

L Peter Galusky, Jr PE

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March 31, 2023

Nelson Velez

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

Re: **2022 Annual Report**
Rice Operating Company – Vacuum SWD System
Vacuum L-26 Vent (1R425-66) T17S, R35E, Section 26 (L)

Sent via E-mail

Mr. Velez:

This letter summarizes progress made over the past calendar year pursuant to the NMOCD approved Corrective Action Plan and Addendum of April 4th, 2011 for this site, which is operated by Rice Operating Company (ROC). The site is located approximately 2.5 miles east of Buckeye, New Mexico at T17S, R35E, Section 26 (L) as shown on the Site Location Map (Appendix - Figure 1). The depth to groundwater (water table) averaged approximately 59 +/- ft below ground surface in the down-gradient monitor well (MW-3) in 2022.

Background and Previous Work

In 2008, ROC conducted field investigation on the former junction box. Soil samples were collected at regular intervals, creating a 30x30x12 ft deep excavation. Based on this investigation, a 30x30-ft geo-synthetic liner was installed at approximately 5 ft bgs. The liner was padded with a six inches of blow sand both above and below. The excavation was backfilled with blended, excavated soil and contoured to the surrounding area. NMOCD was notified of potential groundwater impact on December 1st, 2008, and a disclosure report was submitted with all the 2008 Junction Box Closures and Disclosures.

Review of 2022 Annual Groundwater Report: **Content satisfactory**

1. MW #1R had eight (8) consecutive quarters (CQ) below the allowable concentrations (AC) for chloride between 5/29/2014 to 2/25/2016 & fourteen between 5/23/2017 to 9/10/2020.
2. MW #1 and #1R combined had fifteen (15) CQ below the AC for total dissolved solids (TDS) between 8/24/2012 to 2/25/2016 & fourteen between 2/21/2017 to 11/05/2020.
3. MW #1 and #1R combined had all sampling events below the AC for sulfate.
3. MW #2 had all constituents of concern below the AC.
4. MW #3 had eight (8) CQ below the AC for chloride between 2/21/2017 to 11/14/2018.
5. MW #3 had eight (8) CQ below the AC for TDS between 5/23/2017 to 3/05/2019.
6. MW #3 - all sampling events below the AC for sulfate.
7. Depth to water has declined steadily since later part of 2011 to the present by approximately 3.5 feet.
8. Based on the above, OCD will approve closure with a properly requested submittal.

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Deeper soil sampling was initiated in 2010 which indicated elevated levels of soil chlorides throughout the vadose zone. This was summarized in the September 4th, 2011 Initial Characterization Report and Corrective Action Plan submitted to NMCOD and which recommended the installation of a near-source monitor well. A subsequent Corrective Action Plan and Addendum of April 4th, 2011 was submitted to NMOCD which proposed the installation of a 64x63-ft sub-surface synthetic liner to isolate and prevent the downward migration of residual soil chlorides (Appendix – Figure 2), and the installation additional monitor wells to further delineate groundwater quality. This was approved by NMOCD on April 4th, 2011 and two additional monitoring wells were installed on April 4th, 2011. The liner installation was completed in the summer 2011. A report detailing this work was submitted on August 2nd, 2011 and NMOCD granted soil closure on October 13th, 2011. According to the Additional Groundwater Monitoring and CAP for Groundwater, MW-1 was plugged and replaced with a 4 inch well (MW-1R). Groundwater removal began in July 2012 and has continued through 2019. In 2020, NMOCD granted approval to temporarily cease groundwater recovery which resumed in 2021 and 2022.

Results of Groundwater Monitoring

Results of groundwater sampling from 2009 through 2022 are given in the Appendix (Figure 3, Tables 1 & 2). Average annual groundwater chloride concentrations in the up-gradient monitor well (MW-2) rose slightly from 57 mg/l in 2021 to 102 mg/l in 2022. Groundwater chloride concentrations in the down-gradient monitor well (MW-3) increased slightly from 296 mg/l in 2021 to 313 mg/l in 2022. Groundwater chloride concentrations in the near-source pumping well (MW-1R) increased from 203 mg/l in 2021 to 265 mg/l in 2022. Sampling for BTEX was suspended after early 2020, with NMOCD permission, as concentrations were consistently below detectable limits in all monitor wells since sampling began in 2010. A total of 31,163 bbls of groundwater have been withdrawn from MW-1R since pumping began in 2013 resulting in the removal of approximately 626 kg of groundwater chloride. The withdrawn groundwater has been used for a purposeful use.

Path Forward

ROC will continue groundwater monitoring and recovery at this site through 2023.

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,

Rice Operating Company – Vacuum L-26 Vent Annual Report

System Parties, who provide all operating capital on a percentage ownership/usage basis. The Vacuum system is now abandoned.

We submit this report for your review and consideration.

Please contact either Katie Davis at Rice Operating Company or me if you have any questions or need additional information.

Thank you.

Sincerely,



L. Peter Galusky, Jr. P.E.
NM Prof. Engineer No. 22561

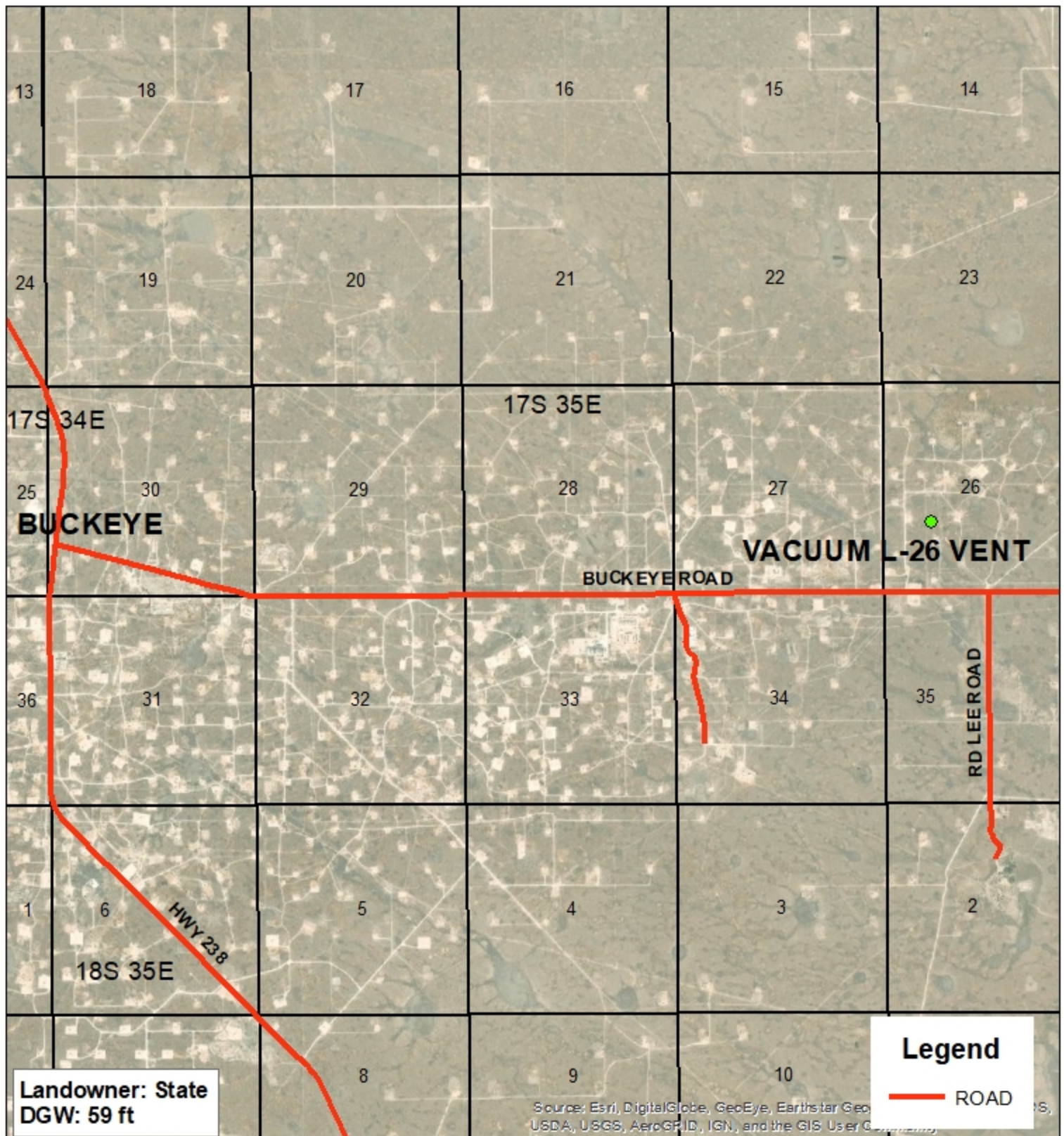
Copy: Rice Operating Company

Attachments: ... as noted in text

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Geographic Location



VACUUM
L-26 VENT
1R425-66

UL L SECTION 26
T17S R35E
LEA COUNTY, NM

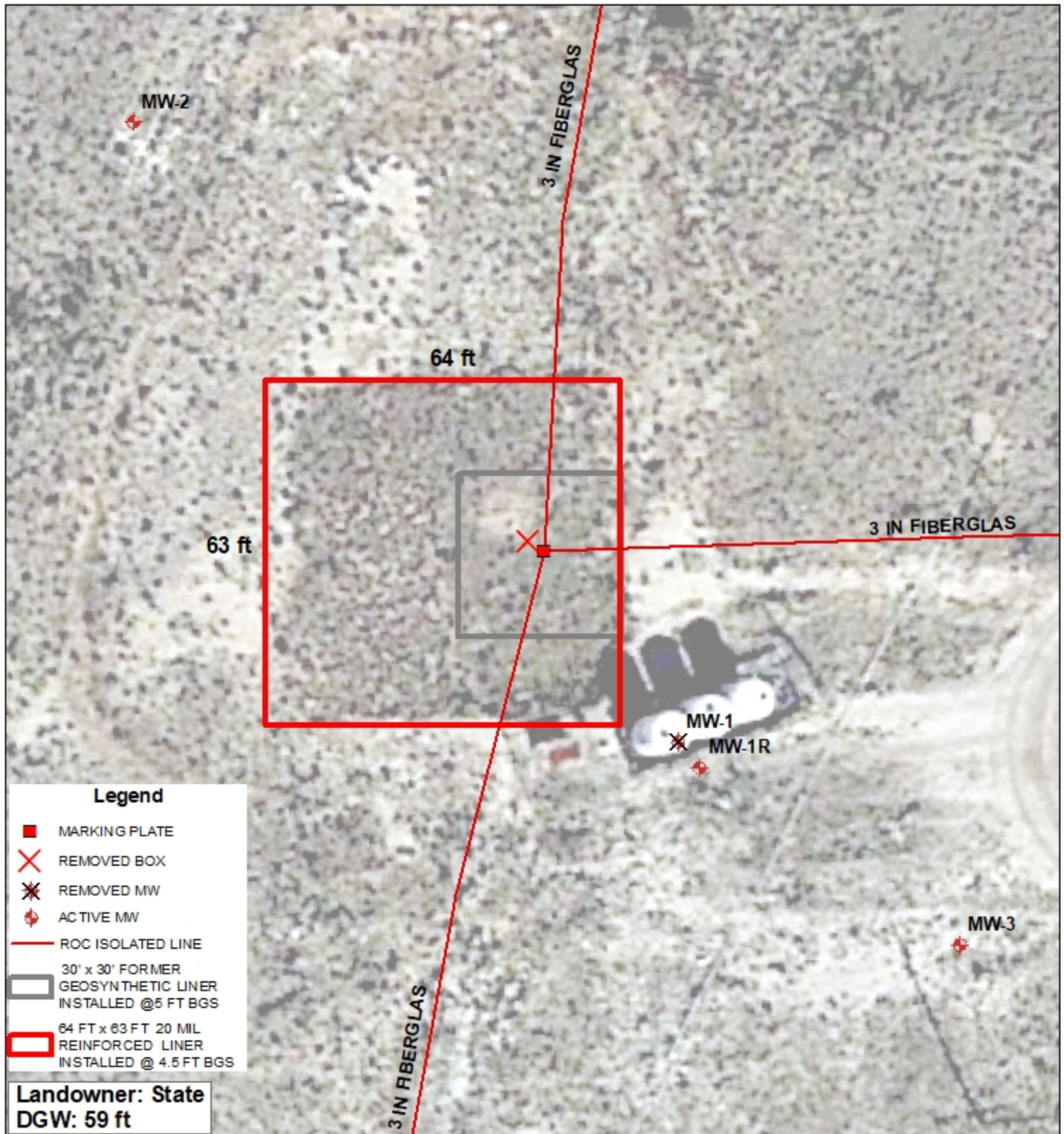
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NAD83 STATE PLANE PROJ
NM EAST ZONE

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Miles

Drawing date: 2/5/20
Drafted by: T. Grieco



Site Map



VACUUM L-26 VENT

1R425-66

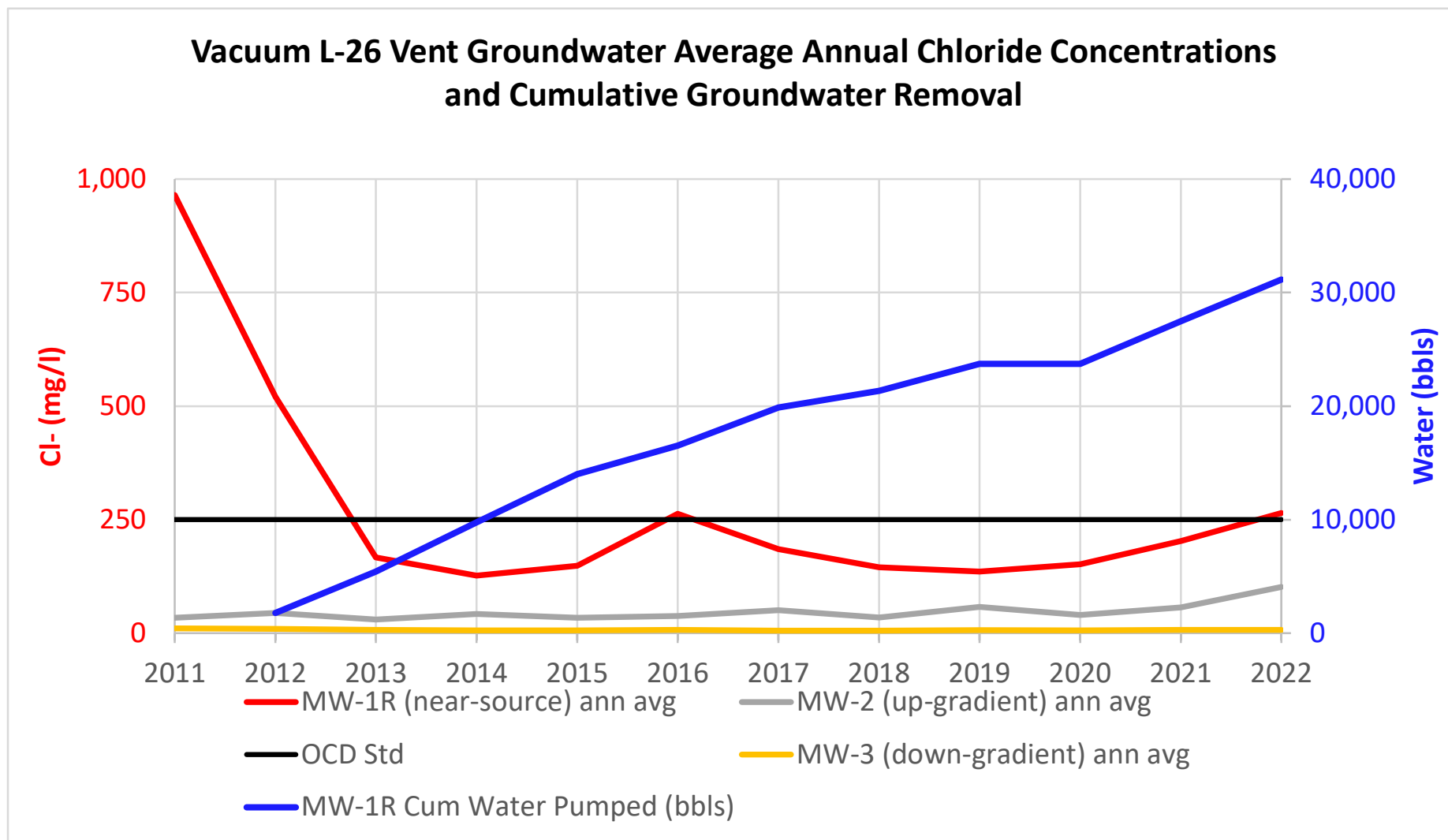
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T-17-S R-35-E
LEA COUNTY, NM

GPS: 32.803423 -103.432869
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NM EAST ZONE

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Drawing date: 2/5/20
Drafted by: T. Grieco





**Vacuum L-26 Vent Groundwater Chloride Annual Averages (mg/l)
and Groundwater Annual Volumes (bbls) and Chloride Mass (kg) Removed**

Year	MW-1R (near- source) ann avg	MW-2 (up- gradient) ann avg	MW-3 (down- gradient) ann avg	OCD Std	MW-1R Cumulative Groundwater Removed (bbls)	MW-1R Cumulative Cl- Removed (kg)
2010	940			250		
2011	965	34	433	250		
2012	521	45	372	250	1,783	37
2013	167	30	309	250	5,424	97
2014	127	42	248	250	9,762	154
2015	149	34	250	250	14,007	259
2016	263	38	308	250	16,527	300
2017	185	51	218	250	19,897	361
2018	145	35	229	250	21,357	387
2019	136	58	268	250	23,717	439
2020	152	40	257	250	23,717	439
2021	203	57	296	250	27,481	528
2022	265	102	313	250	31,163	626

ROC - Vacuum L-26 vent (1R425-66)
Unit Letter L, Section 26, T17S, R35E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	ann. avg Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	56.53	72.54	2.6	10	11/22/2010	940	940	2,120	<0.001	<0.001	<0.001	<0.003	79.6	Clear No odor
1	56.6	72.57	2.6	10	2/16/2011	960		2,130	<0.001	<0.001	<0.001	<0.003	64	Clear No odor
1	56.7	72.57	2.5	10	6/4/2011	1,040		2,710	<0.001	<0.001	<0.001	<0.003	64.7	Clear No odor
1	56.79	72.57	2.5	10	8/31/2011	940		2,440	<0.001	<0.001	<0.001	<0.003	67	Clear No odor
1	56.88	72.57	2.5	10	12/2/2011	920	965	2,230	<0.001	<0.001	<0.001	<0.003	73.7	Clear No odor
1	56.95	72.57	2.5	10	2/22/2012	970		1,930	<0.001	<0.001	<0.001	<0.003	66.3	Clear No odor
1	57.06	72.57	2.5	10	5/29/2012	710		1,910	<0.001	<0.001	<0.001	<0.003	66.4	Clear No odor
1	XXX	XXX	0	Pumping	8/24/2012	116		551	<0.001	<0.001	<0.001	<0.003	63.6	Clear No odor
1	XXX	XXX	0	Pumping	11/15/2012	288	521	960	<0.001	<0.001	<0.001	<0.003	59.5	Clear No odor
1	XXX	XXX	0	Pumping	2/12/2013	300		958	<0.001	<0.001	<0.001	<0.003	55.1	Clear No odor
1R	XXX	XXX	0	Pumping	5/30/2013	140		651	<0.001	<0.001	<0.001	<0.003	60	Clear No odor
1R	XXX	XXX	0	Pumping	9/6/2013	148		692	<0.001	<0.001	<0.001	<0.003	50.2	Clear No odor
1R	XXX	XXX	0	Pumping	11/19/2013	80	167	446	<0.001	<0.001	<0.001	<0.003	58.7	Clear No odor
1R	XXX	XXX	0	90	3/5/2014	256		806	<0.001	<0.001	<0.001	<0.003	58.6	Clear No odor
1R	XXX	XXX	0	Pumping	5/29/2014	88		490	<0.001	<0.001	<0.001	<0.003	59.3	Clear No odor
1R	XXX	XXX	0	Pumping	8/20/2014	80		468	<0.001	<0.001	<0.001	<0.003	56.4	Clear No odor
1R	XXX	XXX	0	90	11/20/2014	84	127	498	<0.001	<0.001	<0.001	<0.003	53.7	Clear No odor
1R	XXX	XXX	0	90	3/2/2015	140		644	<0.001	<0.001	<0.001	<0.003	46.9	Clear No odor
1R	XXX	XXX	0	Pumping	6/2/2015	44		590	<0.001	<0.001	<0.001	<0.003	37.2	Clear No odor
1R	XXX	XXX	0	Pumping	8/20/2015	196		676	<0.001	<0.001	<0.001	<0.003	42	Clear No odor
1R	XXX	XXX	0	Pumping	11/10/2015	216	149	654	<0.001	<0.001	<0.001	<0.003	47	Clear No odor
1R	XXX	XXX	XXX	100	2/25/2016	200		640	<0.001	<0.001	<0.001	<0.003	60	Clear No odor
1R	XXX	XXX	XXX	100	5/18/2016	408		1,270	<0.001	<0.001	<0.001	<0.003	112	Clear No odor
1R	XXX	XXX	XXX	Running	9/12/2016	88		442	<0.001	<0.001	<0.001	<0.003	61	Clear No odor
1R	XXX	XXX	XXX	100	11/11/2016	356	263	1,140	<0.001	<0.001	<0.001	<0.003	56	Clear No odor
1R	XXX	XXX	XXX	100	2/21/2017	264		998	<0.001	<0.001	<0.001	<0.003	58	Clear No odor
1R	XXX	XXX	XXX	Running	5/23/2017	208		944	<0.001	<0.001	<0.001	<0.003	55	Clear No odor
1R	XXX	XXX	XXX	Running	9/8/2017	108		684	<0.001	<0.001	<0.001	<0.003	58	Clear No odor

1R	XXX	XXX	XXX	100	11/29/2017	160	185	796	<0.001	<0.001	<0.001	<0.003	56	Clear No odor
1R	XXX	XXX	XXX	100	2/27/2018	188		810	<0.001	<0.001	<0.001	<0.003	54.4	Clear No odor
1R	XXX	XXX	XXX	100	5/16/2018	240		960	<0.001	<0.001	<0.001	<0.003	58.5	Clear No odor
1R	XXX	XXX	XXX	100	9/6/2018	108		460	<0.001	<0.001	<0.001	<0.003	53.4	Clear No odor
1R	XXX	XXX	XXX	100	11/14/2018	44	145	520	<0.001	<0.001	<0.001	<0.003	54.3	Clear No odor
1R	XXX	XXX	XXX	100	3/5/2019	160		754	<0.001	<0.001	<0.001	<0.003	54	Clear No odor
1R	XXX	XXX	XXX	Running	5/28/2019	140		583	<0.001	<0.001	<0.001	<0.003	55	Clear No odor
1R	XXX	XXX	XXX	Running	8/29/2019	144		650	<0.001	<0.001	<0.001	<0.003	54	Clear No odor
1R	XXX	XXX	XXX	100	11/15/2019	100	136	765	<0.001	<0.001	<0.001	<0.003	46	Clear No odor
1R	XXX	XXX	XXX	100	3/5/2020	108		774	<0.001	<0.001	<0.001	<0.003	54.9	Clear No odor
1R	XXX	XXX	XXX	100	6/15/2020	128		836	XXX	XXX	XXX	XXX	62.2	Clear No odor
1R	XXX	XXX	XXX	100	9/10/2020	120		730	XXX	XXX	XXX	XXX	52.8	Clear No odor
1R	XXX	XXX	XXX	100	11/5/2020	252	152	972	XXX	XXX	XXX	XXX	69	Clear No odor
1R	XXX	XXX	XXX	100	3/10/2021	240		1,050	XXX	XXX	XXX	XXX	57.7	Clear No odor
1R	XXX	XXX	XXX	Running	6/10/2021	148		637	XXX	XXX	XXX	XXX	57.5	Clear No odor
1R	XXX	XXX	XXX	Running	9/10/2021	184		749	XXX	XXX	XXX	XXX	57	Clear No odor
1R	XXX	XXX	XXX	100	11/9/2021	240	203	978	XXX	XXX	XXX	XXX	64.6	Clear No odor
1R	XXX	XXX	XXX	100	3/1/2022	312		1,080	XXX	XXX	XXX	XXX	69.7	Clear No odor
1R	XXX	XXX	XXX	Running	6/6/2022	132		553	XXX	XXX	XXX	XXX	55.6	Clear No odor
1R	XXX	XXX	XXX	Running	9/6/2022	284		890	XXX	XXX	XXX	XXX	68.5	Clear No odor
1R	XXX	XXX	XXX	100	11/30/2022	330	265	1,100	XXX	XXX	XXX	XXX	52.9	Clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	ann. avg Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	56.93	62.78	0.9	10	8/31/2011	32		374	<0.001	<0.001	<0.001	<0.003	33.5	Clear No odor
2	57.02	62.78	0.9	10	12/2/2011	36	34	405	<0.001	<0.001	<0.001	<0.003	40.8	Clear No odor
2	57.09	62.78	0.9	10	2/22/2012	92		408	<0.001	<0.001	<0.001	<0.003	41.6	Clear No odor
2	57.2	62.78	0.9	10	5/29/2012	28		411	<0.001	<0.001	<0.001	<0.003	41.4	Clear No odor
2	57.44	62.78	0.9	10	8/24/2012	28		490	<0.001	<0.001	<0.001	<0.003	27.7	Clear No odor
2	54.48	62.78	1.3	10	11/15/2012	32	45	518	<0.001	<0.001	<0.001	<0.003	20.3	Clear No odor
2	57.49	62.78	0.8	10	2/12/2013	28		573	<0.001	<0.001	<0.001	<0.003	28.7	Clear No odor
2	57.62	62.78	0.8	10	5/30/2013	32		611	<0.001	<0.001	<0.001	<0.003	28.7	Clear No odor
2	57.75	62.78	0.8	10	9/6/2013	32		646	<0.001	<0.001	<0.001	<0.003	31	Clear No odor
2	57.81	62.78	0.8	10	11/19/2013	28	30	587	<0.001	<0.001	<0.001	<0.003	32.2	Clear No odor
2	57.88	62.78	0.8	10	3/5/2014	32		308	<0.001	<0.001	<0.001	<0.003	61.2	Clear No odor
2	58.03	62.78	0.8	10	5/29/2014	72		454	<0.001	<0.001	<0.001	<0.003	51.9	Clear No odor
2	58.02	62.78	0.8	10	8/19/2014	32		558	<0.001	<0.001	<0.001	<0.003	32.9	Clear No odor
2	57.16	62.78	0.9	10	11/20/2014	32	42	526	<0.001	<0.001	<0.001	<0.003	31.3	Clear No odor
2	57.13	62.78	0.9	10	3/2/2015	32		546	<0.001	<0.001	<0.001	<0.003	28.2	Clear No odor
2	54.44	62.78	1.3	10	6/2/2015	32		586	<0.001	<0.001	<0.001	<0.003	40.7	Clear No odor
2	57.64	62.78	0.8	10	8/20/2015	36		546	<0.001	<0.001	<0.001	<0.003	35.4	Clear No odor
2	57.82	62.78	0.79	8	11/10/2015	36	34	510	<0.001	<0.001	<0.001	<0.003	38.6	Clear No odor
2	57.97	62.78	0.8	8	2/25/2016	52		496	<0.001	<0.001	<0.001	<0.003	49	Clear No odor
2	58.05	62.78	0.8	6	5/18/2016	28		564	<0.001	<0.001	<0.001	<0.003	48	Clear No odor
2	58.17	62.78	0.7	6	9/12/2016	40		432	<0.001	<0.001	<0.001	<0.003	44	Clear No odor
2	58.15	62.78	0.7	8	11/11/2016	32	38	444	<0.001	<0.001	<0.001	<0.003	41	Clear No odor
2	58.32	62.78	0.7	10	2/21/2017	40		490	<0.001	<0.001	<0.001	<0.003	44	Clear No odor
2	57.64	62.78	0.7	10	5/23/2017	96		512	<0.001	<0.001	<0.001	<0.003	56	Clear No odor
2	58.49	62.78	0.7	10	9/8/2017	36		628	<0.001	<0.001	<0.001	<0.003	51	Clear No odor
2	58.52	62.78	0.7	10	11/29/2017	32	51	638	<0.001	<0.001	<0.001	<0.003	47	Clear No odor
2	58.57	62.78	0.7	6	2/27/2018	40		622	<0.001	<0.001	<0.001	<0.003	46.9	Clear No odor
2	58.63	62.78	0.7	6	5/16/2018	32		606	<0.001	<0.001	<0.001	<0.003	50.3	Clear No odor
2	58.74	62.78	0.6	6	9/6/2018	32		532	<0.001	<0.001	<0.001	<0.003	50.1	Clear No odor

2	58.82	62.78	0.6	6	11/14/2018	36	35	664	<0.001	<0.001	<0.001	<0.003	52.2	Clear No odor
2	58.93	62.78	0.6	6	3/5/2019	32		512	<0.001	<0.001	<0.001	<0.003	48	Clear No odor
2	59.03	62.78	0.6	6	5/28/2019	28		673	<0.001	<0.001	<0.001	<0.003	48	Clear No odor
2	59.16	62.78	0.6	6	8/29/2019	144		622	<0.001	<0.001	<0.001	<0.003	53	Clear No odor
2	59.24	62.78	0.6	6	11/15/2019	28	58	606	<0.001	<0.001	<0.001	<0.003	47	Clear No odor
2	59.34	62.78	0.6	6	3/5/2020	32		669	<0.001	<0.001	<0.001	<0.003	48.7	Clear No odor
2	59.45	62.78	0.5	6	6/15/2020	72		793	XXX	XXX	XXX	XXX	53.8	Clear No odor
2	59.56	62.78	0.5	6	9/10/2020	24		686	XXX	XXX	XXX	XXX	43.4	Clear No odor
2	59.64	62.78	0.5	6	11/5/2020	32	40	560	XXX	XXX	XXX	XXX	68.1	Clear No odor
2	59.72	62.78	0.5	6	3/10/2021	28		668	XXX	XXX	XXX	XXX	49.1	Clear No odor
2	59.93	62.78	0.5	6	6/10/2021	32		700	XXX	XXX	XXX	XXX	52.4	Clear No odor
2	60.02	62.78	0.4	6	9/10/2021	128		580	XXX	XXX	XXX	XXX	52.3	Clear No odor
2	59.98	62.78	0.5	6	11/9/2021	40	57	658	XXX	XXX	XXX	XXX	55.4	Clear No odor
2	60.27	62.78	0.4	4	3/1/2022	104		458	XXX	XXX	XXX	XXX	64.2	Clear No odor
2	60.42	62.78	0.4	4	6/6/2022	36		564	XXX	XXX	XXX	XXX	54.7	Clear No odor
2	60.49	62.78	0.4	4	9/6/2022	160		644	XXX	XXX	XXX	XXX	61.3	Clear No odor
2	59.88	62.78	0.4	4	11/30/2022	108	102	481	XXX	XXX	XXX	XXX	52.3	Clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	CI	ann. avg CI	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	52.24	68.92	2.7	10	8/31/2011	416		1,250	<0.001	<0.001	<0.001	<0.003	47.3	Clear No odor
3	56.34	68.92	2	10	12/2/2011	450	433	1,330	<0.001	<0.001	<0.001	<0.003	56.8	Clear No odor
3	56.4	68.92	2	10	2/22/2012	332		1,330	<0.001	<0.001	<0.001	<0.003	54.9	Clear No odor
3	56.57	68.92	2	10	5/29/2012	380		1,220	<0.001	<0.001	<0.001	<0.003	57.4	Clear No odor
3	56.74	68.92	1.9	10	8/24/2012	400		1,220	<0.001	<0.001	<0.001	<0.003	48.9	Clear No odor
3	56.77	68.92	1.9	10	11/15/2012	376	372	1,240	<0.001	<0.001	<0.001	<0.003	48.7	Clear No odor
3	56.78	68.92	1.9	10	2/12/2013	352		1,260	<0.001	<0.001	<0.001	<0.003	52.6	Clear No odor
3	56.91	68.92	1.9	10	5/30/2013	320		1,220	<0.001	<0.001	<0.001	<0.003	49	Clear No odor
3	56.91	68.92	1.9	10	9/6/2013	292		1,170	<0.001	<0.001	<0.001	<0.003	46.2	Clear No odor
3	57.1	69.92	1.9	10	11/19/2013	272	309	1,150	<0.001	<0.001	<0.001	<0.003	45.1	Clear No odor
3	57.17	68.92	1.9	10	3/5/2014	256		984	<0.001	<0.001	<0.001	<0.003	47	Clear No odor
3	57.33	68.92	1.9	10	5/29/2014	248		826	<0.001	<0.001	<0.001	<0.003	86.2	Clear No odor
3	57.34	68.92	1.9	10	8/19/2014	236		1,090	<0.001	<0.001	<0.001	<0.003	38.7	Clear No odor
3	56.49	68.92	2	10	11/20/2014	252	248	1,030	<0.001	<0.001	<0.001	<0.003	32.4	Clear No odor
3	56.43	68.92	2	10	3/2/2015	252		1,030	<0.001	<0.001	<0.001	<0.003	42	Clear No odor
3	56.78	68.92	1.9	10	6/2/2015	268		1,060	<0.001	<0.001	<0.001	<0.003	45.3	Clear No odor
3	57.01	68.92	1.9	10	8/20/2015	164		1,100	<0.001	<0.001	<0.001	<0.003	47.5	Clear No odor
3	57.23	68.92	1.87	10	11/10/2015	316	250	1,090	<0.001	<0.001	<0.001	<0.003	50.5	Clear No odor
3	57.25	68.92	1.9	10	2/25/2016	320		1,160	<0.001	<0.001	<0.001	<0.003	49	Clear No odor
3	57.38	68.92	1.8	8	5/18/2016	324		1,180	<0.001	<0.001	<0.001	<0.003	62.2	Clear No odor
3	57.51	68.92	1.8	10	9/12/2016	296		1,150	<0.001	<0.001	<0.001	<0.003	53	Clear No odor
3	57.48	68.92	1.8	10	11/11/2016	292	308	1,050	<0.001	<0.001	<0.001	<0.003	44	Clear No odor
3	57.61	68.92	1.8	10	2/21/2017	200		1,380	<0.001	<0.001	<0.001	<0.003	43	Clear No odor
3	57.64	68.92	1.8	10	5/23/2017	220		980	<0.001	<0.001	<0.001	<0.003	59	Clear No odor
3	57.85	68.92	1.8	10	9/8/2017	204		942	<0.001	<0.001	<0.001	<0.003	59	Clear No odor
3	57.88	68.92	1.8	10	11/29/2017	248	218	930	<0.001	<0.001	<0.001	<0.003	55	Clear No odor
3	57.86	68.92	1.8	10	2/27/2018	208		766	<0.001	<0.001	<0.001	<0.003	51.3	Clear No odor
3	57.93	68.92	1.8	10	5/16/2018	248		962	<0.001	<0.001	<0.001	<0.003	57.7	Clear No odor
3	58.12	68.92	1.7	10	9/6/2018	224		916	<0.001	<0.001	<0.001	<0.003	53.4	Clear No odor
3	58.14	68.92	1.7	10	11/14/2018	236	229	856	<0.001	<0.001	<0.001	<0.003	57.4	Clear No odor
3	58.24	68.92	1.7	10	3/5/2019	268		968	<0.001	<0.001	<0.001	<0.003	57	Clear No odor

3	58.4	68.92	1.7	10	5/28/2019	260		1,010	<0.001	<0.001	<0.001	<0.003	60	Clear No odor
3	58.22	68.92	1.7	10	8/29/2019	256		938	<0.001	<0.001	<0.001	<0.003	54	Clear No odor
3	58.56	68.92	1.7	10	11/15/2019	286	268	1,020	<0.001	<0.001	<0.001	<0.003	56	Clear No odor
3	58.68	68.92	1.6	10	3/5/2020	248		1,000	<0.001	<0.001	<0.001	<0.003	64.4	Clear No odor
3	58.78	68.92	1.6	10	6/15/2020	216		1,010	XXX	XXX	XXX	XXX	78.4	Clear No odor
3	58.87	68.92	1.6	10	9/10/2020	288		1,040	XXX	XXX	XXX	XXX	57.4	Clear No odor
3	58.93	68.92	1.6	10	11/5/2020	276	257	995	XXX	XXX	XXX	XXX	61.6	Clear No odor
3	59.07	68.92	1.6	10	3/10/2021	276		968	XXX	XXX	XXX	XXX	58	Clear No odor
3	59.29	68.92	1.5	10	6/10/2021	280		1,070	XXX	XXX	XXX	XXX	64.2	Clear No odor
3	59.41	68.92	1.5	10	9/10/2021	324		1,220	XXX	XXX	XXX	XXX	84.1	Clear No odor
3	59.36	68.92	1.5	10	11/9/2021	304	296	1,120	XXX	XXX	XXX	XXX	69	Clear No odor
3	59.59	68.92	1.5	10	3/1/2022	300		1,010	XXX	XXX	XXX	XXX	69.5	Clear No odor
3	59.79	68.92	1.5	10	6/6/2022	328		1,090	XXX	XXX	XXX	XXX	78.9	Clear No odor
3	59.85	68.92	1.5	10	9/6/2022	316		1,110	XXX	XXX	XXX	XXX	76.2	Clear No odor
3	59.88	68.92	1.4	10	11/30/2022	308	313	1,070	XXX	XXX	XXX	XXX	49.8	Clear No odor



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

March 09, 2022

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM L-26 VENT

Enclosed are the results of analyses for samples received by the laboratory on 03/04/22 14:36.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	03/04/2022	Sampling Date:	03/01/2022
Reported:	03/09/2022	Sampling Type:	Water
Project Name:	VACUUM L-26 VENT	Sampling Condition:	** (See Notes)
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC26 L-LEA CTY., NM		

Sample ID: MONITOR WELL #1R (H220869-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	312	4.00	03/07/2022	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*	69.7	10.0	03/08/2022	ND	19.0	94.9	20.0	5.18		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1080	5.00	03/09/2022	ND	505	101	500	1.60		

Sample ID: MONITOR WELL #2 (H220869-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	104	4.00	03/07/2022	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*	64.2	10.0	03/08/2022	ND	19.0	94.9	20.0	5.18		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	458	5.00	03/08/2022	ND	505	101	500	1.60		

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	03/04/2022	Sampling Date:	03/01/2022
Reported:	03/09/2022	Sampling Type:	Water
Project Name:	VACUUM L-26 VENT	Sampling Condition:	** (See Notes)
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC26 L-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H220869-03)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	300	4.00	03/07/2022	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*	69.5	10.0	03/08/2022	ND	19.0	94.9	20.0	5.18		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1010	5.00	03/09/2022	ND	505	101	500	1.60		

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

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*=Accredited Analyte

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A handwritten signature in cursive script, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # H220869

Company Name:	BILL TO Company:	PO#
RICE Operating Company	RICE Operating Company	
Project Manager:	Address:	(Street, City, Zip)
Katie Jones	122 W Taylor Street ~ Hobbs, New Mexico	88240
Address:	Phone#:	Fax#:
(Street, City, Zip)		
122 W Taylor Street ~ Hobbs, New Mexico 88240	(575) 393-9174	(575) 397-1471
Phone #:	Fax #:	
(575) 393-9174	(575) 397-1471	
Project #:	Project Name:	
	Vacuum L-26 Vent	
Project Location:	Sampler Signature:	Rozanne Johnson (575) 831-9310
T17S-R35E-Sec26 L ~ Lea County New Mexico		

ANALYSIS REQUEST
(Circle or Specify Method No.)

[illegible]



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

June 14, 2022

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM L-26 VENT

Enclosed are the results of analyses for samples received by the laboratory on 06/08/22 12:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	06/08/2022	Sampling Date:	06/06/2022
Reported:	06/14/2022	Sampling Type:	Water
Project Name:	VACUUM L-26 VENT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC26 L-LEA CTY., NM		

Sample ID: MONITOR WELL #1R (H222437-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	132	4.00	06/09/2022	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*	55.6	10.0	06/10/2022	ND	18.7	93.6	20.0	8.94		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	553	5.00	06/14/2022	ND	514	103	500	7.31		

Sample ID: MONITOR WELL #2 (H222437-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	36.0	4.00	06/09/2022	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*	54.7	10.0	06/10/2022	ND	18.7	93.6	20.0	8.94		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	564	5.00	06/14/2022	ND	514	103	500	7.31		

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*=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:	06/08/2022	Sampling Date:	06/06/2022
Reported:	06/14/2022	Sampling Type:	Water
Project Name:	VACUUM L-26 VENT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC26 L-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H222437-03)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	328	4.00	06/09/2022	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*	78.9	10.0	06/10/2022	ND	18.7	93.6	20.0	8.94		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1090	5.00	06/14/2022	ND	514	103	500	7.31		

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

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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

Celey D. Keene, Lab Director/Quality Manager

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

Cardinal Laboratories, Inc.

Page 1 of 1

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 L-26 Vent		
Project Location: T17S-R35E-Sec26 L ~ Lea County New Mexico				
Sampler Signature: <i>Rozanne Johnson</i> (575) 631-9310				

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY) H222437	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX				PRESERVATIVE METHOD				SAMPLING		MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr	TCLP Metals Ag As Ba Cd Cr	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		
				WATER	SOIL	AIR	SLUDGE	HCL (4 40ml VOA)	HNO3	NaHSO4	H2SO4	ICE (1-1 Liter HDPE)	NONE																							DATE (2022)	TIME
1	Monitor Well #1R	G	1	X																																	
2	Monitor Well #2	G	1	X																																	
3	Monitor Well #3	G	1	X																																	

Relinquished by: <i>Rozanne Johnson</i>	Date: <i>6/8/2022</i>	Time: <i>10:00</i>	Received by: <i>Rozanne Johnson</i>	Date: <i>6/8/2022</i>	Time: <i>10:05</i>						
Relinquished by: <i>Rozanne Johnson</i>	Date: <i>6/8/22</i>	Time: <i>12:50</i>	Received By: (Laboratory Staff) <i>Rozanne Johnson</i>	Date: <i>6-8-22</i>	Time: <i>1250</i>						
Delivered By: (Circle One)	Sample Condition										
Sampler - UPS - Bus - Other:	<table border="1"> <tr> <td>Yes</td> <td>Cool</td> <td>Intact</td> </tr> <tr> <td>No</td> <td>Yes</td> <td>No</td> </tr> </table>					Yes	Cool	Intact	No	Yes	No
Yes	Cool	Intact									
No	Yes	No									
CHECKED BY: <i>TO</i>			(Initials)								

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

September 15, 2022

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM L-26 VENT

Enclosed are the results of analyses for samples received by the laboratory on 09/12/22 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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:	09/12/2022	Sampling Date:	09/06/2022
Reported:	09/15/2022	Sampling Type:	Water
Project Name:	VACUUM L-26 VENT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC26 L-LEA CTY., NM		

Sample ID: MONITOR WELL #1R (H224187-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	284	4.00	09/13/2022	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*	68.5	10.0	09/14/2022	ND	19.2	96.2	20.0	12.6		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	890	5.00	09/15/2022	ND	514	103	500	1.32		

Sample ID: MONITOR WELL #2 (H224187-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	160	4.00	09/13/2022	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*	61.3	10.0	09/14/2022	ND	19.2	96.2	20.0	12.6		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	644	5.00	09/15/2022	ND	514	103	500	1.32		

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*=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:	09/12/2022	Sampling Date:	09/06/2022
Reported:	09/15/2022	Sampling Type:	Water
Project Name:	VACUUM L-26 VENT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC26 L-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H224187-03)

Chloride, SM4500Cl-B		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	316	4.00	09/13/2022	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*	76.2	10.0	09/14/2022	ND	19.2	96.2	20.0	12.6		
TDS 160.1		mg/L		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1110	5.00	09/15/2022	ND	514	103	500	1.32		

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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.
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", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

ANALYSIS REQUEST

(Circle or Specify Method No.)

[illegible]

Yes	No
-----	----

Yes	No
-----	----

REMARKS:

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

CHECKED BY:

(Initials)

Sampler - UPS - Bus - Other:

Page 5 of 5

Released to Imaging: 5/23/2023 11:20:05 AM



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

December 12, 2022

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM L-26 VENT

Enclosed are the results of analyses for samples received by the laboratory on 12/02/22 15:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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.

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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:	12/02/2022	Sampling Date:	11/30/2022
Reported:	12/12/2022	Sampling Type:	Water
Project Name:	VACUUM L-26 VENT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC26 L-LEA CTY., NM		

Sample ID: MONITOR WELL #1R (H225675-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	330	4.00	12/05/2022	ND	100	100	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	52.9	25.0	12/05/2022	ND	18.4	92.0	20.0	5.55		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1100	5.00	12/06/2022	ND	491	98.2	500	3.46		

Sample ID: MONITOR WELL #2 (H225675-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	108	4.00	12/05/2022	ND	100	100	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	52.3	25.0	12/05/2022	ND	18.4	92.0	20.0	5.55		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	481	5.00	12/06/2022	ND	491	98.2	500	3.46		

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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:	12/02/2022	Sampling Date:	11/30/2022
Reported:	12/12/2022	Sampling Type:	Water
Project Name:	VACUUM L-26 VENT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC26 L-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H225675-03)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	308	4.00	12/05/2022	ND	100	100	100	0.00		
Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	49.8	25.0	12/05/2022	ND	18.4	92.0	20.0	5.55		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1070	5.00	12/06/2022	ND	491	98.2	500	3.46		

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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.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
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Cardinal Laboratories

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

Celey D. Keene, Lab Director/Quality Manager

Cardinal Laboratories, Inc.

Project #: Vacuum L-26 Vent

Sampler Signature: Rozanne Johnson (575)631-9310

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

LAB Order ID # _____

(Circle or Specify Method No.)

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

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 202306

CONDITIONS

Operator: RICE OPERATING COMPANY 122 W Taylor Hobbs, NM 88240	OGRID:
	19174
	Action Number: 202306
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Review of 2022 Annual Groundwater Report: Content satisfactory 1. MW #1R had eight (8) consecutive quarters (CQ) below the allowable concentrations (AC) for chloride between 5/29/2014 to 2/25/2016 & fourteen between 5/23/2017 to 9/10/2020. 2. MW #1 and #1R combined had fifteen (15) CQ below the AC for total dissolved solids (TDS) between 8/24/2012 to 2/25/2016 & fourteen between 2/21/2017 to 11/05/2020. 3. MW #1 and #1R combined had all sampling events below the AC for sulfate. 3. MW #2 had all constituents of concern below the AC. 4. MW #3 had eight (8) CQ below the AC for chloride between 2/21/2017 to 11/14/2018. 5. MW #3 had eight (8) CQ below the AC for TDS between 5/23/2017 to 3/05/2019. 6. MW #3 - all sampling events below the AC for sulfate. 7. Depth to water has declined steadily since later part of 2011 to the present by approximately 3.5 feet. 8. Based on the above, OCD will approve closure with a properly requested submittal.	5/23/2023