		
Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	39.8	10.0	09/24/2021	ND	20.0	100	20.0	1.10		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	368	5.00	09/23/2021	ND	268	89.3	300	1.07		

Sample ID: MONITOR WELL #2 (H212610-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	56.0	4.00	09/21/2021	ND	100	100	100	3.92		
Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	43.5	10.0	09/24/2021	ND	20.0	100	20.0	1.10		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	343	5.00	09/23/2021	ND	268	89.3	300	1.07		

Cardinal Laboratories

*=Accredited Analyte

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 the 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.

Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

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 the 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.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name:	RICE Operating Company		BILL TO Company:	RICE Operating Company		PO#
Project Manager:	Katie Jones		Address:		(Street, City, Zip)	
Address:		(Street, City, Zip)		Phone#:		Fax#:
122 W Taylor Street ~ Hobbs, New Mexico 88240		(575) 393-9174		(575) 393-9174		(575) 397-1471
Phone #:	(575) 393-9174		Fax #:	(575) 397-1471		
Project #:	Project Name:					
Vacuum Junction D-31						
Project Location:	Sampler Signature: Rozanne Johnson (575) 631-9310					
T17S-R35E-Sec31 D ~ Lea County New Mexico						

ANALYSIS REQUEST
(Circle or Specify Method No.)

[illegible]

Relinquished by: Rozanne Johnson Date: 9/28/2021 Time: 15:40

Received by:	Date:	Time:
--------------	-------	-------

Phone Results	Yes	No
Fax Results	Yes	No Additional Fax Number:

Relinquished by: _____ Date: 12/12/12 Time: _____

Received By: (Laboratory Staff) Date: Time:

REMARKS:

Email Results: kjones@riceswd.com
rozanne@sdacres.com

Delivered By: (Circle One)

Sample Condition

CHECKED BY:

Sampler - UPS - Bus - Other:

	Cool	Intact
Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
No	<input type="checkbox"/>	<input type="checkbox"/>

(Initials)

#113



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

June 25, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION D-31

Enclosed are the results of analyses for samples received by the laboratory on 06/22/21 12:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	06/22/2021	Sampling Date:	06/17/2021
Reported:	06/25/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION D-31	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC31 D-LEA CTY, NM		

Sample ID: MONITOR WELL #1 (H211610-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	68.0	4.00	06/22/2021	ND	104	104	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	63.3	10.0	06/22/2021	ND	23.5	117	20.0	9.79		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	360	5.00	06/24/2021	ND	515	103	500	0.0280		

Sample ID: MONITOR WELL #2 (H211610-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	40.0	4.00	06/22/2021	ND	104	104	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	52.4	10.0	06/22/2021	ND	23.5	117	20.0	9.79		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	320	5.00	06/24/2021	ND	515	103	500	0.0280		

Cardinal Laboratories

*=Accredited Analyte

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 the 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.

Celey D. Keene, Lab Director/Quality Manager



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

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 the 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.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST
(Circle or Specify Method No.)

[illegible]

Phone Results	Yes	No	
Fax Results	Yes	No	Additional Fax Number:
REMARKS:			
Email Results: kjones@riceswd.com rozanne@sdacres.com			



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

March 26, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION D-31

Enclosed are the results of analyses for samples received by the laboratory on 03/22/21 14:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" and last name "Keene" clearly legible.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	03/22/2021	Sampling Date:	03/17/2021
Reported:	03/26/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION D-31	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC31 D-LEA CTY, NM		

Sample ID: MONITOR WELL #1 (H210717-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	56.0	4.00	03/23/2021	ND	92.0	92.0	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	40.7	10.0	03/24/2021	ND	21.0	105	20.0	2.65		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	384	5.00	03/24/2021	ND	546	109	500	2.49		

Sample ID: MONITOR WELL #2 (H210717-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	48.0	4.00	03/23/2021	ND	92.0	92.0	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	44.7	10.0	03/24/2021	ND	21.0	105	20.0	2.65		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	353	5.00	03/25/2021	ND	546	109	500	2.49		

Cardinal Laboratories

*=Accredited Analyte

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 the 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.

Celey D. Keene, Lab Director/Quality Manager



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

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 the 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.

A handwritten signature in black ink, appearing to read "C. D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager

Cardinal Laboratories, Inc.

LAB Order ID

(Circle or Specify Method No.)

[illegible]

Phone Results	Yes	No
Fax Results	Yes	No Additional Fax Number:

(Initials)

Email Results: kjones@riceswd.com
rozanne@sdacres.com



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

December 01, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION D-31

Enclosed are the results of analyses for samples received by the laboratory on 11/20/20 16:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	11/20/2020	Sampling Date:	11/17/2020
Reported:	12/01/2020	Sampling Type:	Water
Project Name:	VACUUM JUNCTION D-31	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC31 D-LEA CTY, NM		

Sample ID: MONITOR WELL #1 (H003086-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	60.0	4.00	11/23/2020	ND	100	100	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	58.4	10.0	11/23/2020	ND	23.4	117	20.0	2.07		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	414	5.00	11/23/2020	ND	494	98.8	500	0.971		

Sample ID: MONITOR WELL #2 (H003086-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	44.0	4.00	11/23/2020	ND	100	100	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	37.2	10.0	11/23/2020	ND	23.4	117	20.0	2.07		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	377	5.00	11/24/2020	ND	494	98.8	500	0.971		

Cardinal Laboratories

*=Accredited Analyte

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 the 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.

Celey D. Keene, Lab Director/Quality Manager



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

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 the 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.

A handwritten signature in black ink, appearing to read "C. D. Keene", written over a horizontal line.


Celey D. Keene, Lab Director/Quality Manager

Cardinal Laboratories, Inc.

Page 4 of 4

Company Name:	BILL TO Company:	PO#
RICE Operating Company	RICE Operating Company	
Project Manager:	Address:	(Street, City, Zip)
Katie Jones	122 W Taylor Street ~ Hobbs, New Mexico 88240	
Address:	Phone#:	Fax#:
(Street, City, Zip)	(575) 393-9174	(575) 397-1471
122 W Taylor Street ~ Hobbs, New Mexico 88240		
Phone #:	Fax #:	
(575) 393-9174	(575) 397-1471	

(Circle or Specify Method No.)

Project #: _____ Project Name: Vacuum Junction D-31
Project Location: T17S-R35E-Sec31 D ~ Lea County New Mexico
Sampler Signature:  Rozanne Johnson (575) 831-9310

[illegible]

Relinquished by: <u>[Signature]</u>	Date: <u>11/20/20</u>	Time: <u>16:05</u>	Received by: <u>[Signature]</u>	Date: <u>11-20-20</u>	Time: <u>1605</u>
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)	Date:	Time:

Delivered By: (Circle One)	Sample Condition	CHECKED BY:									
<u>Sampler</u> - UPS - Bus - Other:	<table border="0"> <thead> <tr> <th></th> <th>Cool</th> <th>Intact</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>No</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>		Cool	Intact	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	<input type="checkbox"/>	(Initials)
	Cool	Intact									
Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
No	<input type="checkbox"/>	<input type="checkbox"/>									

[illegible]

Phone Results	Yes	No
Fax Results	Yes	No Additional Fax Number:

REMARKS:

Email Results: kjones@riceswd.com
rozanne@sdacres.com

Released to Imaging: 5/3/2022 10:37:02 AM



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

September 29, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION D-31

Enclosed are the results of analyses for samples received by the laboratory on 09/23/20 10:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	09/23/2020	Sampling Date:	09/18/2020
Reported:	09/29/2020	Sampling Type:	Water
Project Name:	VACUUM JUNCTION D-31	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC31 D-LEA CTY, NM		

Sample ID: MONITOR WELL #1 (H002522-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	40.0	4.00	09/23/2020	ND	100	100	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	47.7	10.0	09/25/2020	ND	19.4	97.0	20.0	0.258		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	355	5.00	09/25/2020	ND	827	82.7	1000	23.8		

Sample ID: MONITOR WELL #2 (H002522-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	40.0	4.00	09/23/2020	ND	100	100	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	63.8	10.0	09/25/2020	ND	19.4	97.0	20.0	0.258		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	338	5.00	09/25/2020	ND	827	82.7	1000	23.8		

Cardinal Laboratories

*=Accredited Analyte

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 the 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.

Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

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 the 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.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

March 26, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION D-31

Enclosed are the results of analyses for samples received by the laboratory on 03/20/20 12:36.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. 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 accredited 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,

A handwritten signature in black ink that reads "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	03/20/2020	Sampling Date:	03/18/2020
Reported:	03/26/2020	Sampling Type:	Water
Project Name:	VACUUM JUNCTION D-31	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC31 D-LEA CTY, NM		

Sample ID: MONITOR WELL #1 (H000866-01)

BTEX 8021B		mg/L		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	03/25/2020	ND	0.021	106	0.0200	0.675	
Toluene*	<0.001	0.001	03/25/2020	ND	0.021	105	0.0200	1.05	
Ethylbenzene*	<0.001	0.001	03/25/2020	ND	0.021	107	0.0200	1.78	
Total Xylenes*	<0.003	0.003	03/25/2020	ND	0.062	103	0.0600	1.69	
Total BTEX	<0.006	0.006	03/25/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 58.2-133

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	44.0	4.00	03/23/2020	ND	100	100	100	0.00	

Sulfate 375.4		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	72.3	10.0	03/23/2020	ND	21.5	108	20.0	0.980	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	345	5.00	03/25/2020	ND	554	111	500	1.23	

Cardinal Laboratories

*=Accredited Analyte

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 the 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.

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	03/20/2020	Sampling Date:	03/18/2020
Reported:	03/26/2020	Sampling Type:	Water
Project Name:	VACUUM JUNCTION D-31	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC31 D-LEA CTY, NM		

Sample ID: MONITOR WELL #2 (H000866-02)

BTEX 8021B		mg/L		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	03/25/2020	ND	0.021	106	0.0200	0.675	
Toluene*	<0.001	0.001	03/25/2020	ND	0.021	105	0.0200	1.05	
Ethylbenzene*	<0.001	0.001	03/25/2020	ND	0.021	107	0.0200	1.78	
Total Xylenes*	<0.003	0.003	03/25/2020	ND	0.062	103	0.0600	1.69	
Total BTEX	<0.006	0.006	03/25/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 58.2-133

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	44.0	4.00	03/23/2020	ND	100	100	100	0.00	

Sulfate 375.4		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	49.1	10.0	03/23/2020	ND	21.5	108	20.0	0.980		

TDS 160.1		mg/L		Analyzed By: AC						
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*		311	5.00	03/25/2020	ND	554	111	500	1.23	

Cardinal Laboratories

*=Accredited Analyte

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 the 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.

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

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 the 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.

A handwritten signature in black ink, appearing to read "Mike Snyder", is written over a horizontal line.

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Cardinal Laboratories, Inc.

LAB Order ID # _____

ANALYSIS REQUEST
(Circle or Specify Method No.)

(LAB USE ONLY)
H0008166

Phone Results	Yes	No
Fax Results	Yes	No Additional Fax Number:

REMARKS:

Email Results: kjones@riceswd.com
rozanne11@windstream.net

CHECKED BY:
(Initials) *AA*

Yes	<input checked="" type="checkbox"/>	Yes	<input checked="" type="checkbox"/>
No	<input type="checkbox"/>	No	<input type="checkbox"/>

NMOCD Approval and Soil Closure Request

RICE Operating Company
112 West Taylor, Hobbs, NM 88240
Phone 575.393.9174

From: [Oberding, Tomas, EMNRD](#)
To: [L Peter Galusky Jr](#)
Cc: [Katie Jones](#); [Edward Hansen \(ehansen@basinenv.com\)](mailto:ehansen@basinenv.com)
Subject: RE: Rice Operating Company - Vacuum Jct D-31 (1R425-81) - CAP Report and Soil Closure Request
Date: Friday, August 14, 2015 9:42:52 AM

Aloha all,

Based on the documentation provided and the meeting, the OCD approves the soil closure request for Vacuum Jct D-31 (1R425-81). In addition the OCD approves the CAP.

Please keep us informed.

Mahalo

-Doc

Tomáš 'Doc' Oberding PhD

Hydrologist, Adv-District 1

Oil Conservation Division, EMNRD

(505) 476-3403

E-Mail: tomas.oberding@state.nm.us

一期一会

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

Please note:

-The OCD is no longer granting "risk-based," or standard closure of events/RPs with remediation deferred to site abandonment/sale/closure. The RP will remain open until such time as historic contamination is addressed.

-Geotagged photographic documentation is stipulated for all events involving liquids.

If you have any questions or concerns, and for notification, please contact me.

From: L Peter Galusky Jr [mailto:lpgalusky@outlook.com]
Sent: Friday, August 07, 2015 3:53 PM
To: Oberding, Tomas, EMNRD
Cc: Katie Jones
Subject: Rice Operating Company - Vacuum Jct D-31 (1R425-81) - CAP Report and Soil Closure Request

Dr. Oberding,

Please find attached a Corrective Action Plan (CAP) Report and Soil Closure Request for Rice Operating Company's Vacuum Jct D-31 project in Lea County. Also attached is a project flow chart.

Please contact either myself or Katie Jones, with Rice, if you have any questions or need additional information.

Thank you.

Sincerely,

Pete G.

L Peter Galusky, Jr PE

Texerra E-mail: lpg@texerra.com

Personal E-mail: lpgalusky@outlook.com

Cell: 719-339-6791

Web: texerra.com

L Peter Galusky, Jr PE

Texerra LLC**August 7th, 2015****Dr. Tomas Oberding**

New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87504

Re: **Corrective Action Plan Report & Soil Closure Request**
Rice Operating Company – Vacuum SWD System
Vacuum Jct. D-31 (1R425-81): UL/D, Sec. 31, T17S, R35E

Sent via E-mail

Dr. Oberding:

Texerra LLC (Texerra) is submitting this Corrective Action Plan Report & Soil Closure Request on behalf of Rice Operating Company (ROC). This report documents remedial and corrective actions completed per the NMOCD approved Corrective Action Plan of March 24th, 2014 for this former junction box. This site is located approximately 0.3 miles south of Buckeye, New Mexico in UL/D, Sec. 31, T17S, R35E as shown in the Site Location Map (Figure 1). NM OSE records indicate that groundwater will likely be encountered at a depth of approximately 118 +/- feet.

Background and Previous Work

In 2009, ROC initiated work on the former Vacuum D-31 junction as part of the system abandonment. The site was delineated using a backhoe to form an excavation with dimensions 10x30x12-ft deep and soil samples were screened at regular intervals for both hydrocarbons and chlorides. Representative composite samples were sent to a commercial laboratory for analysis of chloride and TPH. Laboratory analysis of the four-wall composite resulted in a chloride concentration of 3,320 mg/kg, a gasoline range organics (GRO) concentration below detectable limit and a diesel range organics (DRO) concentration of 966 mg/kg. Laboratory analysis of the bottom composite resulted in a chloride concentration of 2,840 mg/kg, a GRO concentration below detectable limit and a DRO concentration of 1,130 mg/kg. The excavated soil was blended on site and a sample of the blended soil returned a laboratory chloride concentration of 1,070 mg/kg, a GRO concentration below detectable limit and a DRO concentration of 1,180 mg/kg. The blended backfill was returned to the excavation up to 5 ft below ground surface (bgs). At 5-4 ft bgs, a 1-ft thick clay

20055 Laredo Ln
Web: www.texerra.com
Tel: 719-339-6791

Monument, CO 80132
E-mail: lpg@texerra.com

Rice Operating Company

liner was installed and a clay compaction test performed on April 17th, 2009. Clean, imported soil was used to backfill the excavation to ground surface and to contour the site to the surrounding area. On June 8th, 2009, the site was seeded with a blend of native vegetation. NMOCD was notified of potential groundwater impact on November 11th, 2009, and a junction box disclosure report was submitted to NMOCD with all the 2009 junction box closures and disclosures.

ICP Results

On February 8th, 2013, ROC submitted an Investigation and Characterization Plan (ICP) to NMOCD which was approved on March 4th, 2013. As part of the ICP, RECS personnel were on site April 9th through 11th to conduct soil bore installations. Six soil bores were installed and as the bores were advanced, samples were field tested for chlorides and hydrocarbons. Representative samples from each bore were taken to a commercial laboratory for analysis of chlorides and hydrocarbons. SB-1 returned laboratory chloride readings of 3,200 mg/kg at 50 ft bgs and decreased to 1,020 mg/kg at 85 ft bgs. GRO in SB-1 was non-detect for both samples and DRO was 17.5 mg/kg at 50 ft bgs and 14.9 mg/kg at 85 ft bgs. In SB-2, chloride readings returned results of 3,320 mg/kg at 20 ft bgs and decreased to 912 mg/kg at 85 ft bgs. GRO and DRO readings were non-detect. In SB-3, the chloride readings returned results of 320 mg/kg at the surface, 624 mg/kg at 15 ft bgs and 128 mg/kg at 20 ft bgs. GRO and DRO reading were non-detect. In SB-4, chloride readings returned results of 3,760 mg/kg at 20 ft bgs and decreased to 1,310 mg/kg at 85 ft bgs. GRO and DRO results were non-detect except for the DRO reading at 20 ft bgs, which was 30.4 mg/kg. In SB-5, chloride readings returned results of 2,800 mg/kg at 20 ft bgs and decreased to 432 mg/kg at 85 ft bgs. GRO and DRO results were non-detect except for the DRO reading at 20 ft bgs, which was 10.8 mg/kg. In SB-6, chloride readings returned results of 3,360 mg/kg at 20 ft bgs and decreased to 1,280 mg/kg at 85 ft bgs. GRO and DRO results were non-detect throughout the bore. Each soil bore was plugged in entirety with bentonite.

On May 31st, 2011, an Investigation and Characterization Plan (ICP) Report and Request for Further Investigation was submitted to NMOCD and approved on July 25th, 2013. The ICP Report and Request for Further Investigation asked NMOCD permission to continue to investigate the site to determine the lateral extent of the chloride contamination. As part of this report, RECS personnel were on site December 13th and 19th to install an additional four soil bores. As SB 7-10 were installed, soil samples were taken at regular intervals and field tested for chlorides and hydrocarbons. Representative samples were taken to a commercial laboratory for confirmatory analysis. SB-7 returned a laboratory chloride result of 640 mg/kg at 60 ft bgs and 336 mg/kg at 80 ft bgs. SB-8 returned a laboratory chloride result of 5,440 mg/kg at 15 ft bgs and 2,600 mg/kg at 80 ft bgs. SB-9 returned a laboratory chloride result of 1,360 mg/kg at 40 ft bgs and 2,920 mg/kg at 80 ft bgs. SB-10 returned a laboratory chloride result of 176 mg/kg at 5 ft bgs and 128 mg/kg at 20 ft bgs. A 38 ft north surface sample was taken to a commercial laboratory and returned a chloride result of non-detect. GRO and DRO results at all depths in all bores were non-detect. Each soil bore was plugged in entirety with bentonite.

On February 10th, 2014, SB-11 was installed at the site to determine depth to groundwater at the site. Groundwater was determined to be located at a depth of 118 ft bgs. The soil bore was plugged in entirety with bentonite.

Rice Operating Company

Corrective Action Plan (CAP)

On March 24th, 2014, a Corrective Action Plan (CAP) was submitted to the NMOCD and subsequently approved on January 13th, 2015. The approved CAP proposed additional vertical delineation to depths greater than 85 ft bgs, based on a depth to groundwater of 118 ft bgs. The additional delineation would be conducted to determine if the residual chloride concentrations in the vadose zone could potentially affect groundwater.

In order to protect groundwater quality from potential chloride migration, the report also recommended the installation of a 20-mil, reinforced liner. The site would be excavated 50 ft x 90 ft to a depth of 3 ft bgs, due to the presence of hard rock in the area (Figure 2). The excavation would cover the 38 ft North Surface Sample and would extend 5 ft beyond the 5 ft south vertical taken during the junction box delineation phase. Chloride concentrations in the south vertical remained low with a concentration of 165 mg/kg at 12 ft bgs. To the west, the edge of the excavation is located 5 ft beyond SB-7. To the east, the edge of the excavation is located half way between SB-9 and SB-10. The soils placed above the liner would have a laboratory chloride reading no greater than 500 mg/kg and a field PID reading below 100 ppm. Excavated soil would be evaluated for use as backfill and any soils requiring disposal would be properly disposed of at a NMOCD approved facility. At the base of the excavation, a 20-mil reinforced poly liner would be installed and properly seated. The liner would overlay the previously installed 30 ft x 10 ft clay liner at 5 – 4 ft bgs. The poly liner would provide a barrier that will inhibit the downward migration of chlorides to groundwater. Upon completion of backfilling, the site would be seeded with a native vegetative mix and soil amendments will be added as necessary.

Corrective Actions Completed

On May 12th, 2014, SB-1 and the bore with the highest chloride concentration at depth, SB-9, were extended and drilled to a depth of 115 ft bgs. SB-1 returned laboratory chloride readings of 2,480 mg/kg at 100 ft bgs and decreased to 1,630 mg/kg at 115 ft bgs. GRO and DRO results were non-detect in both the 100 ft and 115 ft samples. SB-9 returned laboratory chloride readings of 1,960 mg/kg at 95 ft bgs and decreased to 496 mg/kg at 115 ft bgs. GRO, DRO, and BTEX results were non-detect in both the 100 ft and 115 ft samples. Each soil bore was plugged in entirety with bentonite. This additional investigation is included in Appendix A.

Based on the extended soil bore data, monitoring wells are warranted for this site. A near-source and up-gradient monitoring well will be installed as shown on the attached plat (Figure 2). The monitoring wells will be installed per EPA and NMOCD standards. The monitor wells will be sampled quarterly and once appropriate groundwater analysis data has been obtained, a remedy for groundwater will be proposed to NMOCD. Additional monitoring wells may be required to fully delineate groundwater quality.

ROC began excavation for the installation of the subsurface liner on March 4th, 2015. The depth of excavation was 3 ft bgs and the areal dimensions were 50 by 90 ft per the specifications in the CAP. The excavated soil was rock screen, and approximately 560 yds³ of excavated soil were exported to a NMOCD facility. Approximately 840 yds³ of clean top soil was imported to the site. A sample of the imported top soil was analyzed by a commercial laboratory, resulting in a chloride concentration

Rice Operating Company

of non-detect. The sample was also field analyzed for hydrocarbon using a PID, resulting in a reading of 0.3 ppm. The bottom of the excavation was padded with approximately six inches of the imported soil material and a 20 mil reinforced poly liner was carefully installed and properly seated over this. Approximately six inches of clean imported soil material was carefully padded overtop of the liner. The screened rock was returned to the excavation and the imported top soil was carefully added to bring the excavation to natural, surrounding elevation. The seedbed was prepared and approximately 18 pounds of Summer Wheat, 18 pounds Blue Gramma seed, and 34 bags of custom mix amendments were disked in to the top soil layer on April 7th, 2015. Photo documentation, laboratory analysis results, PID sheet, and a revegetation form are included in Appendix B.

Given that ROC has completed remedial work to protect groundwater from the potential leaching of residual soil contaminants and that the protection of groundwater quality is thus ensured, we respectfully request 'soil closure' or similar regulatory closure status of this project for the vadose zone. We plan to install monitoring wells and conduct groundwater sampling in the foreseeable future and we will correspond with NMOCD as to the outcome and in the planning of any subsequent actions.

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. We thus submit this CAP Report and Soil Closure Request for your review and consideration.

Please call Rice Operating Company or me if you have any questions or need additional information.

Thank you.

Sincerely,



L. Peter (Pete) Galusky, Jr PE
NM Prof. Engineer No. 22561

Copy: Rice Operating Company

Rice Operating Company

Attachment List

Figures

Figure 1 - Site Location Map

Figure 2 - Plan View of Installed Liner

Appendix A

SB Log

Lab Analysis

Field PID Analysis

Appendix B

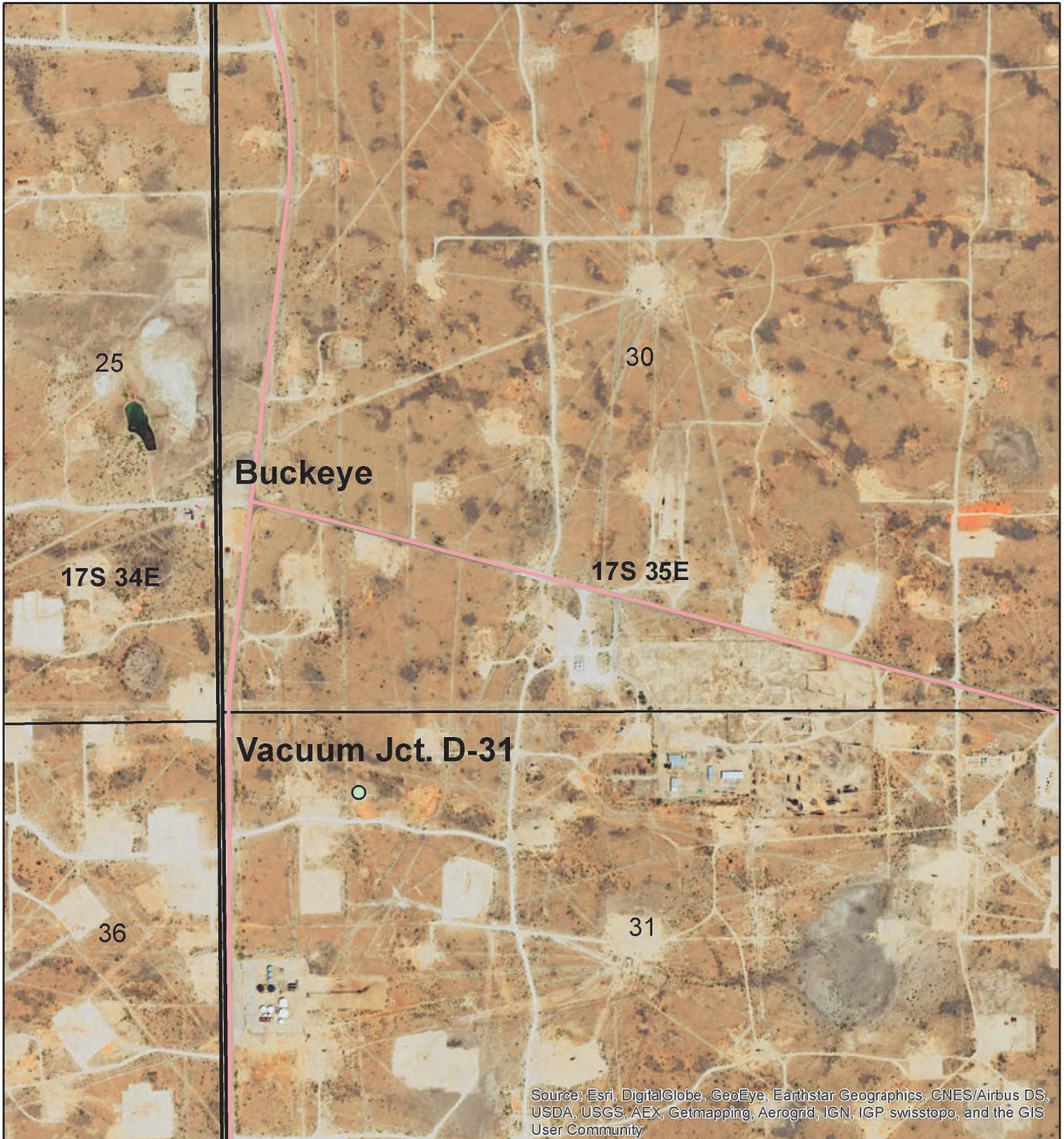
Lab Analysis of Fill Material Chloride Concentration

Field PID Analysis of Fill Material Petroleum Hydrocarbon Concentration

Photographs of Liner Installation,

Revegetation Form

Site Location Map



Vacuum Jct. D-31

NMOCD Case #: 1R425-81

Legals: UL/D, Section 31

T17S, R35E

Lea County, NM

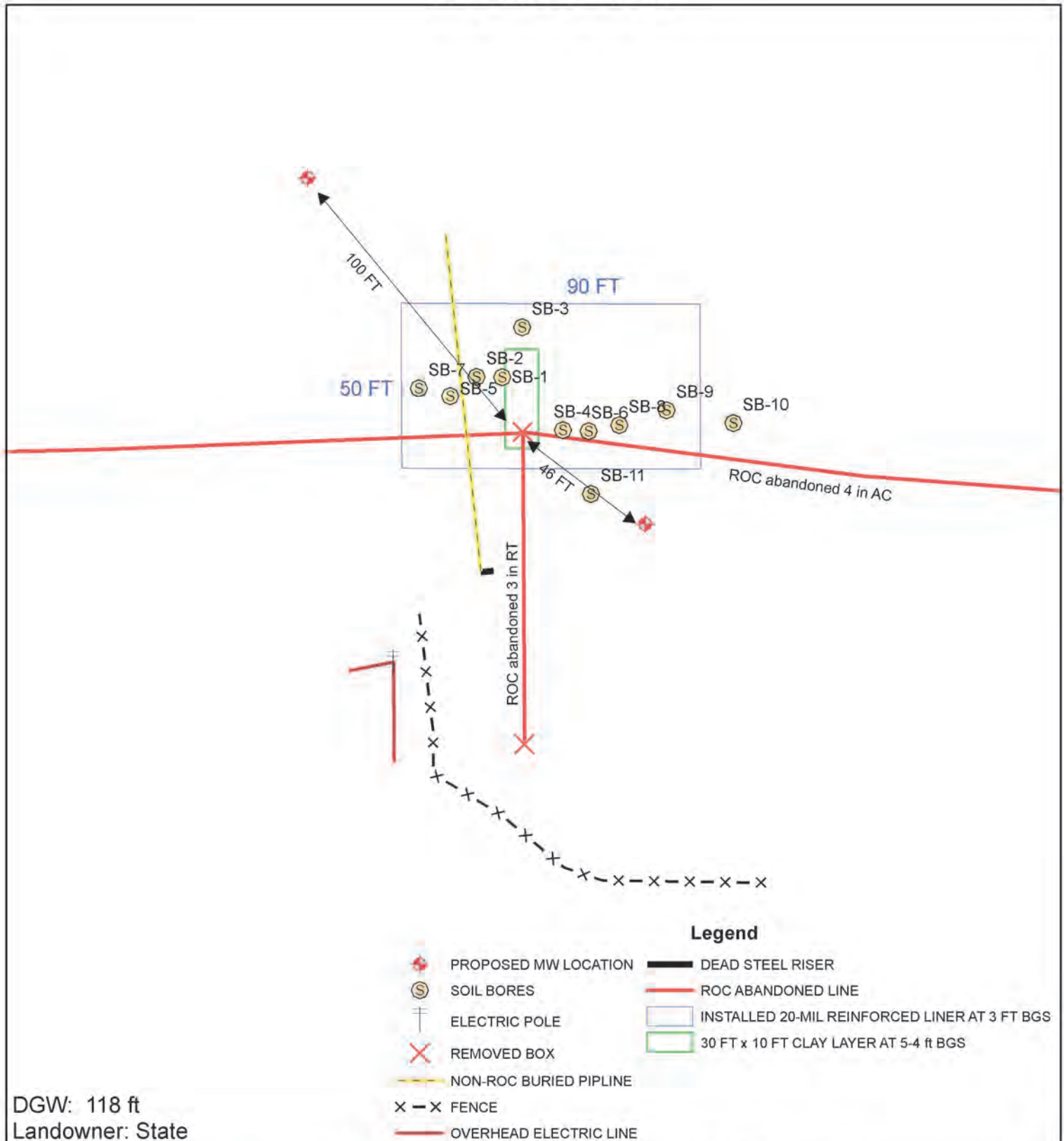
Figure 1



GPS: 32.797607, -103.502839

0 500 1,000
FeetDrawing date: 7/27/15
Drawn by: L. Weinheimer

Installed Liner



Vacuum Jct. D-31

NMOCD Case #: 1R425-81

Legals: UL/D, Section 31

T17S, R35E

Lea County, NM

Figure 2



GPS: 32.797607, -103.502839

0 25 50
Feet

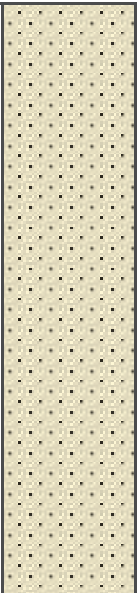

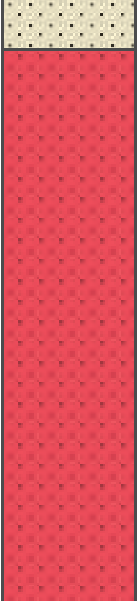

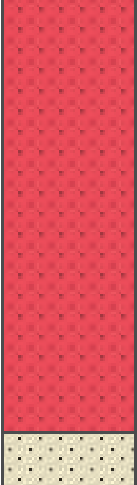

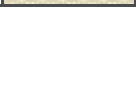





Drawing date: 7/27/15
Drafted by: L. Weinheimer

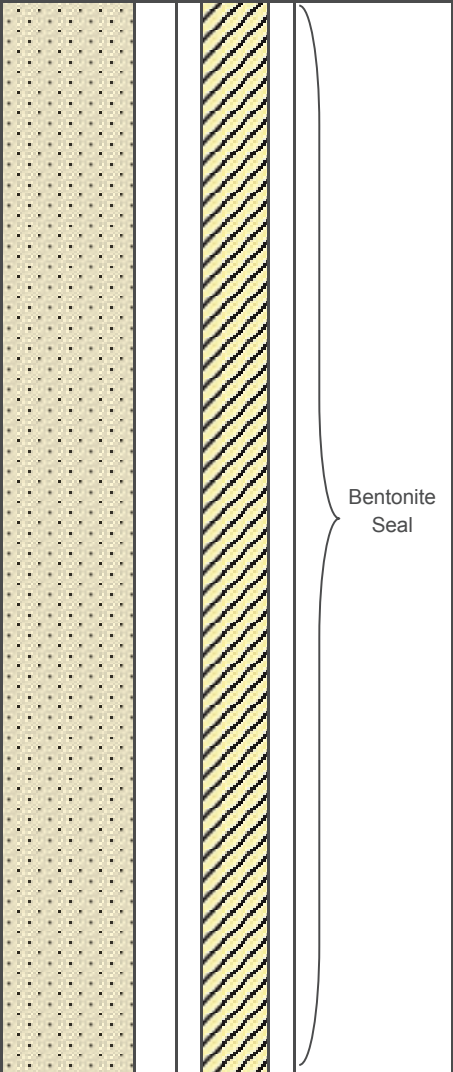


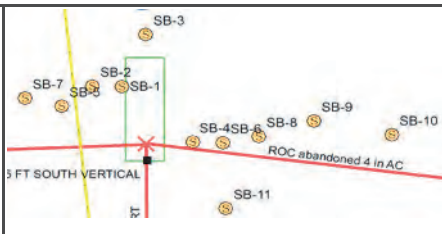

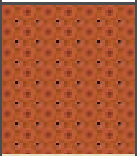



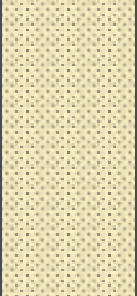

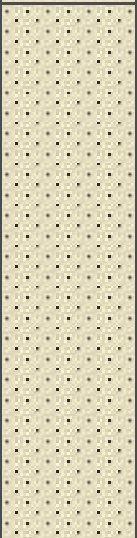
APPENDIX A

Additional Soil Investigation

Logger:	Edward Cesareo					
Driller:	Harrison&Cooper					
Drilling Method:	Air Rotary					
Start Date:	5/12/2014					
End Date:	5/12/2014		Project Name: Vacuum Jct. D-31 Well ID: SB-1 Project Consultant: RECS			
Comments: All samples were taken from cuttings. SB-1 was installed 15' north of the former junction. SB-1 drilled to 85' 4/9/2013 and extended to 115' 5/12/2014 DRAFTED BY: Catherine Uršanič TD = 115' GW = 118'			Location: U/L D, Sec. 31, T17S, R35E Lat: 32°47'51.253"N Long: 103°30'10.392"W County: Lea State: NM			
Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				REGOLITH BROWN SAND		
SS						
5 ft						
				CALICHE/SANDSTONE		
15 ft	954		2.1	TAN SAND		
20 ft	1936		0.6			
25 ft	2517		2.1			
30 ft	2398		1.7			
35 ft	2478		1.3			

				TAN SAND			
40 ft	2302		1.4				
45 ft	1986		0.8	TAN SAND			
50 ft	2699	CI-3200	0.1				
		GRO <10					
		DRO <17.5		MOIST RED SAND			Bentonite Seal
55 ft	1865		0.2				
60 ft	2392		0.4				
				MOIST RED SAND			
65 ft	1628		0.4				
70 ft	970		0.3	MOIST RED SAND			
75 ft	1046		0.2				
80 ft	1271		0.2	MOIST RED SAND			
85 ft	961	CI-1020	0.8				
		GRO <10	DRO 14.9				

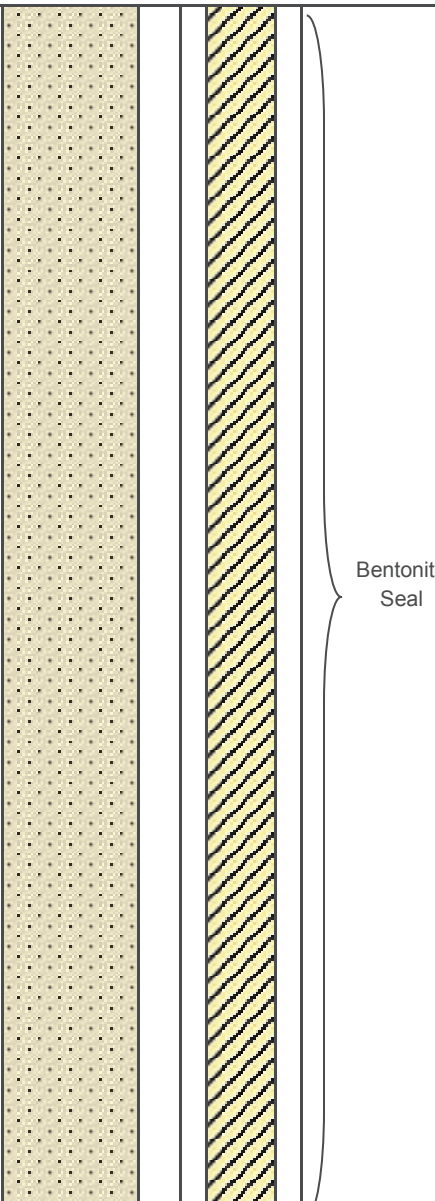
				TAN SAND/NO ODOR	
90 ft	1890		9.8		
				TAN SAND/NO ODOR	
95 ft	1947		97.5		
100 ft	2475	CI- 2480	18.4		
		GRO <10			
		DRO <10			
105 ft	1945		16		
110 ft	1788		12.3		
115 ft	1611	CI- 1630	8.5		
		GRO <10			
		DRO <10			

Logger:		Edward Cesareo									
Driller:		Harrison&Cooper									
Drilling Method:		Air Rotary									
Start Date:		5/12/2014									
End Date:		5/12/2014		Project Name:		Well ID:					
				Vacuum Jct. D-31		SB-9					
				Project Consultant: RECS							
Comments: All samples were taken from cuttings. SB-9 was installed 44' east of the former junction box. SB-9 drilled to 80' 12/13/2013 and extended to 115' on 5/12/2014.				Location: U/L D, Sec. 31, T17S, R35E							
DRAFTED BY: Catherine Uršanić				Lat: 32°47'51.179"N		County: Lea					
TD = 115'				GW = 118'		Long: 103°30'9.523"W					
						State: NM					
Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction					
				DARK BROWN SAND							
SS	187		1.7								
				TAN SAND/ROCK							
5 ft	293		2.4								
				TAN SILTY SAND							
10 ft	1,064		2.6								
15 ft	2,173		7.0								
				TAN SAND/GRAVEL							
20 ft	586		2.9								
				TAN SAND							
25 ft	1,054		3.2								
30 ft	959		3.7								
35 ft	1,250		3.0								

40 ft	3,580	CI-1360	3.5					
		GRO <10						
		DRO <10						
45 ft	2,128		2.8					
50 ft	2,399		2.0					
55 ft	2,497		4.7					
60 ft	2,503		1.6					
65 ft	2,399		1.4					
70 ft	2,617		3.4					
75 ft	2,960		2.1					
80 ft	3,003	CI-2920	3.7					
		GRO <10						
		DRO <10						

TAN SAND

Bentonite Seal

85 ft	634		19.6	TAN SAND/NO ODOR	
90 ft	1,883		380.0		
95 ft	1,957	CI-1960	384.0		
	B <0.05 T <0.05	GRO <10			
	E <0.05 X <0.15	DRO <10			
100 ft	888		372.0		
105 ft	1,370		392.0		
110 ft	1,087		130.0		
115 ft	512	CI-496	63.9		
	B <0.05 T <0.05	GRO <10			
	E <0.05 X <0.15	DRO <10			



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

May 19, 2014

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JCT. D-31 17S-35E

Enclosed are the results of analyses for samples received by the laboratory on 05/12/14 16:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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 accredited 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,

A handwritten signature in dark ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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:	05/12/2014	Sampling Date:	05/12/2014
Reported:	05/19/2014	Sampling Type:	Soil
Project Name:	VACUUM JCT. D-31 17S-35E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB #1 100' (H401441-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2480	16.0	05/14/2014	ND	400	100	400	14.8	
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	05/16/2014	ND	203	101	200	4.36	
DRO >C10-C28	<10.0	10.0	05/16/2014	ND	230	115	200	6.27	
Surrogate: 1-Chlorooctane	101 %	65.2-140							
Surrogate: 1-Chlorooctadecane	100 %	63.6-154							

Sample ID: SB #1 115' (H401441-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1630	16.0	05/14/2014	ND	400	100	400	14.8	
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	05/16/2014	ND	203	101	200	4.36	
DRO >C10-C28	<10.0	10.0	05/16/2014	ND	230	115	200	6.27	
Surrogate: 1-Chlorooctane	106 %	65.2-140							
Surrogate: 1-Chlorooctadecane	104 %	63.6-154							

Cardinal Laboratories

*=Accredited Analyte

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 the 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.

Celey D. Keene, Lab Director/Quality Manager



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:	05/12/2014	Sampling Date:	05/12/2014
Reported:	05/19/2014	Sampling Type:	Soil
Project Name:	VACUUM JCT. D-31 17S-35E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB #9 95' (H401441-03)

BTEx 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/16/2014	ND	2.28	114	2.00	0.684	
Toluene*	<0.050	0.050	05/16/2014	ND	2.23	112	2.00	3.55	
Ethylbenzene*	<0.050	0.050	05/16/2014	ND	2.07	104	2.00	3.35	
Total Xylenes*	<0.150	0.150	05/16/2014	ND	6.30	105	6.00	2.33	
Total BTEX	<0.300	0.300	05/16/2014	ND					

Surrogate: Dibromofluoromethane 96.4 % 61.3-142

Surrogate: Toluene-d8 103 % 71.3-129

Surrogate: 4-Bromofluorobenzene 103 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1960	16.0	05/14/2014	ND	400	100	400	14.8	

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	05/16/2014	ND	203	101	200	4.36	
DRO >C10-C28	<10.0	10.0	05/16/2014	ND	230	115	200	6.27	

Surrogate: 1-Chlorooctane 111 % 65.2-140

Surrogate: 1-Chlorooctadecane 111 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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 the 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.

Celey D. Keene, Lab Director/Quality Manager



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:	05/12/2014	Sampling Date:	05/12/2014
Reported:	05/19/2014	Sampling Type:	Soil
Project Name:	VACUUM JCT. D-31 17S-35E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB #9 115' (H401441-04)

BTEx 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/16/2014	ND	2.28	114	2.00	0.684	
Toluene*	<0.050	0.050	05/16/2014	ND	2.23	112	2.00	3.55	
Ethylbenzene*	<0.050	0.050	05/16/2014	ND	2.07	104	2.00	3.35	
Total Xylenes*	<0.150	0.150	05/16/2014	ND	6.30	105	6.00	2.33	
Total BTEX	<0.300	0.300	05/16/2014	ND					

Surrogate: Dibromofluoromethane 93.1 % 61.3-142

Surrogate: Toluene-d8 101 % 71.3-129

Surrogate: 4-Bromofluorobenzene 98.5 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	05/14/2014	ND	416	104	400	0.00	

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	05/16/2014	ND	203	101	200	4.36	
DRO >C10-C28	<10.0	10.0	05/16/2014	ND	230	115	200	6.27	

Surrogate: 1-Chlorooctane 109 % 65.2-140

Surrogate: 1-Chlorooctadecane 108 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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 the 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.

Celey D. Keene, Lab Director/Quality Manager



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

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 the 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.

A handwritten signature in cursive script that reads "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

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.	<input checked="" type="checkbox"/>	MODEL: PGM 7300 X	SERIAL NO: 590-000183
MODEL	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000504
NO.	<input type="checkbox"/>	MODEL: PGM 7320	SERIAL NO: 592-903318
	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-902553

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT NO: HAL-248-100-1	7/1/2015
METER READING ACCURACY: 100PPM	

ACCURACY : +/- 2%

COMPANY
ROC

SITE	UNIT	SECTION	TOWN SHIP	RANGE
VACUUM JCT. D-31	D	31	T17S	R35E

SAMPLE ID	PID	SAMPLE ID	PID
SB# 9 85'	19.6	SB# 1 90'	9.8
SB# 9 90'	380	SB# 1 95'	97.5
SB# 9 95'	384	SB# 1 100'	18.4
SB# 9 100'	372	SB# 1 105'	16
SB# 9 105'	392	SB# 1 110'	12.3
SB# 9 110'	130	SB# 1 115'	8.5
SB# 9 115'	63.9		

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

SIGNATURE: Edward Cesareo (signature not available)

DATE: 5/12/2014

APPENDIX B

Excavation and Liner Installation



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

March 20, 2015

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JCT. D-31 17S-35E

Enclosed are the results of analyses for samples received by the laboratory on 03/13/15 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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 accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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:	03/13/2015	Sampling Date:	03/13/2015
Reported:	03/20/2015	Sampling Type:	Soil
Project Name:	VACUUM JCT. D-31 17S-35E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: IMPORTED TOPSOIL (H500710-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/18/2015	ND	416	104	400	0.00		

Cardinal Laboratories

*=Accredited Analyte

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 the 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.

Celey D. Keene, Lab Director/Quality Manager

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

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 the 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.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

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

ARDINAL LABORATORIES



ANALYSIS REQUEST

Company Name: RICE Operating	
Project Manager: Katie Jones	
Address: 112 W. Taylor	
City: Hobbs	
State: NM Zip: 88240	
Project Owner:	
Project #:	
Project Name:	
Project Location: Vacunymet. D-31 (175 356)	
Sample Name: Karanja Lewis	
P.O. #:	Company:
Attn:	Address:
City:	State:
Zip:	Phone #:
Fax #:	

Lab I.D.	H500710	Sample I.D.	Imported Top Soil	G 1	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE/COOL	OTHER:	PRESERV.	SAMPLING	DATE	TIME	3-13-15	2:32
FOR LAB USE ONLY																					

PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising from this analysis shall be limited to the amount paid by the client for the analysis. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, 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: Karanja Lewis	Date: 3-13-15	Time: 4:00	Received By: Jack Johnson	Sample Condition: Cool Intact	Delivered By: (Circle One)	Sampler - UPS - Bus - Other:	5.22	Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476
Relinquished By:	Date:	Time:	Received By:	Sample Condition:	Delivered By:	Sampler - UPS - Bus - Other:	5.22	Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476
email: hconder@riceswd.com; kjones@riceswd.com; lweihheimer@rice-ecs.com; knowman@rice-ecs.com; jkainplain@rice-ecs.com; sedwards@rice-ecs.com; cursanica@rice-ecs.com; Environmental Tech: Klewis@rice-ecs.com								

122 West Taylor Hobbs, NM 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471
PID METER CALIBRATION & FIELD REPORT FORM

CK.		MODEL: PGM 7300	SERIAL NO: 590-000508
MODEL		MODEL: PGM 7300	SERIAL NO: 590-000504
NO.		MODEL: PGM 7320	SERIAL NO: 592-903318
	X	MODEL: PGM 7300	SERIAL NO: 590-001413

LOT NO : HAL-248-100-1	EXPIRATION DATE: 07/01/2015
METER READING ACCURACY: 100.0 ppm	

COMPANY
RICE Operating Company (ROC)

SITE	UNIT	SECTION	TOWN SHIP	RANGE
Vacuum Jct. D-31	D	31	17S	35E

[illegible]

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

SIGNATURE: *K. O. Lewis*

DATE: 3/13/2015

Vacuum Jct. D-31 (1R425-81)
Unit Letter D, Section 31, T17S, R35E



Site prior to excavation,
facing south 3/2/2015



Digging excavation,
facing west 3/9/2015



Exporting spoiled material,
facing northwest 3/11/2015



Importing topsoil,
facing west 3/13/2015



6" padding of topsoil,
facing southwest 3/26/2015



20-mil poly liner installed at 2.5 ft bgs,
facing west 3/26/2015



Backfilling above the liner,
facing southwest 3/27/2015



Backfilling the site with caliche rock,
facing southeast 3/27/2015



Contouring the site,
Facing west 3/20/2015



Spreading amendments,
facing northwest 4/7/2015



Seeding and disking the site,
facing northeast 4/7/2015



Site complete,
facing southeast 4/7/2015



PO Box 2498
Hobbs, NM 88241
Phone: (575) 393-2967
Fax: (575) 393-0293

VEGETATION FORM

1. General Information

Site name: Vacuum Jct. D-31						
U/L D	Section 31	Township 17S	Range 35E	County Lea	Latitude N 32.797643	Longitude -103.502777
Contact Name: Hack Conder						
Email: hconder@rice-ecs.com						
Site size: square feet: 17,183 square feet						

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 checked="" type="checkbox"/> Imported	<input type="checkbox"/> Blended	Depth (in)	
Texture:	Moist sand		Describe soil & subsoil: Top soil above caliche		
Soil prep methods:	<input type="checkbox"/> Rip	Depth (in)	<input checked="" type="checkbox"/> Disc	Depth (in)	6
Date completed:	4/7/2015				

3. Bioremediation

Fertilizer	<input type="checkbox"/> Hay	Other	<input checked="" type="checkbox"/>
Type:	Describe: 3 Bags Manure and 34 bags		
Lbs/acre:	of custom bioremediation.		

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	Seed Mix Name:	18 lbs. Summer Wheat, 18 lbs. Blue Grama	Date:	4/7/2015
Broadcast	Push Broadcasting Seeder and Tractor		Method: With Broadcast Seeder		
Soil conditions during seed:	Dry	<input checked="" type="checkbox"/> Damp	<input type="checkbox"/> Wet		
Observations:	The seed was disced into the site.				

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:	Jose Flores	Title:	Environmental Technician	Date:	4/7/2015
Signature:	<i>Jose Flores</i>				

Final C-141

RICE Operating Company
112 West Taylor, Hobbs, NM 88240
Phone 575.393.9174

Incident ID	nAPP2110349043
District RP	1R425-81
Facility ID	
Application ID	pEJH1015949962

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Katie Davis Title: Environmental Manager

Signature: Katie Davis Date: 4/12/2022

email: kjones@riceswd.com Telephone: 575-393-9174

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Jennifer Nobui Date: 05/03/2022

Printed Name: Jennifer Nobui Title: Environmental Specialist A

Vacuum Jct. D-31 (1R425-81)
Unit D, Section 31, T17S, R35E



Facing South

11/3/2021

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 90565

CONDITIONS

Operator: RICE OPERATING COMPANY 122 W Taylor Hobbs, NM 88240	OGRID: 19174
	Action Number: 90565
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Termination Request Approved.	5/3/2022