

RICE *Operating Company*

112 West Taylor • Hobbs, New Mexico 88240

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

NV

April 1, 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: 2021 Annual Groundwater Report
Rice Operating Company – BD SWD System
BD L-36 EOL (1R426-278): UL/L, Sec. 36, T21S, R37E**

Mr. Billings:

ROC is the service provider (agent) for the BD SWD System and has no ownership of any portion of the pipeline, well, or facility. The system is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Background and Previous Work

The site is located approximately 2 miles east of Eunice, New Mexico at UL/L, Sec. 36, T21S, R37E as shown on the Geographical Location Map. Groundwater sampling at the site indicated the depth to groundwater is approximately 45 feet below ground surface (bgs).

An Investigation and Characterization Plan (ICP) was submitted to NMOCD on April 24th, 2015 and approved May 7th, 2015. The site was investigated through soil bore installation resulting in elevated chloride concentrations that decreased with depth.

A Corrective Action Plan (CAP) and Addendum was submitted and approved by NMOCD on October 30th, 2017. According to the NMOCD approved CAP, a 91x31-ft 20-mil reinforced liner was installed and properly seated at 4.5 ft bgs which covered the previously installed 20x20 ft clay liner. The site was backfilled and seeded with a blend of native vegetation. A CAP Report and Soil Closure Request detailing this work was submitted to the NMOCD on May 17th, 2018. The report also requested three monitoring wells be installed near the source, up-gradient and down-gradient of the site. NMOCD approved this report and granted 'Soil Closure' on June 20th, 2018.

On June 27th, 2019, a near-source well (MW-1) was installed approximately 40 ft southeast of the source, and lithology soil samples were collected at regular intervals. The well was developed and sampled regularly. On November 13th, 2019, an up-gradient well (MW-2) and a down-gradient well (MW-3) were installed.

The most recent sampling event resulted in a chloride concentration of 500 mg/L in MW-1, 500 mg/L in MW-2, and 500 mg/L in MW-3. BTEX concentrations have remained below detectable limit in each well since installation. The samples collected from the up-gradient well (MW-2) suggests a non-ROC, up-gradient source has contributed to the degradation of groundwater quality. ROC will continue quarterly sampling in 2022.

Attached is the Appendix, which contains:

1. A Geographical 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 2021.

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,

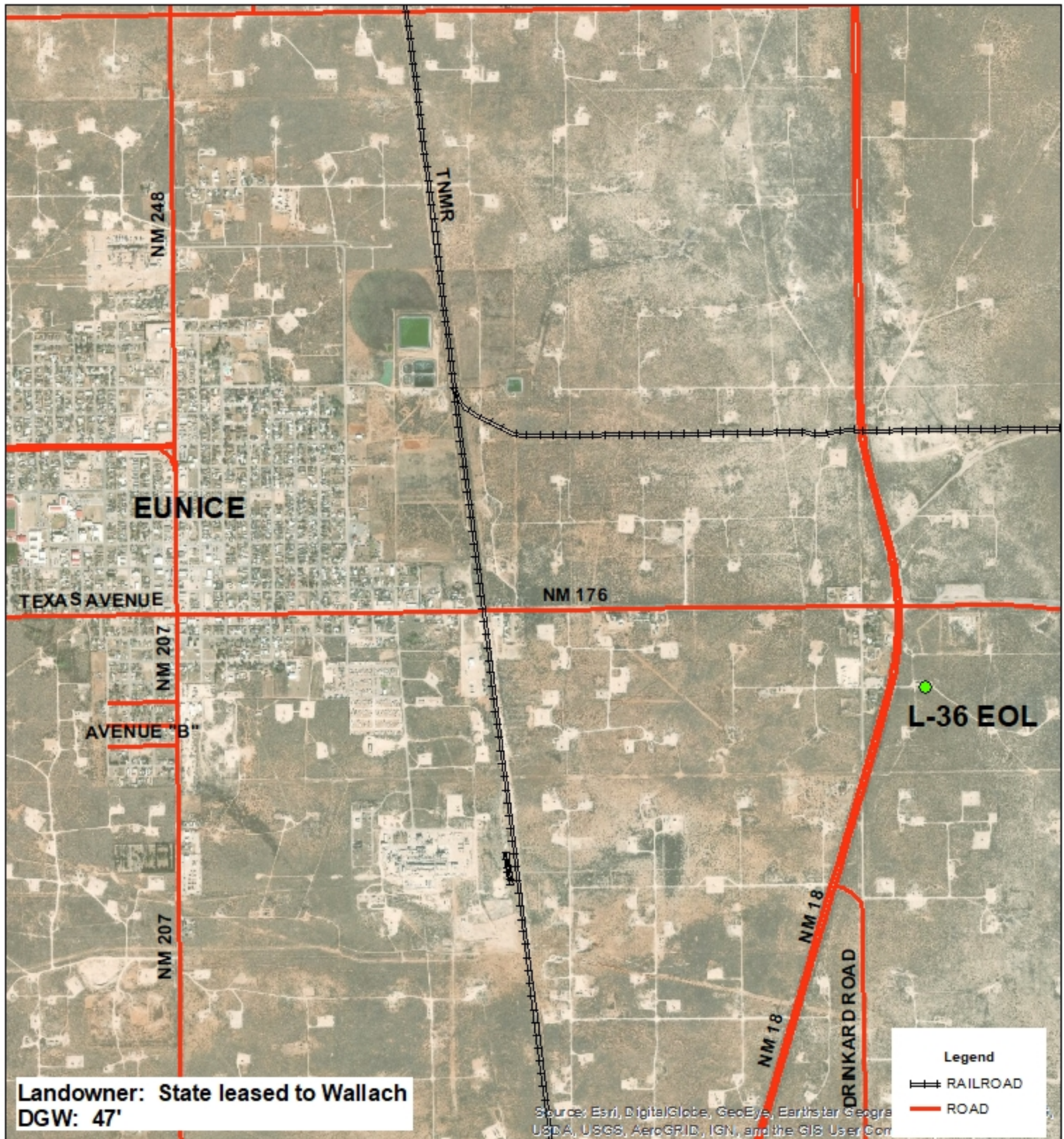


Katie Davis
Environmental Manager
RICE Operating Company (ROC)

Cc – Edward J. Hansen (ROC)

appendix

Geographic Location



BD
L-36 EOL
1R426-278

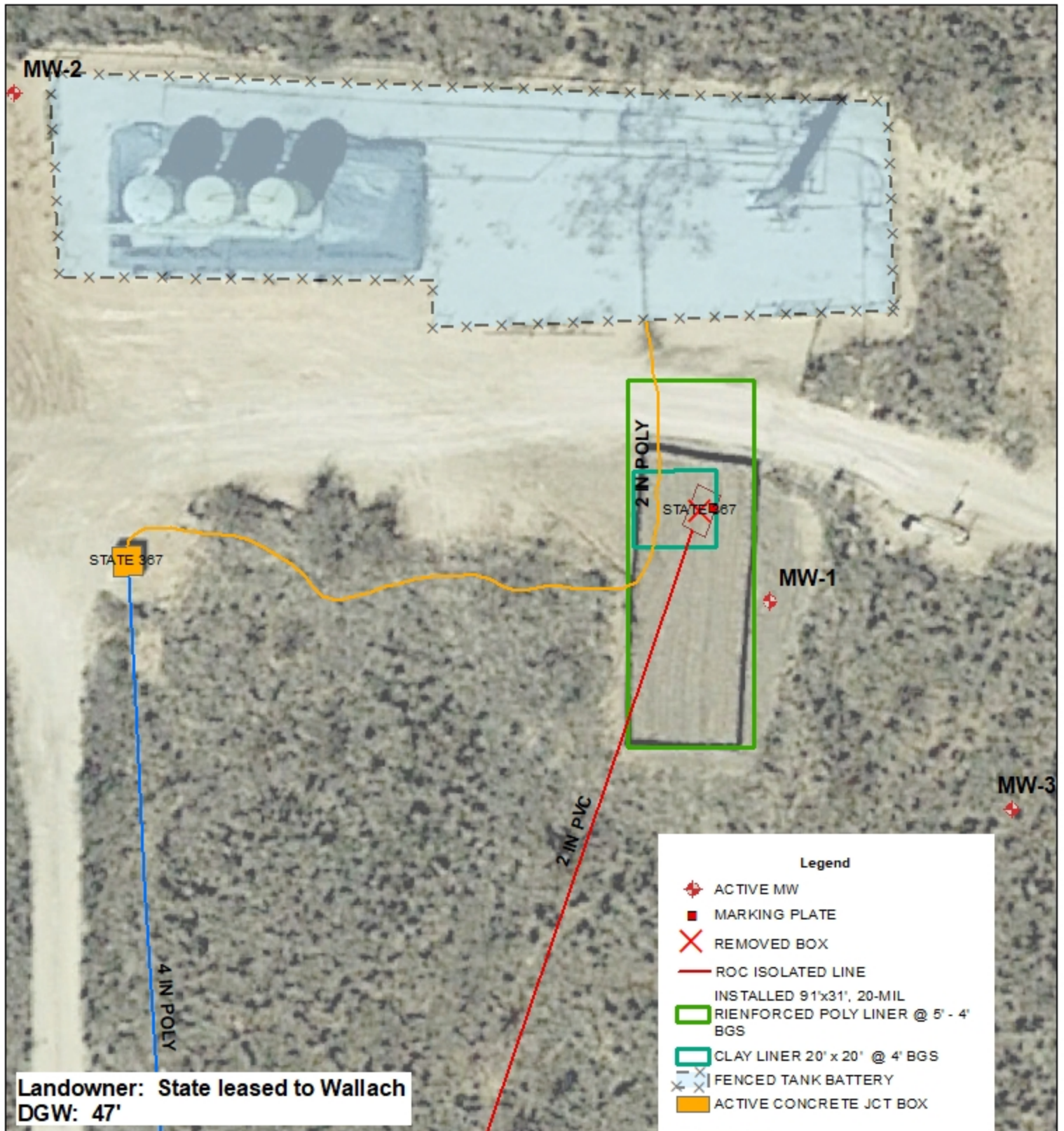
UL L SECTION 36
T-21-S R-37-E
LEA COUNTY, NM

GPS: 32.431908, -103.122049
NAD 83 STATE PLANE PROJECTION
NM EAST ZONE

0 1,000 2,000
Feet

GPS Date: 7/10/15 CF, 7/1/19 TG
Drawing date: 3/6/20
Drafted by: T. Grieco





BD
L-36 EOL
1R426-278

UL L SECTION 36
T-21-S R-37-E
LEA COUNTY, NM

GPS: 32.431908, -103.122049
NAD 83 STATE PLANE PROJECTION
NM EAST ZONE

0 25 50
Feet

GPS Date: 7/10/15 CF, 7/1/19 TG
Drawing date: 3/6/20
Drafted by: T. Grieco



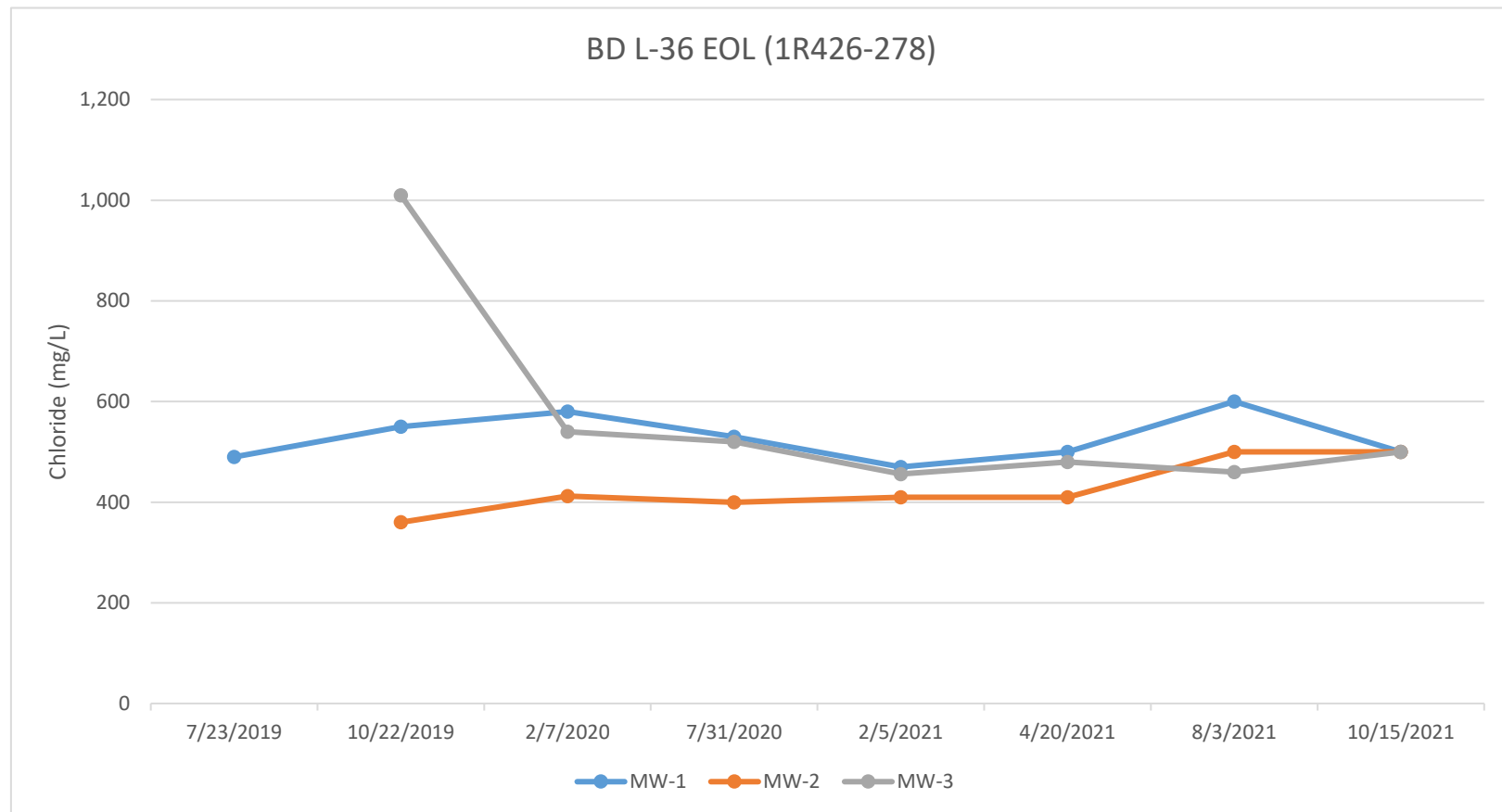
ROC - BD L-36 EOL (1R426-278)**Unit Letter L, Section 36, T21S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	45.58	88.6	28	100	7/23/2019	490	2,010	<0.001	<0.001	<0.001	<0.003	560	Clear No odor
1	45.53	88.6	28	100	10/22/2019	550	1,840	<0.001	<0.001	<0.001	<0.003	602	Clear No odor
1	45.41	88.6	28	90	2/7/2020	580	2,180	<0.001	<0.001	<0.001	<0.003	536	Clear No odor
1	45.35	88.6	28	90	7/31/2020	530	2,080	<0.001	<0.001	<0.001	<0.003	407	Clear No odor
1	45.36	88.6	28	90	2/5/2021	470	1,930	<0.001	<0.001	<0.001	<0.003	521	Clear No odor
1	45.3	88.6	28	90	4/20/2021	500	1,990	<0.001	<0.001	<0.001	<0.003	468	Clear No odor
1	45.27	88.6	28	90	8/3/2021	600	2,160	<0.001	<0.001	<0.001	<0.003	679	Clear No odor
1	45.23	88.6	28	90	10/15/2021	500	1,960	<0.001	<0.001	<0.001	<0.003	435	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	47.78	63.75	2.6	10	12/16/2019	360	1,690	<0.001	<0.001	<0.001	<0.003	510	Clear No odor
2	47.72	63.75	2.6	10	2/7/2020	412	1,680	<0.001	<0.001	<0.001	<0.003	480	Clear No odor
2	47.69	63.75	2.6	10	7/31/2020	400	1,790	<0.001	<0.001	<0.001	<0.003	319	Clear No odor
2	47.73	63.75	2.6	10	2/5/2021	410	1,750	<0.001	<0.001	<0.001	<0.003	521	Clear No odor
2	47.63	63.75	2.6	10	4/20/2021	410	1,440	<0.001	<0.001	<0.001	<0.003	475	Clear No odor
2	47.62	63.75	2.6	10	8/3/2021	500	1,930	<0.001	<0.001	<0.001	<0.003	624	Clear No odor
2	47.58	63.75	2.6	10	10/15/2021	500	1,900	<0.001	<0.001	<0.001	<0.003	357	Clear No odor

ROC - BD L-36 EOL (1R426-278)**Unit Letter L, Section 36, T21S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	43.94	63.93	3.2	10	12/16/2019	1,010	2,940	<0.001	<0.001	<0.001	<0.003	557	Clear No odor
3	43.9	63.93	3.2	10	2/7/2020	540	2,100	<0.001	<0.001	<0.001	<0.003	552	Clear No odor
3	43.88	63.93	3.2	10	7/31/2020	520	2,000	<0.001	<0.001	<0.001	<0.003	324	Clear No odor
3	43.84	63.93	3.2	12	2/5/2021	456	1,880	<0.001	<0.001	<0.001	<0.003	522	Clear No odor
3	43.78	63.93	3.2	12	4/20/2021	480	1,830	<0.001	<0.001	<0.001	<0.003	464	Clear No odor
3	43.77	63.93	3.2	12	8/3/2021	460	1,920	<0.001	<0.001	<0.001	<0.003	639	Clear No odor
3	43.72	63.93	3.2	12	10/15/2021	500	1,960	<0.001	<0.001	<0.001	<0.003	406	Clear No odor





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

February 22, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD L-36 EOL

Enclosed are the results of analyses for samples received by the laboratory on 02/09/21 12:45.

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:	02/09/2021	Sampling Date:	02/05/2021
Reported:	02/22/2021	Sampling Type:	Water
Project Name:	BD L-36 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC 36 L ~ LEA COUNTY NM		

Sample ID: MONITOR WELL #1 (H210332-01)

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	02/10/2021	ND	0.022	109	0.0200	2.16	
Toluene*	<0.001	0.001	02/10/2021	ND	0.021	104	0.0200	1.99	
Ethylbenzene*	<0.001	0.001	02/10/2021	ND	0.021	103	0.0200	1.58	
Total Xylenes*	<0.003	0.003	02/10/2021	ND	0.063	105	0.0600	0.819	
Total BTEX	<0.006	0.006	02/10/2021	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*	470	4.00	02/10/2021	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*	521	125	02/12/2021	ND	19.9	99.6	20.0	9.15	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1930	5.00	02/15/2021	ND	804	80.4	1000	8.51	

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	02/09/2021	Sampling Date:	02/05/2021
Reported:	02/22/2021	Sampling Type:	Water
Project Name:	BD L-36 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC 36 L ~ LEA COUNTY NM		

Sample ID: MONITOR WELL #2 (H210332-02)

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	02/10/2021	ND	0.022	109	0.0200	2.16	
Toluene*	<0.001	0.001	02/10/2021	ND	0.021	104	0.0200	1.99	
Ethylbenzene*	<0.001	0.001	02/10/2021	ND	0.021	103	0.0200	1.58	
Total Xylenes*	<0.003	0.003	02/10/2021	ND	0.063	105	0.0600	0.819	
Total BTEX	<0.006	0.006	02/10/2021	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*	410	4.00	02/10/2021	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*	521	125	02/12/2021	ND	19.9	99.6	20.0	9.15		

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1750	5.00	02/15/2021	ND	804	80.4	1000	8.51	

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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:	02/09/2021	Sampling Date:	02/05/2021
Reported:	02/22/2021	Sampling Type:	Water
Project Name:	BD L-36 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC 36 L ~ LEA COUNTY NM		

Sample ID: MONITOR WELL #3 (H210332-03)

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	02/10/2021	ND	0.022	109	0.0200	2.16	
Toluene*	<0.001	0.001	02/10/2021	ND	0.021	104	0.0200	1.99	
Ethylbenzene*	<0.001	0.001	02/10/2021	ND	0.021	103	0.0200	1.58	
Total Xylenes*	<0.003	0.003	02/10/2021	ND	0.063	105	0.0600	0.819	
Total BTEX	<0.006	0.006	02/10/2021	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*	456	4.00	02/10/2021	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*	522	125	02/12/2021	ND	19.9	99.6	20.0	9.15		

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1880	5.00	02/15/2021	ND	804	80.4	1000	8.51	

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*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Cardinal Laboratories, Inc.

LAB Order ID

ANALYSIS REQUEST
(Circle or Specify Method No.)[illegible]

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

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

Released to Imaging: 12/16/2022 1:50:57 PM



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

April 27, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD L-36 EOL

Enclosed are the results of analyses for samples received by the laboratory on 04/22/21 16:15.

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



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Analytical Results For:

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

Received:	04/22/2021	Sampling Date:	04/20/2021
Reported:	04/27/2021	Sampling Type:	Water
Project Name:	BD L-36 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC 36 L ~ LEA COUNTY NM		

Sample ID: MONITOR WELL #1 (H211042-01)

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	04/26/2021	ND	0.021	103	0.0200	1.10	
Toluene*	<0.001	0.001	04/26/2021	ND	0.020	98.5	0.0200	3.25	
Ethylbenzene*	<0.001	0.001	04/26/2021	ND	0.019	96.4	0.0200	3.25	
Total Xylenes*	<0.003	0.003	04/26/2021	ND	0.057	95.2	0.0600	3.12	
Total BTEX	<0.006	0.006	04/26/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.2 % 92.2-112

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	500	4.00	04/26/2021	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*	468	83.3	04/27/2021	ND	23.4	117	20.0	11.6	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1990	5.00	04/26/2021	ND	531	106	500	3.70	

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	04/22/2021	Sampling Date:	04/20/2021
Reported:	04/27/2021	Sampling Type:	Water
Project Name:	BD L-36 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC 36 L ~ LEA COUNTY NM		

Sample ID: MONITOR WELL #2 (H211042-02)

BTEX 8021B		mg/L		Analyzed By: MS				S-05	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	04/26/2021	ND	0.021	103	0.0200	1.10	
Toluene*	<0.001	0.001	04/26/2021	ND	0.020	98.5	0.0200	3.25	
Ethylbenzene*	<0.001	0.001	04/26/2021	ND	0.019	96.4	0.0200	3.25	
Total Xylenes*	<0.003	0.003	04/26/2021	ND	0.057	95.2	0.0600	3.12	
Total BTEX	<0.006	0.006	04/26/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.9 % 92.2-112

Chloride, SM4500CI-B		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	410	4.00	04/26/2021	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*	475	83.3	04/27/2021	ND	23.4	117	20.0	11.6	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1440	5.00	04/26/2021	ND	531	106	500	3.70	

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

Analytical Results For:

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

Received:	04/22/2021	Sampling Date:	04/20/2021
Reported:	04/27/2021	Sampling Type:	Water
Project Name:	BD L-36 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC 36 L ~ LEA COUNTY NM		

Sample ID: MONITOR WELL #3 (H211042-03)

BTX 8021B		mg/L		Analyzed By: MS				S-05	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	04/26/2021	ND	0.021	103	0.0200	1.10	
Toluene*	<0.001	0.001	04/26/2021	ND	0.020	98.5	0.0200	3.25	
Ethylbenzene*	<0.001	0.001	04/26/2021	ND	0.019	96.4	0.0200	3.25	
Total Xylenes*	<0.003	0.003	04/26/2021	ND	0.057	95.2	0.0600	3.12	
Total BTX	<0.006	0.006	04/26/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.1 % 92.2-112

Chloride, SM4500CI-B		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	480	4.00	04/26/2021	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*	464	83.3	04/27/2021	ND	23.4	117	20.0	11.6	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1830	5.00	04/26/2021	ND	531	106	500	3.70	

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

S-05	The surrogate recovery is outside of lab established statistical control limits but still within method limits. Data is not adversely affected.
QR-04	The RPD for the BS/BSD was outside of historical limits.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
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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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: BD L-36 EOL		
Project Location: T21S R37E Sec36 L ~ Lea County New Mexico		Sampler Signature: Rozanne Johnson (575) 631-9310		

Page 6 of 6

LAB Order ID # _____

(Circle or Specify Method No.)

[illegible]



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

August 11, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD L-36 EOL

Enclosed are the results of analyses for samples received by the laboratory on 08/06/21 14:40.

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:	08/06/2021	Sampling Date:	08/03/2021
Reported:	08/11/2021	Sampling Type:	Water
Project Name:	BD L-36 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC 36 L ~ LEA COUNTY NM		

Sample ID: MONITOR WELL #1 (H212104-01)

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	08/10/2021	ND	0.019	94.2	0.0200	1.06	
Toluene*	<0.001	0.001	08/10/2021	ND	0.020	101	0.0200	0.583	
Ethylbenzene*	<0.001	0.001	08/10/2021	ND	0.020	101	0.0200	0.0447	
Total Xylenes*	<0.003	0.003	08/10/2021	ND	0.063	104	0.0600	0.312	
Total BTEX	<0.006	0.006	08/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 77.1-124

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	600	4.00	08/09/2021	ND	104	104	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*	679	125	08/10/2021	ND	21.0	105	20.0	0.427	

TDS 160.1		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	2160	5.00	08/10/2021	ND	542	108	500	1.76	

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	08/06/2021	Sampling Date:	08/03/2021
Reported:	08/11/2021	Sampling Type:	Water
Project Name:	BD L-36 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC 36 L ~ LEA COUNTY NM		

Sample ID: MONITOR WELL #2 (H212104-02)

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	08/10/2021	ND	0.019	94.2	0.0200	1.06	
Toluene*	<0.001	0.001	08/10/2021	ND	0.020	101	0.0200	0.583	
Ethylbenzene*	<0.001	0.001	08/10/2021	ND	0.020	101	0.0200	0.0447	
Total Xylenes*	<0.003	0.003	08/10/2021	ND	0.063	104	0.0600	0.312	
Total BTEX	<0.006	0.006	08/10/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 77.1-124

Chloride, SM4500CI-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	500	4.00	08/09/2021	ND	104	104	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*	624	125	08/10/2021	ND	21.0	105	20.0	0.427	

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1930	5.00	08/11/2021	ND	542	108	500	1.76		

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	08/06/2021	Sampling Date:	08/03/2021
Reported:	08/11/2021	Sampling Type:	Water
Project Name:	BD L-36 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC 36 L ~ LEA COUNTY NM		

Sample ID: MONITOR WELL #3 (H212104-03)

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	08/10/2021	ND	0.019	94.2	0.0200	1.06		
Toluene*	<0.001	0.001	08/10/2021	ND	0.020	101	0.0200	0.583		
Ethylbenzene*	<0.001	0.001	08/10/2021	ND	0.020	101	0.0200	0.0447		
Total Xylenes*	<0.003	0.003	08/10/2021	ND	0.063	104	0.0600	0.312		
Total BTEX	<0.006	0.006	08/10/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 77.1-124

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	460	4.00	08/09/2021	ND	104	104	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*	639	125	08/10/2021	ND	21.0	105	20.0	0.427	

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1920	5.00	08/10/2021	ND	542	108	500	1.76		

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Celey D. Keene, Lab Director/Quality Manager



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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.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Cardinal Laboratories, Inc.

[illegible]

Relinquished by: <u>Rozanne Johnson</u>	Date: <u>8/6/21</u>	Time: <u>14:39</u>	Received by: <u>Amara Aldakir</u>	Date: <u>8-6-21</u>	Time: <u>1440</u>									
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)	Date:	Time:									
Delivered By: (Circle One) <u>UPS</u>	Sample Condition		CHECKED BY:											
Sampler - UPS - Bus - Other:	<table border="1"> <tr> <td>Yes</td> <td>Cool</td> <td>Intact</td> </tr> <tr> <td></td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>No</td> <td>No</td> <td>No</td> </tr> </table>		Yes	Cool	Intact		Yes	Yes	No	No	No	(Initials) <u>Y</u>		
Yes	Cool	Intact												
	Yes	Yes												
No	No	No												

LAB Order ID # _____

(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

October 26, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD L-36 EOL

Enclosed are the results of analyses for samples received by the laboratory on 10/20/21 14:40.

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:	10/20/2021	Sampling Date:	10/15/2021
Reported:	10/26/2021	Sampling Type:	Water
Project Name:	BD L-36 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC 36 L ~ LEA COUNTY NM		

Sample ID: MONITOR WELL #1 (H212954-01)

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	10/25/2021	ND	0.022	108	0.0200	2.42	
Toluene*	<0.001	0.001	10/25/2021	ND	0.020	101	0.0200	0.962	
Ethylbenzene*	<0.001	0.001	10/25/2021	ND	0.021	105	0.0200	3.84	
Total Xylenes*	<0.003	0.003	10/25/2021	ND	0.064	107	0.0600	2.67	
Total BTEX	<0.006	0.006	10/25/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 77.1-124

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	500	4.00	10/21/2021	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*	435	83.3	10/22/2021	ND	19.1	95.6	20.0	4.85	

TDS 160.1		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1960	5.00	10/21/2021	ND	868	86.8	1000	2.48	

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	10/20/2021	Sampling Date:	10/15/2021
Reported:	10/26/2021	Sampling Type:	Water
Project Name:	BD L-36 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC 36 L ~ LEA COUNTY NM		

Sample ID: MONITOR WELL #2 (H212954-02)

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	10/25/2021	ND	0.022	108	0.0200	2.42		
Toluene*	<0.001	0.001	10/25/2021	ND	0.020	101	0.0200	0.962		
Ethylbenzene*	<0.001	0.001	10/25/2021	ND	0.021	105	0.0200	3.84		
Total Xylenes*	<0.003	0.003	10/25/2021	ND	0.064	107	0.0600	2.67		
Total BTEX	<0.006	0.006	10/25/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 77.1-124

Chloride, SM4500CI-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	500	4.00	10/21/2021	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*	357	83.3	10/22/2021	ND	19.1	95.6	20.0	4.85		

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1900	5.00	10/21/2021	ND	868	86.8	1000	2.48		

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	10/20/2021	Sampling Date:	10/15/2021
Reported:	10/26/2021	Sampling Type:	Water
Project Name:	BD L-36 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC 36 L ~ LEA COUNTY NM		

Sample ID: MONITOR WELL #3 (H212954-03)

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	10/25/2021	ND	0.022	108	0.0200	2.42		
Toluene*	<0.001	0.001	10/25/2021	ND	0.020	101	0.0200	0.962		
Ethylbenzene*	<0.001	0.001	10/25/2021	ND	0.021	105	0.0200	3.84		
Total Xylenes*	<0.003	0.003	10/25/2021	ND	0.064	107	0.0600	2.67		
Total BTEX	<0.006	0.006	10/25/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 77.1-124

Chloride, SM4500CI-B		mg/L		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	500	4.00	10/21/2021	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*	406	83.3	10/22/2021	ND	19.1	95.6	20.0	4.85		

TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1960	5.00	10/21/2021	ND	868	86.8	1000	2.48		

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

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 # _____

ANALYSIS REQUEST

(Circle or Specify Method No.)

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: **BD L-36 EOL**

Project Location: **T21S R37E Sec36 L ~ Lea County New Mexico**
Sampler Signature: *Rozanne Johnson* (575) 631-9310

LAB # (LAB USE ONLY)		FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX				PRESERVATIVE METHOD					SAMPLING		
					WATER	SOIL	AIR	SLUDGE	HCL (4 - 40ml VOA)	HNO ₃	NaHSO ₄	H ₂ SO ₄	ICE (1-1Liter HDPE)	NONE	DATE (2021)	TIME
1		Monitor Well #1	G	5	X				4				1		10/15	13:50
2		Monitor Well #2	G	5	X				4				1		10/15	10:00
3		Monitor Well #3	G	5	X				4				1		10/15	11:45
			</													

Relinquished by: *Rozanne Johnson*
Date: *10/20/21* Time: *14:40*

Received by: *Samuel Oldak*
Date: *10-20-21* Time: *14:40*

Delivered By: (Circle One)

Sample Condition

Cool Intact
Yes ☒ Yes ☒
No ☐ No ☐

CHECKED BY:

(Initials)

Sampler - UPS - Bus - Other:

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 90544

CONDITIONS

Operator: RICE OPERATING COMPANY 122 W Taylor Hobbs, NM 88240	OGRID: 19174
	Action Number: 90544
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Accepted for the record. See app ID 136521 for most updated status.	12/16/2022