

**APPROVED**

# **RICE** *Operating Company*

112 West Taylor • Hobbs, New Mexico 88240

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

**April 1, 2021**

## **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: 2020 Annual Groundwater Report  
Rice Operating Company – BD SWD System  
Vacuum Jct. C-31 (1R425-84): UL/C, 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 0.5 miles southwest of Buckeye, New Mexico at UL/C, Sec. 31, T17S, R35E as shown on the Geographical Location Map. Groundwater beneath the site is located at a depth of 117 ft below ground surface (bgs) as shown in MW-1 and MW-2.

In 2009, ROC initiated work on the former Vacuum Jct. C-31 junction box. A site investigation resulted in a 30 x 20 x 12 ft deep excavation. The excavation was backfilled with blended soils to 5 feet bgs, and a geo-synthetic clay liner and plastic liner were installed and properly seated into the excavation. The excavation was then backfilled with blended soils and clean imported soils. The site was re-seeded with native vegetation.

In 2013, ROC initiated additional investigation approved by OCD on March 4<sup>th</sup>, 2013. A total of eleven borings were installed to fully delineate the site. A Corrective Action Plan (CAP) was submitted to OCD on November 8<sup>th</sup>, 2013, requesting to install a modified 82 x 132 ft 20-mil reinforced liner at 3 feet bgs. The CAP also included the installation of two groundwater monitoring wells (near-source and up-gradient). The CAP was approved by OCD on November 21<sup>st</sup>, 2013.

In 2014, ROC installed the proposed liner in accordance with the approved CAP. On August 15<sup>th</sup>, 2014, a CAP Report and Soil Closure Request were submitted to OCD. On September 18<sup>th</sup>, 2014, OCD approved the Soil Closure Request.

Review of 2020 Annual Groundwater Report:

### **Content satisfactory**

1. Termination Request is hereby approved.

A Termination Request was submitted to OCD on September 26<sup>th</sup>, 2019, followed by an Addendum submitted on September 30<sup>th</sup>, 2019. Then an Updated Termination Request was submitted on January 23<sup>rd</sup>, 2020.

The proposed groundwater monitoring wells were installed March 13<sup>th</sup>, 2015. The groundwater was monitored for chloride, TDS, benzene, toluene, ethylbenzene, total xylene, and sulfate on a regular basis. The highest concentration of chloride observed in MW-1 was 470 mg/L sampled on June 2<sup>nd</sup>, 2017, which decreased 232 mg/L on December 6<sup>th</sup>, 2017. Chloride concentrations have since remained below WQCC standards through 2020. Chloride concentrations in MW-2 have remained below WQCC standards since installation. The monitoring results for BTEX constituents have been non-detect in both MW-1 and MW-2.

A Termination Request was submitted to OCD on September 26<sup>th</sup>, 2019, followed by an Addendum submitted on September 30<sup>th</sup>, 2019. Then an Updated Termination Request was submitted on January 23<sup>rd</sup>, 2020. The Termination Request is pending OCD response/approval. The monitoring wells were sampled semi-annually in 2020, and concentrations remained below WQCC standards. ROC also ceased BTEX analysis in 2020.

Attached is the Appendix, which contains:

1. A Geographic Location Map.
2. A map showing well locations.
3. A table presenting all laboratory results and depth to groundwater for each well at the site, and a graph showing recent laboratory results.
4. The laboratory analytical results for 2020.

Rice Operating Company appreciates the opportunity to work with you on this project. Please contact me at (575) 393-9174 or Edward Hansen at (505) 920-4965 if you have any questions or wish to further discuss this site. Thank you for your time and consideration.

Sincerely,

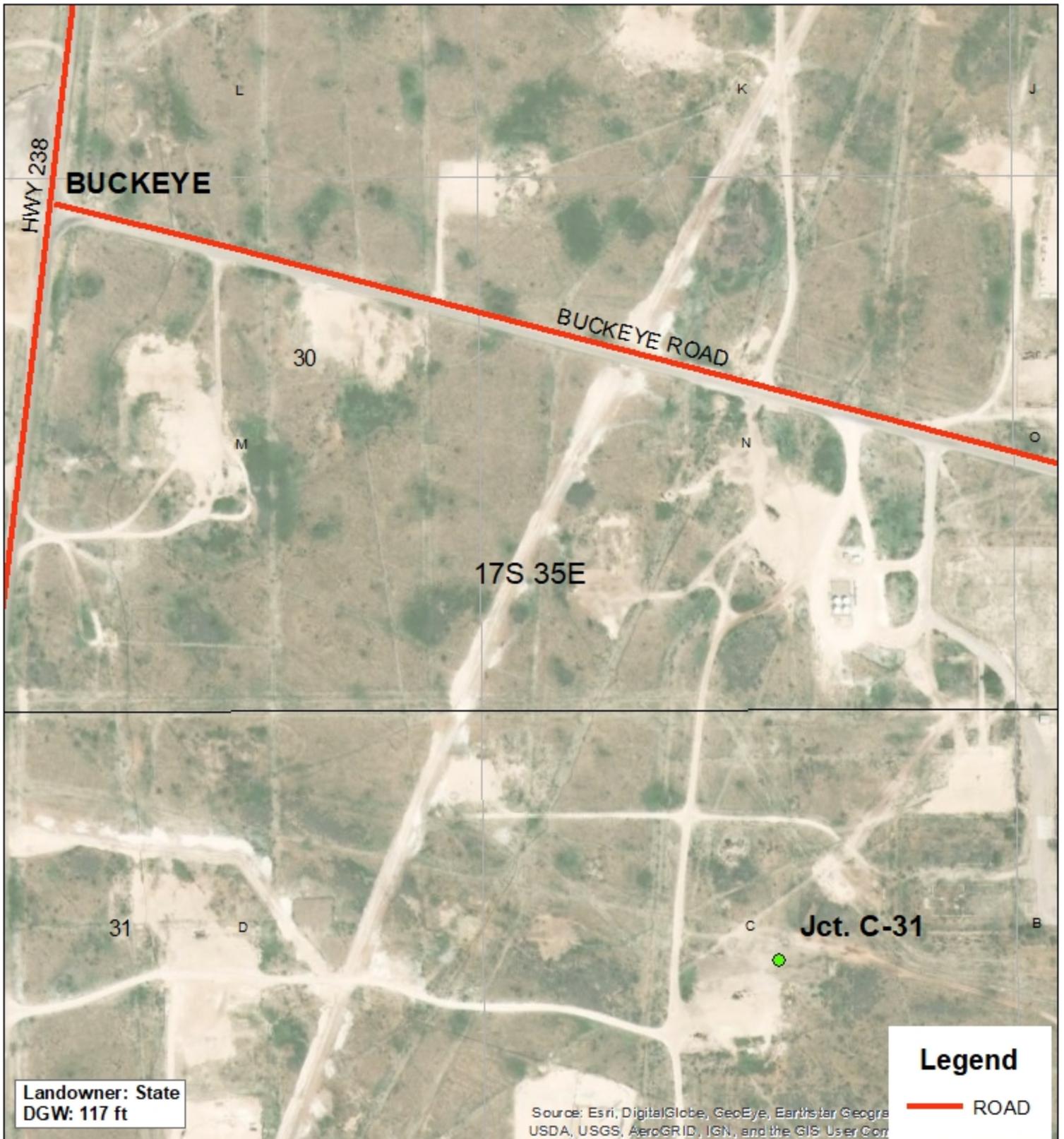


Katie Davis  
Environmental Manager  
RICE Operating Company (ROC)

Cc – Edward J. Hansen (ROC)

appendix

# Geographic Location



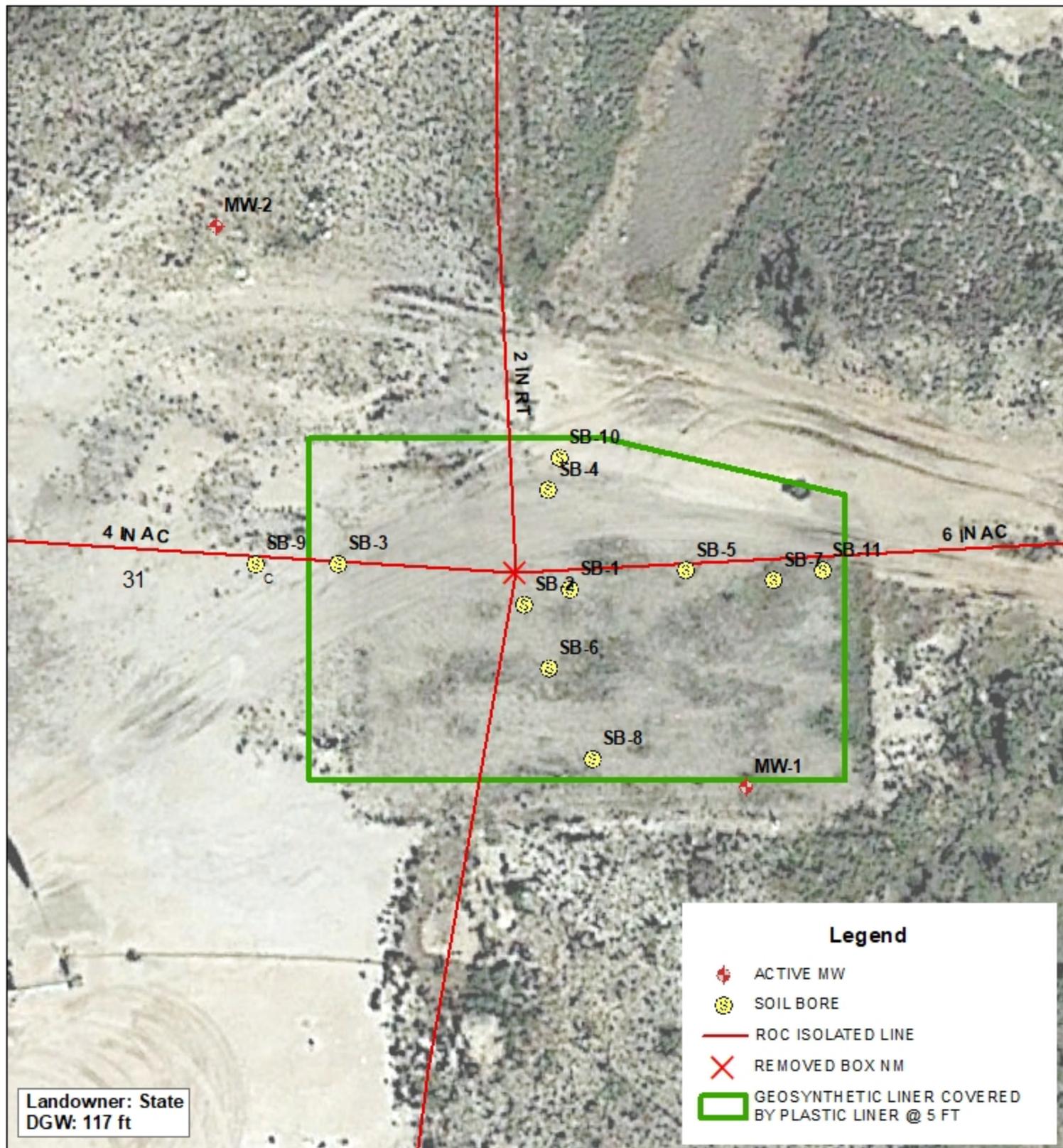
**VACUUM  
C-31 JCT**  
1R425-84

UL C SECTION 31  
T17S R35E  
LEA COUNTY, NM

GPS: 32.797235 -103.498882  
NAD 83 STATE PLANE PROJ  
NM EAST ZONE

0 250 500  
Feet

Drawing date: 9/24/19  
Drafted by: T. Grieco



Landowner: State  
DGW: 117 ft

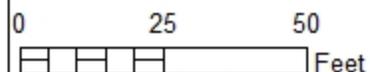


## VACUUM C-31 JCT

1R425-84

UL C SECTION 31  
T17S R35E  
LEA COUNTY, NM

GPS: 32.797235 -103.498882  
NAD 83 STATE PLANE PROJ  
NM EAST ZONE



Drawing date: 9/24/19  
Drafted by: T. Grieco

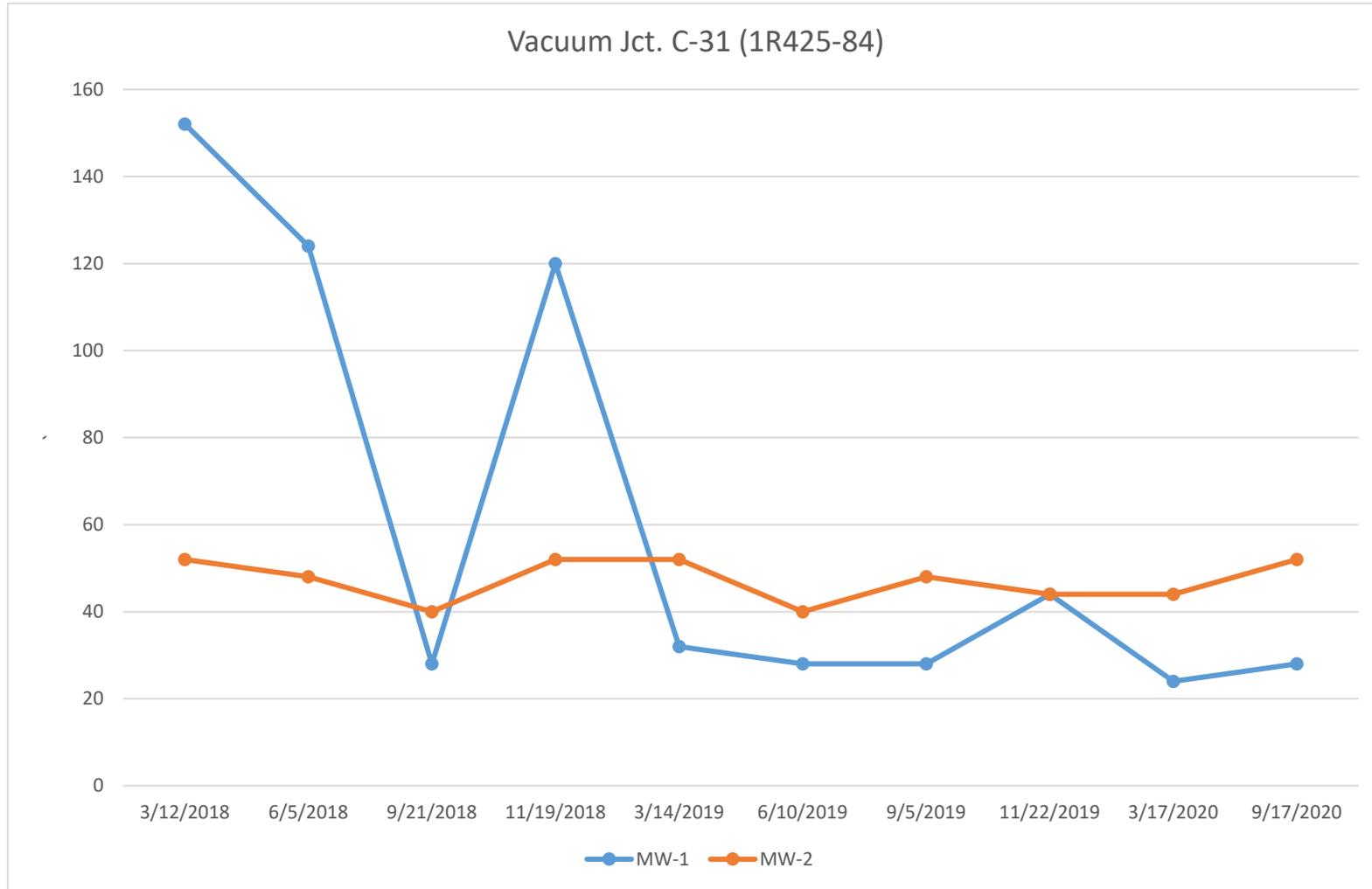
**ROC - Vacuum Jct. C-31 (1R425-84)  
Unit Letter C, Section 31, T17S, R35E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	116.78	164.71	31.2	100	6/5/2015	100	454	<0.001	<0.001	<0.001	<0.003	49.5	Clear No odor
1	116.83	164.71	31.1	100	8/24/2015	152	588	<0.001	<0.001	<0.001	<0.003	48.3	Clear No odor
1	117.08	164.71	30.96	100	11/16/2015	32	312	<0.001	<0.001	<0.001	<0.003	<10.0	Clear No odor
1	117.1	164.71	30.9	100	3/15/2016	128	698	<0.001	<0.001	<0.001	<0.003	48.8	Clear No odor
1	117.26	164.71	30.8	100	6/31/2016	276	852	<0.001	<0.001	<0.001	<0.003	50.7	Clear No odor
1	117.37	164.71	30	100	9/15/2016	256	730	<0.001	<0.001	<0.001	<0.003	32	Clear No odor
1	117.41	164.71	30	100	11/18/2016	264	820	<0.001	<0.001	<0.001	<0.003	72	Clear No odor
1	117.39	164.71	30	100	3/3/2017	240	910	<0.001	<0.001	<0.001	<0.003	50	Clear No odor
1	117.48	164.71	30	100	6/2/2017	470	1,170	<0.001	<0.001	<0.001	<0.003	71	Clear No odor
1	117.56	164.71	30	100	9/14/2017	400	1,090	<0.001	<0.001	<0.001	<0.003	59	Clear No odor
1	117.31	164.71	30	100	12/6/2017	232	852	<0.001	<0.001	<0.001	<0.003	124	Clear No odor
1	117.3	164.71	30.8	100	3/12/2018	152	498	<0.001	<0.001	<0.001	<0.003	30.8	Clear No odor
1	117.4	164.71	30.8	100	6/5/2018	124	508	<0.001	<0.001	<0.001	<0.003	111	Clear No odor
1	117.53	164.71	30.7	100	9/21/2018	28	264	<0.001	<0.001	<0.001	<0.003	43.3	Clear No odor
1	117.65	164.71	30.6	100	11/19/2018	120	472	<0.001	<0.001	<0.001	<0.003	43.8	Clear No odor
1	117.47	164.71	30	100	3/14/2019	32	295	<0.001	<0.001	<0.001	<0.003	43	Clear No odor
1	117.78	164.71	30	100	6/10/2019	28	218	<0.001	<0.001	<0.001	<0.003	48	Clear No odor
1	118.11	164.71	30	100	9/5/2019	28	256	<0.001	<0.001	<0.001	<0.003	48	Clear No odor
1	118.13	164.71	30	100	11/22/2019	44	135	<0.001	<0.001	<0.001	<0.003	43	Clear No odor
1	118.17	164.71	30.3	100	3/17/2020	24	289	<0.001	<0.001	<0.001	<0.003	57.1	Clear No odor
1	119.39	164.71	29.5	100	9/17/2020	28	301	XXX	XXX	XXX	XXX	45.5	Clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	116.74	132.48	2.5	15	6/5/2015	60	398	<0.001	<0.001	<0.001	<0.003	30.8	Clear No odor
2	116.79	132.48	2.5	15	8/24/2015	88	512	<0.001	<0.001	<0.001	<0.003	61.2	Clear No odor
2	117.04	132.48	2.47	15	11/16/2015	40	440	<0.001	<0.001	<0.001	<0.003	56.6	Clear No odor

**ROC - Vacuum Jct. C-31 (1R425-84)**  
**Unit Letter C, 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	117.09	132.48	2.5	15	3/15/2016	56	328	<0.001	<0.001	<0.001	<0.003	44.6	Clear No odor
2	117.28	132.48	2.4	15	5/31/2016	72	548	<0.001	<0.001	<0.001	<0.003	46.1	Clear No odor
2	117.38	132.48	2.4	15	9/15/2016	60	352	<0.001	<0.001	<0.001	<0.003	45	Clear No odor
2	117.43	132.48	2.4	15	11/18/2016	56	254	<0.001	<0.001	<0.001	<0.003	50	Clear No odor
2	117.41	132.48	2.4	15	3/3/2017	52	326	<0.001	<0.001	<0.001	<0.003	55	Clear No odor
2	117.51	132.48	2.4	15	6/2/2017	80	486	<0.001	<0.001	<0.001	<0.003	57	Clear No odor
2	117.6	132.48	2.4	15	9/14/2017	60	336	<0.001	<0.001	<0.001	<0.003	46	Clear No odor
2	117.36	132.48	2.4	15	12/6/2017	48	334	<0.001	<0.001	<0.001	<0.003	44	Clear No odor
2	117.34	132.48	2.4	15	3/12/2018	52	280	<0.001	<0.001	<0.001	<0.003	45.6	Clear No odor
2	117.44	132.48	2.4	15	6/5/2018	48	362	<0.001	<0.001	<0.001	<0.003	45.9	Clear No odor
2	117.57	132.48	2.4	10	9/21/2018	40	376	<0.001	<0.001	<0.001	<0.003	42.2	Clear No odor
2	117.72	132.48	2.4	10	11/19/2018	52	350	<0.001	<0.001	<0.001	<0.003	45.6	Clear No odor
2	117.51	132.48	2.4	10	3/14/2019	52	110	<0.001	<0.001	<0.001	<0.003	51	Clear No odor
2	117.83	132.48	2.3	10	6/10/2019	40	338	<0.001	<0.001	<0.001	<0.003	49	Clear No odor
2	118.17	132.48	2.3	10	9/5/2019	48	372	<0.001	<0.001	<0.001	<0.003	45	Clear No odor
2	118.19	132.48	2.3	10	11/22/2019	44	135	<0.001	<0.001	<0.001	<0.003	43	Clear No odor
2	118.82	132.48	2.2	10	3/17/2020	44	321	<0.001	<0.001	<0.001	<0.003	86.9	Clear No odor
2	119.58	132.48	2.1	10	9/17/2020	52	345	XXX	XXX	XXX	XXX	46.8	Clear No odor





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

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March 26, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION C-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](http://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 legible.

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:	03/17/2020
Reported:	03/26/2020	Sampling Type:	Water
Project Name:	VACUUM JUNCTION C-31	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC31C - LEA CTY., NM		

**Sample ID: MONITOR WELL #1 (H000865-01)**

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*	24.0	4.00	03/23/2020	ND	104	104	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*	57.1	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*	289	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:	03/17/2020
Reported:	03/26/2020	Sampling Type:	Water
Project Name:	VACUUM JUNCTION C-31	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC31C - LEA CTY., NM		

**Sample ID: MONITOR WELL #2 (H000865-02)**

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) 104 % 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*	86.9	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*	321	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



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**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

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\*=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

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September 29, 2020

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION C-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](http://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:	09/23/2020	Sampling Date:	09/17/2020
Reported:	09/29/2020	Sampling Type:	Water
Project Name:	VACUUM JUNCTION C-31	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC31C - LEA CTY., NM		

**Sample ID: MONITOR WELL #1 (H002521-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride*</b>	<b>28.0</b>	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	
<b>Sulfate*</b>	<b>45.5</b>	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	
<b>TDS*</b>	<b>301</b>	5.00	09/25/2020	ND	827	82.7	1000	23.8		

**Sample ID: MONITOR WELL #2 (H002521-02)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride*</b>	<b>52.0</b>	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	
<b>Sulfate*</b>	<b>46.8</b>	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	
<b>TDS*</b>	<b>345</b>	5.00	09/25/2020	ND	827	82.7	1000	23.8		

Cardinal Laboratories

\*=Accredited Analyte

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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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

# Cardinal Laboratories, Inc.

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

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

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

**Project #:**  
**Project Name:** Vacuum Junction C-31  
**Project Location:** T17S-R35E-Sec31 C ~ Lea County New Mexico  
**Sampler Signature:** Rozanne Johnson (575) 631-9310

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

### ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX				PRESERVATIVE METHOD				SAMPLING		DATE (2020)	TIME
				WATER	SOIL	AIR	SLUDGE	HCL (4.40ml VOA)	HNO <sub>3</sub>	NaHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	ICE (1-1 Liter HDPE)	NONE		
1	Monitor Well #1	G	1	X											
2	Monitor Well #2	G	1	X									9/17	13:20	
													9/17	10:05	

MTBE 8021B/602	
BTEX 8021B/602	
TPH 418.1/TX1005 / TX1005 Extended (C35)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	
Moisture Content	
Cations (Ca, Mg, Na, K)	
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	
Sulfates	X
Total Dissolved Solids	X
Chlorides	X

**Acquired by:** Rozanne Johnson  
**Date:** 9/23/2020  
**Time:** 1035

**Received by:** Tamara Oldroyd  
**Date:** 9-23-20  
**Time:** 1035

**Received By:** (Laboratory Staff)

**Phone Results:** Yes  No   
**Fax Results:** Yes  No   
**Additional Fax Number:** \_\_\_\_\_

**Shipped By:** (Circle One) UPS - UPS - Bus - Other:  
**Sample Condition:**  
 Yes  Cool  Yes  Intact   
 No  No   
**CHECKED BY:** (Initials) T.O.

**REMARKS:**  
**Email Results:** [kjones@riceswd.com](mailto:kjones@riceswd.com)  
[rozanne@sdacres.com](mailto:rozanne@sdacres.com)

**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**

COMMENTS

Action 24245

**COMMENTS**

Operator: RICE OPERATING COMPANY 122 W Taylor Hobbs, NM 88240	OGRID: 19174
	Action Number: 24245
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

**COMMENTS**

Created By	Comment	Comment Date
nvelez	A Termination Request was submitted to OCD on September 26th, 2019, followed by an Addendum submitted on September 30th, 2019. Then an Updated Termination Request was submitted on January 23rd, 2020.	1/31/2022

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**State of New Mexico**  
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**Oil Conservation Division**  
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CONDITIONS  
 Action 24245

**CONDITIONS**

Operator: RICE OPERATING COMPANY 122 W Taylor Hobbs, NM 88240	OGRID: 19174
	Action Number: 24245
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

**CONDITIONS**

Created By	Condition	Condition Date
nvelez	None	1/25/2022