RICE Operating Company
112 West Taylor • Hobbs, New Mexico 88240
Phone: (575) 393-9174 • Fax: (575) 397-1471

Review of 2020 Annual Groundwater Report:
Content satisfactory
1. Continue sampling on a quarterly schedule
2. Submit summarized activities completed and their results in a 2021 Annual Report. Submittal to OCD expected no later than March 31,2022.

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 – 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 Site Location Map. Groundwater sampling at the site indicated the depth to groundwater is approximately 118 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.

ROC initiated soil sampling and analysis as indicated in our Investigation and Characterization Plan (ICP) of February 8th, 2013. As part of the ICP, personnel were on site to conduct soil bore installations. A total of ten soil bores were drilled at the site with soil samples collected at regular intervals, representative samples were sent to a commercial laboratory for analysis. An additional soil bore (SB-11) was drilled to determine depth to groundwater. Each bore was plugged with bentonite to ground surface.

A Corrective Action Plan (CAP) summarizing the soil sampling was submitted to NMOCD and approved on January 13th, 2015. The CAP proposed installing a 50x90-ft, 20-mil reinforced liner at a depth of 3 ft bgs due to the presence of hard rock in the area. In March 2015, the area was excavated, and a 20-mil reinforced liner was installed and properly seat at a depth of 3 ft bgs. The excavation was backfilled to ground surface and the site was contoured to the surrounding area. The disturbed area was then seeded with a blend of native vegetation. A CAP Report summarizing this work was submitted on August 7th, 2015. NMOCD approved the report and granted "Soil Closure" on August 14th, 2015.

In December 2015, a near-source monitoring well (MW-1) and an up-gradient monitoring well (MW-2) were installed at the site. The wells were developed and have been sampled regularly since installation. The most recent sampling event resulted in a chloride concentration of 60 mg/L in MW-1 and 44 mg/L in MW-2. BTEX concentrations have remained below detectable limits since the wells were installed. In 2020, ROC received NMOCD approval to cease BTEX sampling and temporarily reduce the sampling interval to semi-annual. ROC will continue quarterly sampling in 2021.

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,

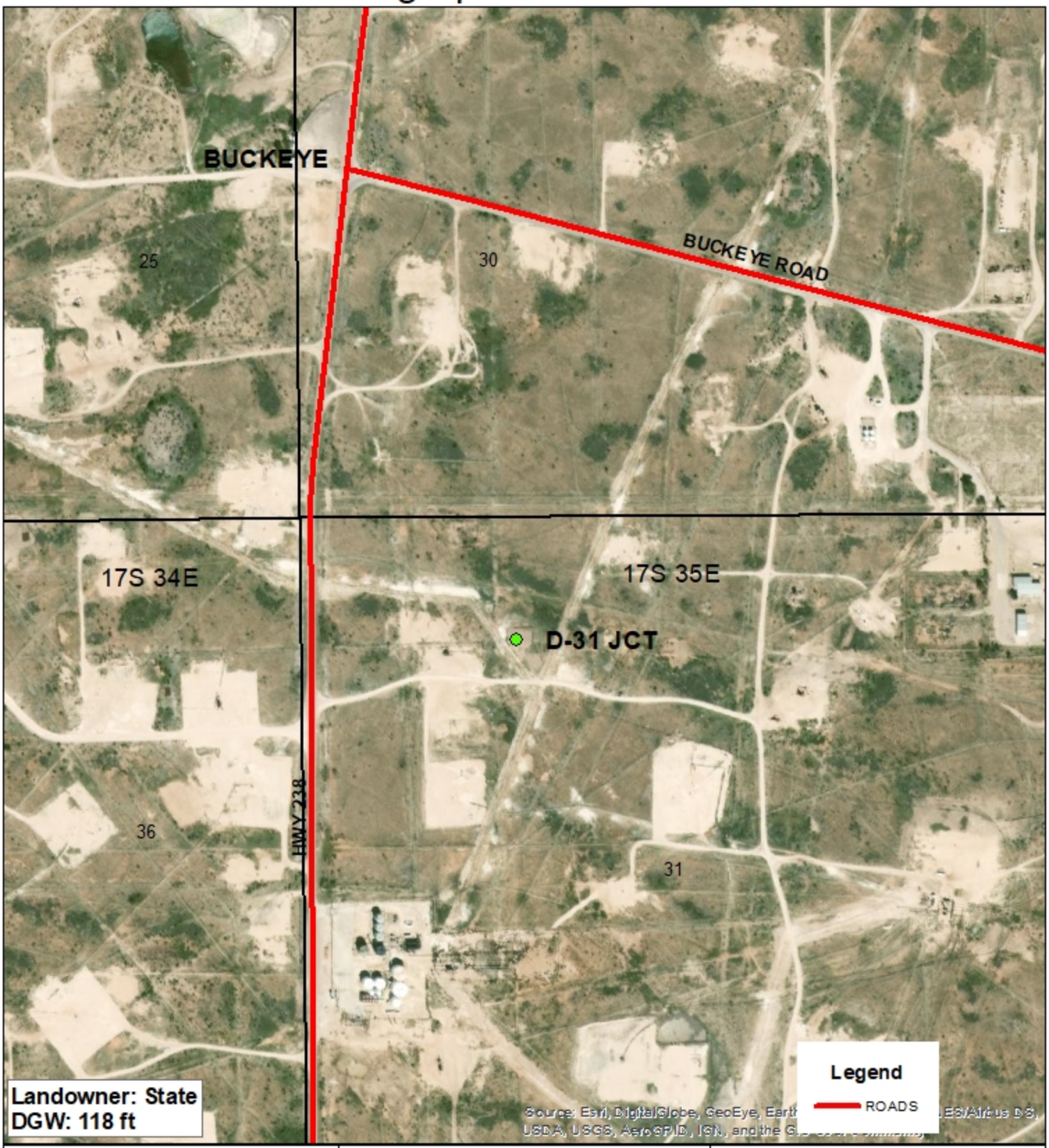
Katie Davis

Katie Davis
Environmental Manager
RICE Operating Company (ROC)

Cc – Edward J. Hansen (ROC)

appendix

Geographic Location



RICE OPERATING COMPANY
ROC
SINCE 1955

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

N
W E
S

0 250 500
Feet

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

Installed Monitor Wells

RICE OPERATING COMPANY
ROC
SINCE 1955

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

N
W E
S

0 25 50
Feet

Drawing date:8/7/19
Drafted by: T. Grieco

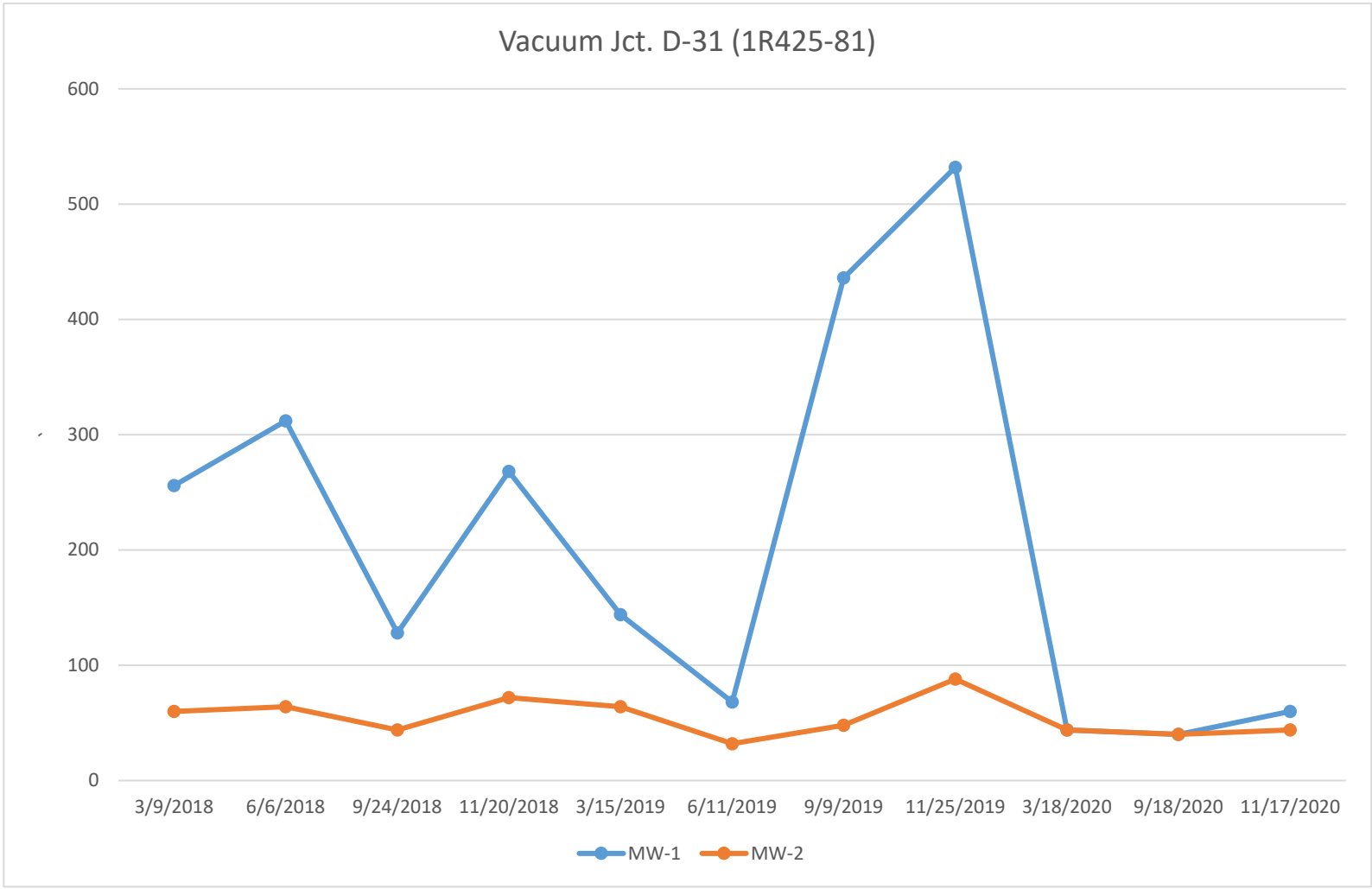
ROC - Vacuum Jct. D-31 (1R425-81)
Unit Letter D, Section 31, T17S, R35E

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

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
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

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	121.37	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


Vacuum Jct. D-31 (1R425-81)
600
500
400
300
200
100
0
3/9/2018
6/6/2018
9/24/2018
11/20/2018
3/15/2019
6/11/2019
9/9/2019
11/25/2019
3/18/2020
9/18/2020
11/17/2020
MW-1
MW-2

CARDINAL Laboratories

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 accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Rice Operating Company
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

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

CARDINAL Laboratories

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

Analytical Results For:

Rice Operating Company
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

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

CARDINAL Laboratories

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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

Cardinal Laboratories, Inc.

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

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) 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 # (LAB USE ONLY) H000816	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2020)	TIME
1	Monitor Well #1	G	3	X				2				1		3/18	13:50
2	Monitor Well #2	G	3	X				2				1		3/18	10:15

ANALYSIS REQUEST

(Circle or Specify Method No.)

	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, SO4, CO3, HCO3)	Sulfates	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
1		X																	X	X	X	
2		X																	X	X	X	

Relinquished by: Rozanne Johnson	Date: 3/20/2020	Time: 12:36	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff) Jodi Henson	Date: 3/20/20	Time: 12:36

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

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Sample Condition: Cool — Yes ✓ / No; Intact — Yes ✓ / No

CHECKED BY: (Initials) JH

REMARKS:

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

CARDINAL Laboratories

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 accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Rice Operating Company
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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Celey D. Keene, Lab Director/Quality Manager

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

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) 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 # H002522 (LAB USE ONLY)

FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2020)	TIME
1 Monitor Well #1	G	3	X				2				1		9/23/20	13:50
2 Monitor Well #2	G	3	X				2				1		9/23/20	10:15

ANALYSIS REQUEST (Circle or Specify Method No.)	
MTBE 8021B/602	
BTEX 8021B/602	X
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, SO4, CO3, HCO3)	
Sulfates	X
Total Dissolved Solids	X
Chlorides	X
Turn Around Time ~ 24 Hours	

Relinquished by: Rozanne Johnson Date: 9/23/2020 Time: 10:35
Relinquished by: Date: Time:

Received by: Tamara Date: 9-23-20 Time: 1035
Received By: (Laboratory Staff) Date: Time:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Sample Condition: Cool: Yes / No; Intact: Yes / No

CHECKED BY: (Initials)

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

REMARKS:

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

CARDINAL Laboratories

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 accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Rice Operating Company
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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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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) 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

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY) H003086	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (4 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2020)	TIME	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, SO4, CO3, HCO3)	Sulfates	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
1	Monitor Well #1	G	1	X								1		11/17	13:00																		X	X	X	
2	Monitor Well #2	G	1	X								1		11/17	9:20																		X	X	X	

Relinquished by: Rozanne Johnson	Date: 11/20/20	Time: 16:05	Received by: Tamara Oldaker
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool: Yes / Intact: Yes; No / No		CHECKED BY: (Initials)

Date: 11-20-20 Time: 1605

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

REMARKS:

Email Results: kjones@riceswd.com
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

CONDITIONS

Action 24246

CONDITIONS

Operator: RICE OPERATING COMPANY 122 W Taylor Hobbs, NM 88240	OGRID: 19174
	Action Number: 24246
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

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