L Peter Galusky, Jr PE

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April 1st, 2024

REVIEWED
By Mike Buchanan at 10:49 am, Sep 17, 2024

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

Review of the 2023 Annual Report for Vacuum N-6-1 Jct (1R0479): content satisfactory
1. Continue to conduct groundwater recovery as prescribed in the report.
2. Conduct groundwater sampling on a quarterly schedule for the 2024 calendar year.
3. Submit the 2024 annual report to OCD by April 1, 2025.

RE: **2023 Annual Report**
Rice Operating Company
Vacuum N-6-1 Jct (1R0479): UL N, Sec 6, T18S, R35E
NMOCD Application ID: 202397, Incident ID: nAPP21103

Sent by E-mail

Mr. Velez:

This letter summarizes progress made over the past calendar year pu s approval e-mail letter of May 23rd, 2023 for this site which is operated by Rice Operating Company (ROC). Geographic location and site maps are given in the Appendix, Figure 1 and 2, respectively. A groundwater elevation and flow map is given in the Appendix, Figure 3. The groundwater depth near the site of the release is approximately 120 ft.

ROC submitted a Vadose Zone Corrective Action Plan (CAP) Update to NMOCD on November 8th, 2013, and approved on November 20th, 2013, which entailed the removal of high-chloride soils to 3 ft bgs and the installation of an impermeable, 20-mil reinforced synthetic liner to reduce the potential downward migration of residual soil chlorides (Appendix - Figure 2). This work was completed in 2014 and is summarized in the Vadose Zone CAP Report & Soil Closure Request dated and submitted to NMOCD on August 12th, 2014. NMOCD approved the report and granted 'Soil Closure' on September 18th, 2014.

ROC continued to monitor groundwater chloride concentrations during 2023. Please see the Appendix, Figure 4 and Table 1 (dataset summary) & Table 2 (full dataset). In brief,

- Approximately 47,685 barrels of chloride-affected groundwater have been removed from the source area from 2008 through 2023. The removed groundwater was hauled to an off-site location and utilized for a beneficial use.

- Average annual groundwater chloride concentrations in the near-source monitor well (MW-1) dropped from 21,700 mg/l in 2006 to 5,100 mg/l in 2014 (Figure 4, Tables 1&2). This well was replaced in summer 2014 with a new monitor well, MW-1R, after being damaged during the installation of the

sub-surface soil liner. Average annual groundwater chloride concentrations in MW-1R increased slightly from 338 mg/l in 2022 to 437 mg/l in 2023.

- Groundwater chloride concentrations in up and down gradient monitor wells (MW-2, MW-3 and MW-4) have continued to remain low throughout 2023 with concentrations at or below 66 mg/l.

- Average annual groundwater chloride concentrations in the (down-gradient) recovery well (RW-1) dropped from 583 mg/l in 2022 to 334 mg/l in 2023.

Water-soluble petroleum hydrocarbons (BTEX) were not detected in any of the groundwater samples taken in 2020 nor in any prior years. In 2020, NMOCD granted approval to cease BTEX sampling and analysis.

ROC will continue quarterly groundwater sampling and groundwater recovery in 2024.

ROC is the service provider (agent) for the Vacuum Salt Water Disposal System and has no ownership of any portion of pipeline, well or facility. The Vacuum SWD 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.

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

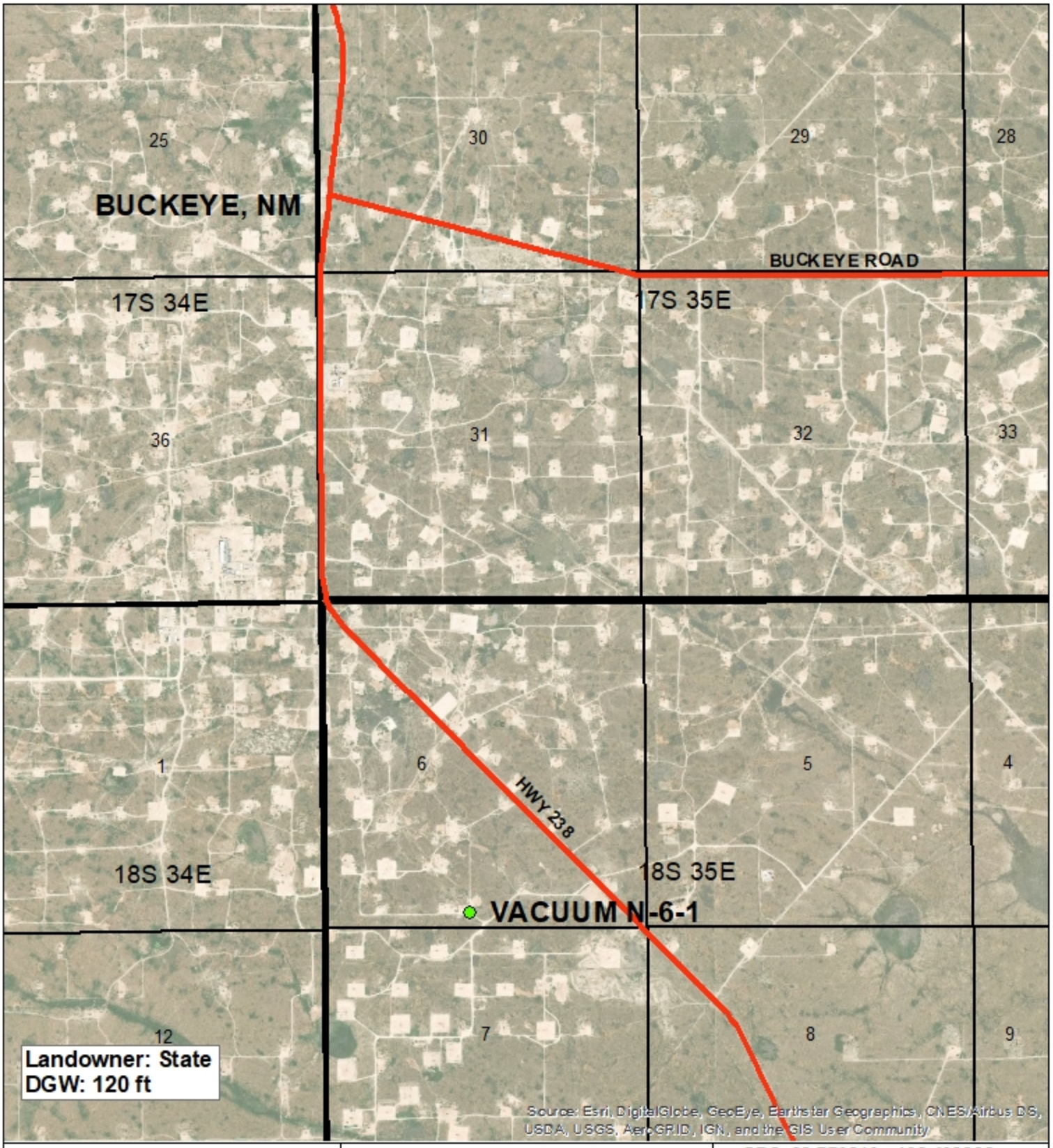
Sincerely,

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

Copy: Rice Operating Company
Attachments: … as noted, above.

Geographic Location

Figure 1



RICE OPERATING COMPANY
ROC
SINCE 1955

VACUUM
N-6-1

1R0479

UL N SECTION 6
T-18-S R-35-E
LEA COUNTY, NM

GPS: 32.770216 -103.498268
NAD83 STATE PLANE PROJ
NM EAST ZONE

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Miles

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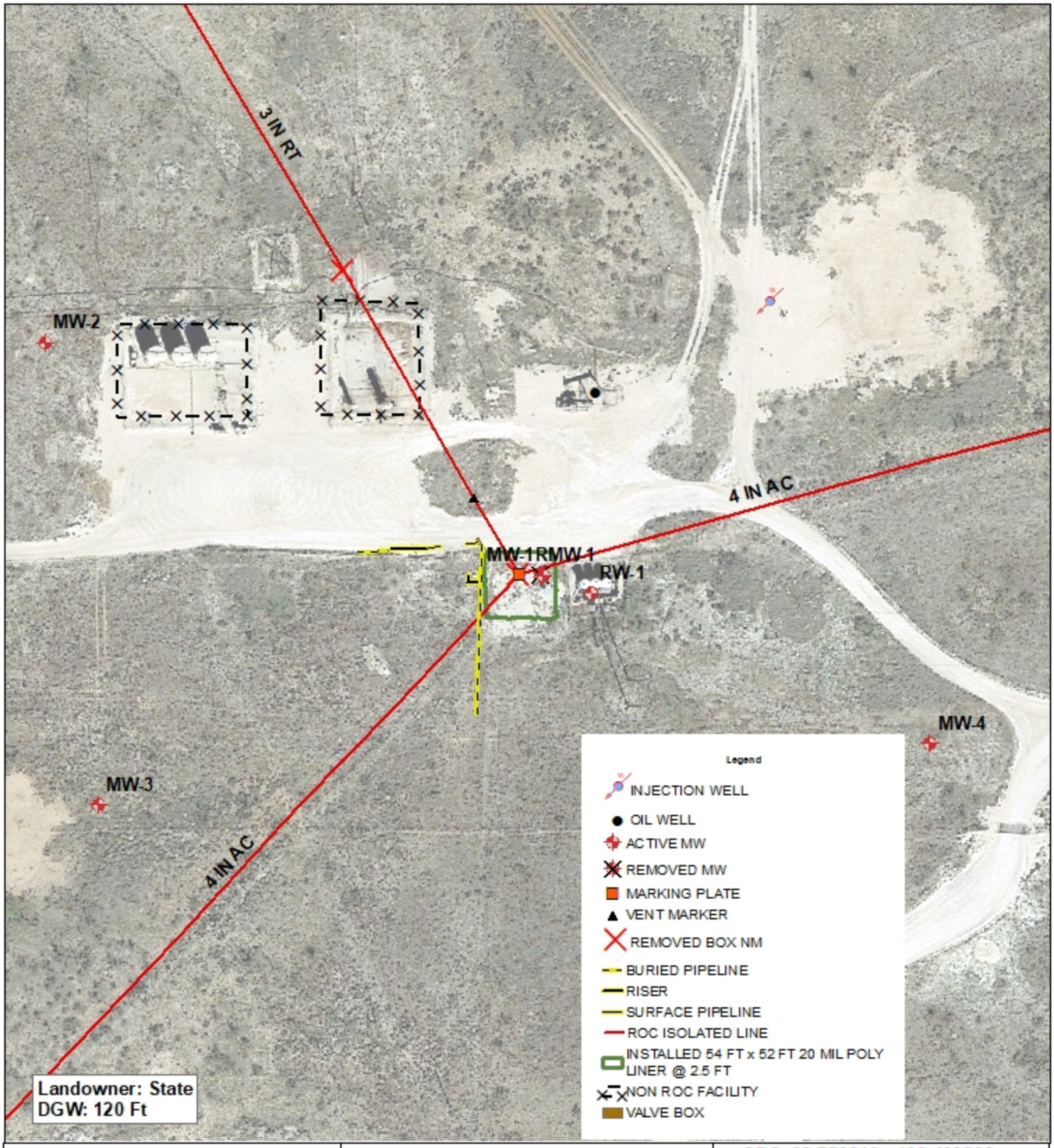
Drawing date: 2/5/20
Drafted by: T. Grieco

Site Map

Figure 2



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UL/N SEC 6
T-18-S R-35-E
LEA COUNTY, NM

GPS: 32.770216 -103.498268
NAD83 STATE PLANE PROJ
NM EAST ZONE

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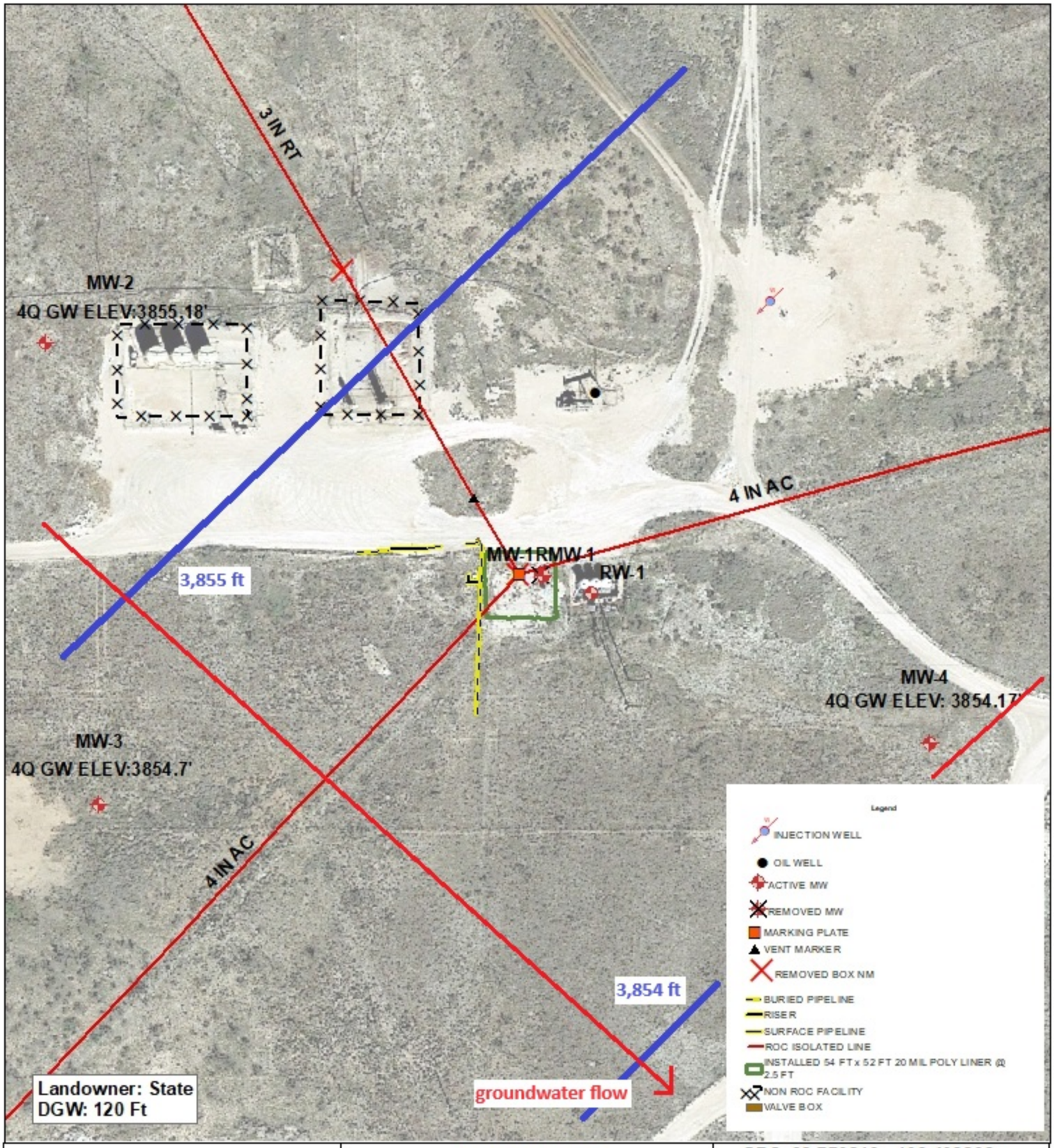
0 50 100
Feet

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

Groundwater Elevation

Figure 3



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N-6-1
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LEA COUNTY, NM

GPS: 32.770216 -103.498268
NAD83 STATE PLANE PROJ
NM EAST ZONE

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0 50 100
Feet

Drawing date: 3/6/24
Drafted by: T. Grieco

Figure 4

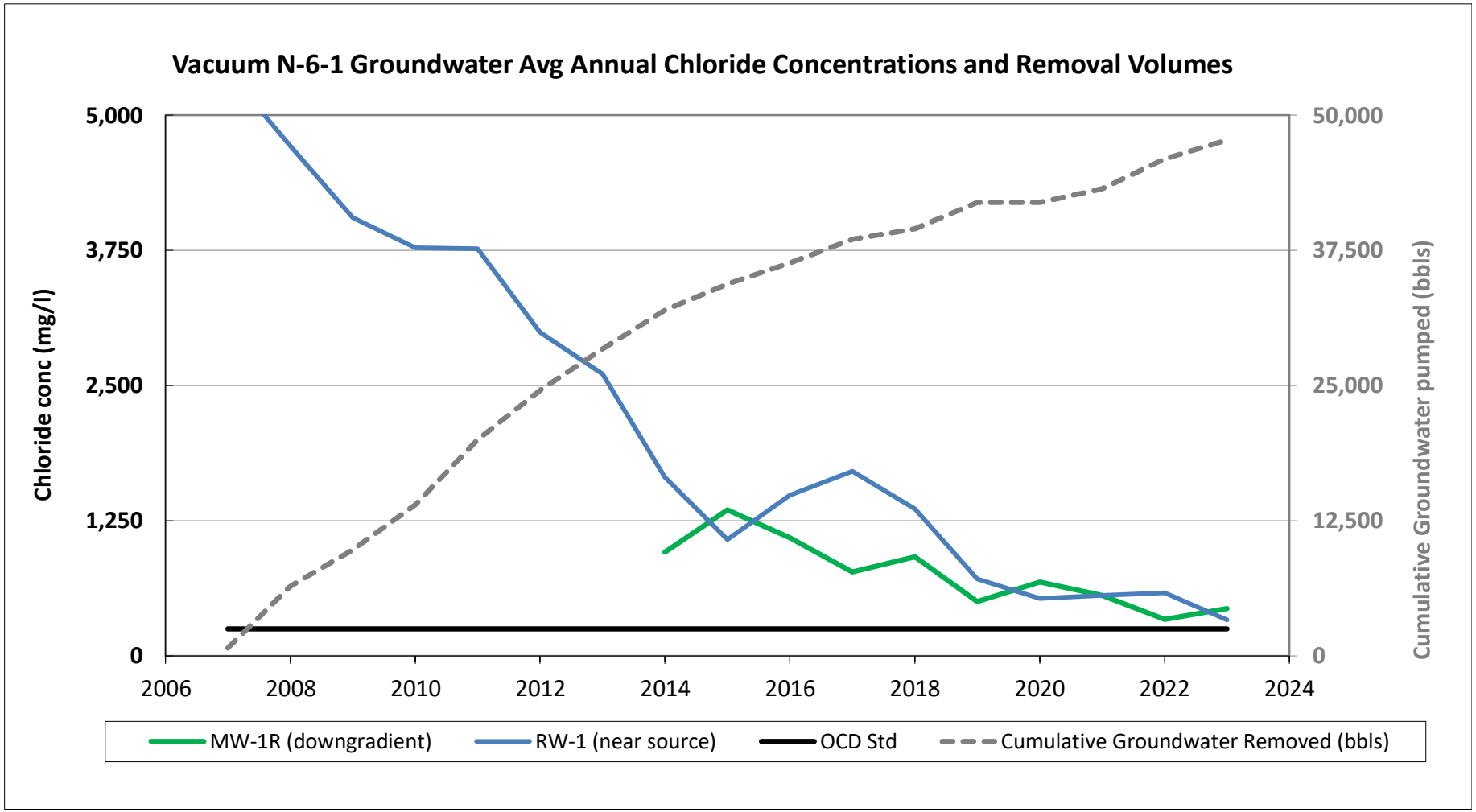
Vacuum N-6-1 Groundwater Avg Annual Chloride Concentrations and Removal Volumes
Chloride conc (mg/l)
5,000
3,750
2,500
1,250
0
50,000
37,500
25,000
12,500
0
Cumulative Groundwater pumped (bbls)
2006
2008
2010
2012
2014
2016
2018
2020
2022
2024
MW-1R (downgradient)
RW-1 (near source)
OCD Std
Cumulative Groundwater Removed (bbls)

Table 1

ROC - Vacuum N-6-1 (1R0479)

Annual Average Groundwater Chloride Concentrations (mg/l)
and Groundwater Volume (bbls) **and Chloride Mass** (kg) **Removal**

Year	MW-2 (upgradient northwest)	MW-3 (upgradient, southwest)	MW-4 (downgradient, southeast)	RW-1 (near source)	MW-1R (downgradient)	OCD Std	Cumulative Groundwater Removed (bbls)	Cumulative Chloride Mass Removed (kg)
2006								
2007	24	23	41	5,399		250	738	480
2008	32	27	41	4,713		250	6,438	4,371
2009	30	27	34	4,050		250	9,819	6,491
2010	27	23	38	3,775		250	13,957	9,269
2011	27	25	37	3,763		250	20,003	12,627
2012	31	24	38	2,993		250	24,560	14,449
2013	30	28	31	2,608		250	28,390	15,899
2014	64	28	37	1,653	960	250	31,972	16,910
2015	37	27	30	1,075	1,350	250	34,372	17,326
2016	47	24	43	1,485	1,093	250	36,322	17,560
2017	39	34	37	1,708	776	250	38,517	17,774
2018	51	37	41	1,360	915	250	39,497	17,860
2019	33	34	32	713	503	250	41,927	18,039
2020	32	28	50	530	684	250	41,927	
2021	59	33	42	560	560	250	43,173	18,148
2022	56	38	38	583	338	250	45,943	18,325
2023	66	39	36	334	437	250	47,685	18,409

ROC - Vacuum N-6-1 (1R0479)
Unit Letter N, Section 6, T18S, 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	116.43	125.8	1.5	10	10/18/2006	21,400	21,400	40,100	<0.001	<0.001	<0.001	<0.001	475	Silt to clear
1	116.66	125.1	1.4	10	3/7/2007	20,200		28,100	<0.001	<0.001	<0.001	<0.001	584	Silt to clear Slight odor
1	116.61	125.1	1.4	10	5/29/2007	18,500		35,900	<0.001	<0.001	<0.001	<0.001	449	Silt to clear Slight odor
1	116.95	125.1	1.3	5	9/25/2007	15,795		27,714	<0.002	<0.002	<0.002	<0.006	152	Silt to clear Slight odor
1	116.98	125.1	1.3	5	10/17/2007	16,400	17,724	27,927	<0.001	0.004	<0.001	<0.001	143	Silt to clear Slight odor
1	117.02	125.1	1.3	5	1/31/2008	15,400		28,300	<0.001	<0.001	<0.001	<0.003	148	Silt to clear Slight odor
1	117.22	125.1	1.3	5	4/24/2008	14,300		24,800	<0.001	<0.001	<0.001	<0.003	128	Silt to clear Slight odor
1	117.67	125.1	1.2	5	8/7/2008	14,000		24,900	<0.001	<0.001	<0.001	<0.003	158	Silt to clear Slight odor
1	117.62	125.1	1.2	5	10/30/2008	14,000	14,425	28,200	<0.001	<0.001	<0.001	<0.003	126	Silt to clear Slight odor
1	117.78	125	1.1	5	1/23/2009	13,600		24,200	<0.001	<0.001	<0.001	<0.003	109	Silt to clear Slight odor
1	118.09	125	1.1	5	4/29/2009	14,200		22,800	<0.001	<0.001	<0.001	<0.003	110	Silt to clear Slight odor
1	118.08	125	1.1	5	8/7/2009	12,800		21,200	<0.001	<0.001	<0.001	<0.003	102	Silt to clear Slight odor
1	118.43	125	1	5	10/22/2009	12,200	13,200	19,700	<0.001	<0.001	<0.001	<0.003	76.4	Silt to clear Slight odor
1	118.78	125	1	5	4/26/2010	10,700		18,400	<0.001	<0.001	<0.001	<0.003	96	Silt to clear Slight odor
1	118.28	125	1.1	5	2/11/2010	12,100		20,700	<0.001	<0.001	<0.001	<0.003	94.4	Silt to clear Slight odor
1	118.6	125	1	5	8/5/2010	9,800		15,600	<0.001	<0.001	<0.001	<0.003	79.4	Silt to clear Slight odor
1	118.96	125	1	5	10/28/2010	8,900	10,375	16,800	<0.001	<0.001	<0.001	<0.003	81.7	Silt to clear Slight odor
1	118.89	125.2	1	5	2/21/2011	7,730		13,200	<0.001	0.001	<0.001	<0.003	60.3	Silt to clear Slight odor
1	119.35	125.2	0.9	5	6/6/2011	9,800		13,700	<0.001	<0.001	<0.001	<0.003	77.8	Silt to clear Slight odor
1	120.17	125.2	0.8	5	9/2/2011	9,300		11,800	<0.001	<0.001	<0.001	<0.003	94.9	Silt to clear Slight odor
1	119.72	125.2	0.9	5	12/4/2011	6,900	8,433	11,500	<0.001	<0.001	<0.001	<0.003	81	Silt to clear Slight odor
1	119.76	125.2	0.9	5	2/24/2012	6,000		10,400	<0.001	<0.001	<0.001	<0.003	77.5	Silt to clear Slight odor
1	119.78	125.2	0.9	5	6/1/2012	5,700		10,100	<0.001	<0.001	<0.001	<0.003	77.2	Silt to clear Slight odor
1	119.83	125.2	0.9	5	8/31/2012	5,700		9,330	<0.001	<0.001	<0.001	<0.003	66.3	Silt to clear Slight odor
1	119.98	125.2	0.8	5	11/16/2012	5,400	5,700	9,240	<0.001	<0.001	<0.001	<0.003	71.8	Silt to clear Slight odor
1	120.03	125.2	0.8	5	2/14/2013	4,850		8,110	<0.001	<0.001	<0.001	<0.003	65	Silt to clear Slight odor
1	120.4	125.2	0.8	5	5/23/2013	5,100		8,230	<0.001	<0.001	<0.001	<0.003	74	Silt to clear Slight odor
1	120.6	125.2	0.7	5	9/4/2013	4,100		7,160	<0.001	<0.001	<0.001	<0.003	55.2	Silt to clear Slight odor
1	120.61	125.2	0.7	5	11/13/2013	3,130	4,295	6,910	<0.001	<0.001	<0.001	<0.003	60.9	Silt to clear Slight odor
1	120.64	125.2	0.7	5	3/14/2014	5,100		7,250	<0.001	<0.001	<0.001	<0.003	72.8	Silt to clear Slight odor

ROC - Vacuum N-6-1 (1R0479)
Unit Letter N, Section 6, T18S, 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
MW-1R installed 7/17/2014														
1R	XXX	XXX	0	Running	8/22/2014	1,300		2,770	<0.001	<0.001	<0.001	<0.003	45.7	Silt to clear Slight odor
1R	XXX	168.3	0	100	12/13/2014	620	2,340	1,360	<0.001	<0.001	<0.001	<0.003	37.1	Silt to clear Slight odor
1R	XXX	168.3	0	100	3/9/2015	2,270		5,920	<0.001	<0.001	<0.001	<0.003	180	Silt to clear Slight odor
1R	XXX	168	0	Running	6/8/2015	1,110		2,670	<0.001	<0.001	<0.001	<0.003	48	Silt to clear Slight odor
1R	XXX	168	0	Running	8/25/2015	1,100		1,970	<0.001	<0.001	<0.001	<0.003	36.1	Silt to clear Slight odor
1R	XXX	168	0	Running	11/17/2015	920	1,350	1,780	<0.001	<0.001	<0.001	<0.003	40.2	Silt to clear Slight odor
1R	XXX	168.3	XXX	100	3/21/2016	1,300		2,880	<0.001	<0.001	<0.001	<0.003	209	Silt to clear Slight odor
1R	XXX	168.3	XXX	100	6/3/2016	1,300		2,750	<0.001	<0.001	<0.001	<0.003	71.8	Silt to clear Slight odor
1R	XXX	168.3	XXX	Running	9/21/2016	710		1,500	<0.001	<0.001	<0.001	<0.003	40	Silt to clear Slight odor
1R	XXX	168.3	XXX	100	11/28/2016	1,060	1,093	2,040	<0.001	<0.001	<0.001	<0.003	43	Silt to clear Slight odor
1R	XXX	168.3	XXX	100	3/8/2017	1,340		2,790	<0.001	<0.001	<0.001	<0.003	204	Silt to clear Slight odor
1R	XXX	168.3	XXX	Running	6/8/2017	32		320	<0.001	<0.001	<0.001	<0.003	43	Silt to clear Slight odor
1R	XXX	168.3	XXX	Running	9/20/2017	570		1,470	<0.001	<0.001	<0.001	<0.003	42	Silt to clear Slight odor
1R	XXX	168.3	XXX	100	12/11/2017	1,160	776	2,310	<0.001	<0.001	<0.001	<0.003	80	Silt to clear Slight odor
1R	XXX	168	XXX	100	3/13/2018	1,520		2,830	<0.001	<0.001	<0.001	<0.003	74	Silt to clear Slight odor
1R	XXX	168	XXX	100	6/8/2018	570		1,190	<0.001	<0.001	<0.001	<0.003	38.9	Silt to clear Slight odor
1R	XXX	168.3	XXX	Running	9/17/2018	510		1030	<0.001	<0.001	<0.001	<0.003	40	Silt to clear Slight odor
1R	XXX	168	XXX	100	11/29/2018	1,060	915	1,760	<0.001	<0.001	<0.001	<0.003	52.5	Silt to clear Slight odor
1R	XXX	168.3	XXX	100	3/19/2019	730		1,540	<0.001	<0.001	<0.001	<0.003	70	Silt to clear Slight odor
1R	XXX	168.3	XXX	Running	6/14/2019	450		1,030	<0.001	<0.001	<0.001	<0.003	38	Silt to clear Slight odor
1R	XXX	168.3	XXX	Running	9/18/2019	428		966	<0.001	<0.001	<0.001	<0.003	40	Silt to clear Slight odor
1R	XXX	168.3	XXX	100	12/3/2019	404	503	828	<0.001	<0.001	<0.001	<0.003	40	Silt to clear Slight odor
1R	XXX	168	XXX	100	3/23/2020	860		1,650	<0.001	<0.001	<0.001	<0.003	47.4	Silt to clear Slight odor
1R	XXX	168	XXX	100	9/22/2020	508	684	1,100	XXX	XXX	XXX	XXX	63.8	Silt to clear Slight odor
1R	XXX	168	XXX	100	3/19/2021	440		1,030	XXX	XXX	XXX	XXX	57.6	Silt to clear Slight odor
1R	XXX	168	XXX	Running	6/18/2021	780		1,580	XXX	XXX	XXX	XXX	60.9	Silt to clear Slight odor
1R	XXX	168	XXX	Running	9/20/2021	320		840	XXX	XXX	XXX	XXX	44.9	Silt to clear Slight odor
1R	XXX	168	XXX	100	11/20/2021	700	560	1,520	XXX	XXX	XXX	XXX	56.4	Silt to clear Slight odor
1R	XXX	168	XXX	100	3/21/2022	470		1,050	XXX	XXX	XXX	XXX	71.9	Silt to clear Slight odor
1R	XXX	168	XXX	Running	6/17/2022	288		776	XXX	XXX	XXX	XXX	32.2	Silt to clear Slight odor
1R	XXX	168	XXX	Running	9/9/2022	408		1,010	XXX	XXX	XXX	XXX	36.2	Silt to clear Slight odor
1R	XXX	168	XXX	100	12/7/2022	184	338	910	XXX	XXX	XXX	XXX	27.8	Silt to clear Slight odor

ROC - Vacuum N-6-1 (1R0479)
Unit Letter N, Section 6, T18S, 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
1R	XXX	168	XXX	100	3/21/2023	324		728	XXX	XXX	XXX	XXX	42.4	Silt to clear Slight odor
1R	XXX	168	XXX	100	6/9/2023	700		1,550	XXX	XXX	XXX	XXX	40.7	Silt to clear Slight odor
1R	XXX	168	XXX	Running	9/14/2023	224		670	XXX	XXX	XXX	XXX	35.9	Silt to clear Slight odor
1R	XXX	168	XXX	Running	10/10/2023	500	437	1,090	XXX	XXX	XXX	XXX	49.8	Silt to clear Slight 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	117.56	126.9	1.5	8	3/7/2007	21		278	<0.001	<0.001	<0.001	<0.001	30.5	Sand to clear No odor
2	117.61	126.9	1.5	2	5/29/2007	24		296	<0.001	<0.001	<0.001	<0.001	34.2	Sand to clear No odor
2	117.89	126.9	1.4	6	9/25/2007	24		319	<0.002	<0.002	<0.002	<0.006	38	Sand to clear No odor
2	117.92	126.9	1.4	6	10/17/2007	28	24	289	<0.001	0.005	<0.001	0.004	37.8	Sand to clear No odor
2	117.96	126.6	1.4	6	1/31/2008	28		325	<0.001	<0.001	<0.001	<0.003	36.4	Sand to clear No odor
2	118.11	126.6	1.4	6	4/24/2008	28		286	<0.001	<0.001	<0.001	<0.003	30.7	Sand to clear No odor
2	118.35	126.6	1.3	6	8/7/2008	32		324	<0.001	<0.001	<0.001	<0.003	48	Sand to clear No odor
2	118.53	126.6	1.3	6	10/30/2008	40	32	342	<0.001	<0.001	<0.001	<0.003	47.3	Sand to clear No odor
2	118.65	126.6	1.3	6	1/23/2009	36		365	<0.001	<0.001	<0.001	<0.003	44.6	Sand to clear No odor
2	118.81	126.6	1.2	6	4/29/2009	24		346	<0.001	<0.001	<0.001	<0.003	34.2	Sand to clear No odor
2	118.96	126.6	1.2	6	8/7/2009	36		24	<0.001	<0.001	<0.001	<0.003	302	Silt to clear No odor
2	119.11	126.6	1.2	6	10/22/2009	24	30	314	<0.001	<0.001	<0.001	<0.003	32.8	Sand to clear No odor
2	119.49	126.5	1.1	6	4/26/2010	28		324	<0.001	<0.001	<0.001	<0.003	42.4	Sand to clear No odor
2	119.25	126.5	1.2	6	2/11/2010	28		343	<0.001	<0.001	<0.001	<0.003	42.6	Sand to clear No odor
2	119.55	126.5	1.1	6	8/5/2010	28		316	<0.001	<0.001	<0.001	<0.003	35	Sand to clear No odor
2	119.71	126.5	1.1	6	10/28/2010	24	27	336	<0.001	<0.001	<0.001	<0.003	39	Sand to clear No odor
2	119.96	127	1.1	6	2/21/2011	24		311	<0.001	<0.001	<0.001	<0.003	34.8	Sand to clear No odor
2	120.08	127	1.1	6	6/6/2011	28		309	<0.001	<0.001	<0.001	<0.003	39.3	Sand to clear No odor
2	120.31	127	1.1	6	9/2/2011	32		270	<0.001	<0.001	<0.001	<0.003	49	Sand to clear No odor
2	120.47	127	1	6	12/4/2011	24	27	303	<0.001	<0.001	<0.001	<0.003	40.1	Sand to clear No odor
2	120.56	127	1	6	2/24/2012	24		343	<0.001	<0.001	<0.001	<0.003	37.9	Sand to clear No odor
2	120.67	127	1	6	6/1/2012	32		311	<0.001	<0.001	<0.001	<0.003	40.2	Sand to clear No odor
2	120.93	127	1	6	8/31/2012	40		320	<0.001	<0.001	<0.001	<0.003	36.4	Sand to clear No odor
2	121.08	127	0.9	6	11/16/2012	28	31	303	<0.001	<0.001	<0.001	<0.003	30.4	Sand to clear No odor
2	121.11	127	0.9	6	2/14/2013	36		326	<0.001	<0.001	<0.001	<0.003	55.6	Sand to clear No odor

ROC - Vacuum N-6-1 (1R0479)
Unit Letter N, Section 6, T18S, 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
2	121.27	127	0.9	6	5/23/2013	24		255	<0.001	<0.001	<0.001	<0.003	43.5	Sand to clear No odor
2	121.54	127	0.9	6	9/4/2013	28		290	<0.001	<0.001	<0.001	<0.003	33.1	Sand to clear No odor
2	121.52	127	0.9	6	11/13/2013	32	30	300	<0.001	<0.001	<0.001	<0.003	46.6	Sand to clear No odor
2	121.65	127	0.9	6	3/14/2014	68		336	<0.001	<0.001	<0.001	<0.003	36.8	Sand to clear No odor
2	121.78	127	0.8	6	6/24/2014	60		368	<0.001	<0.001	<0.001	<0.003	57.6	Sand to clear No odor
2	121.89	127	0.8	6	8/22/2014	60		426	<0.001	<0.001	<0.001	<0.003	31.8	Sand to clear No odor
2	121.29	127	0.9	6	12/12/2014	68	64	370	<0.001	<0.001	<0.001	<0.003	28.1	Sand to clear No odor
2	122.04	127	0.8	6	3/9/2015	24		284	<0.001	<0.001	<0.001	<0.003	26.9	Sand to clear No odor
2	122.09	127	0.8	6	6/8/2015	48		276	<0.001	<0.001	<0.001	<0.003	34.3	Sand to clear No odor
2	122.27	127	4.73	6	8/25/2015	36		390	<0.001	<0.001	<0.001	<0.003	40.2	Sand to clear No odor
2	122.41	127	0.73	6	11/17/2015	40	37	356	<0.001	<0.001	<0.001	<0.003	43.5	Sand to clear No odor
2	122.44	127	0.7	6	3/21/2016	60		362	<0.001	<0.001	<0.001	<0.003	39	Sand to clear No odor
2	122.51	127	0.7	6	6/3/2016	44		320	<0.001	<0.001	<0.001	<0.003	37.5	Sand to clear No odor
2	122.97	127	0.6	6	9/21/2016	28		288	<0.001	<0.001	<0.001	<0.003	40	Sand to clear No odor
2	123.02	127	0.6	6	11/28/2016	56	47	376	<0.001	<0.001	<0.001	<0.003	46	Sand to clear No odor
2	123.2	127	0.6	5	3/8/2017	32		320	<0.001	<0.001	<0.001	<0.003	43	Sand to clear No odor
2	123.3	127	0.6	5	6/8/2017	36		332	<0.001	<0.001	<0.001	<0.003	42	Sand to clear No odor
2	123.21	127	0.6	6	9/20/2017	32		340	<0.001	<0.001	<0.001	<0.003	45	Sand to clear No odor
2	123.22	127	0.6	6	12/11/2017	56	39	396	<0.001	<0.001	<0.001	<0.003	54	Sand to clear No odor
2	123.4	127	0.6	5	3/13/2018	80		386	<0.001	<0.001	<0.001	<0.003	40	Sand to clear No odor
2	123.6	127	0.5	5	6/8/2018	64		312	<0.001	<0.001	<0.001	<0.003	45.4	Sand to clear No odor
2	123.72	127	0.5	5	9/17/2018	32		250	<0.001	<0.001	<0.001	<0.003	42	Sand to clear No odor
2	123.83	127	0.5	3	11/29/2018	28	51	299	<0.001	<0.001	<0.001	<0.003	41.3	Sand to clear No odor
2	123.87	127	0.5	3	3/19/2019	44		338	<0.001	<0.001	<0.001	<0.003	47	Sand to clear No odor
2	123.81	127	0.5	3	6/14/2019	28		330	<0.001	<0.001	<0.001	<0.003	44	Sand to clear No odor
2	124.03	127	0.5	3	9/18/2019	28		266	<0.001	<0.001	<0.001	<0.003	42	Sand to clear No odor
2	124.18	127	0.5	3	12/3/2019	32	33	311	<0.001	<0.001	<0.001	<0.003	43	Sand to clear No odor
2	124.41	127	0.4	3	3/23/2020	32		281	<0.001	<0.001	<0.001	<0.003	50	Sand to clear No odor
2	124.61	127	0.4	3	9/22/2020	32	32	267	XXX	XXX	XXX	XXX	42.5	Sand to clear No odor
2	124.79	127	0.4	3	3/19/2021	48		338	XXX	XXX	XXX	XXX	70.5	Sand to clear No odor
2	124.96	127	0.4	3	6/18/2021	28		264	XXX	XXX	XXX	XXX	36.5	Sand to clear No odor
2	125.15	127	0.3	3	9/20/2021	68		373	XXX	XXX	XXX	XXX	37.7	Sand to clear No odor
2	125.2	127	0.4	3	11/20/2021	92	59	392	XXX	XXX	XXX	XXX	39.9	Sand to clear No odor

ROC - Vacuum N-6-1 (1R0479)
Unit Letter N, Section 6, T18S, 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
2	125.26	127	0.3	2	3/21/2022	68		401	XXX	XXX	XXX	XXX	69.7	Sand to clear No odor
2	125.3	127	0.3	2	6/17/2022	52		314	XXX	XXX	XXX	XXX	53.1	Sand to clear No odor
2	125.38	127	0.3	2	9/9/2022	64		419	XXX	XXX	XXX	XXX	63.5	Sand to clear No odor
2	125.38	127	0.3	2	12/7/2022	40	56	383	XXX	XXX	XXX	XXX	79.5	Sand to clear No odor
2	125.46	127	0.2	2	3/21/2023	76		265	XXX	XXX	XXX	XXX	61.5	Sand to clear No odor
2	125.69	127	0.2	2	6/9/2023	48		343	XXX	XXX	XXX	XXX	58.4	Sand to clear No odor
2	125.78	127	0.2	2	9/14/2023	64		375	XXX	XXX	XXX	XXX	69.8	Sand to clear No odor
2	126.01	127	0.2	2	10/10/2023	76	66	409	XXX	XXX	XXX	XXX	64.2	Sand to 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
3	117.35	127.6	1.6	8	3/7/2007	20		236	<0.001	<0.001	<0.001	<0.001	33.9	Sand to clear No odor
3	117.4	127.6	1.6	8	5/29/2007	24		290	<0.001	<0.001	<0.001	<0.001	40.2	Sand to clear No odor
3	117.71	127.6	1.6	6	9/25/2007	24		332	<0.002	<0.002	<0.002	<0.006	40.7	Sand to clear No odor
3	117.76	127.6	1.6	6	10/17/2007	24	23	281	<0.001	0.004	<0.001	0.004	39.5	Sand to clear No odor
3	117.88	127.6	1.6	6	1/31/2008	24		291	<0.001	<0.001	<0.001	<0.003	38.3	Sand to clear No odor
3	118	127.6	1.5	6	4/24/2008	24		306	<0.001	<0.001	<0.001	<0.003	38	Sand to clear No odor
3	118.18	127.6	1.5	6	8/7/2008	24		264	<0.001	<0.001	<0.001	<0.003	51	Sand to clear No odor
3	118.31	127.6	1.5	6	10/30/2008	36	27	325	<0.001	<0.001	<0.001	<0.003	48	Sand to clear No odor
3	118.46	127.5	1.4	6	1/23/2009	36		328	<0.001	<0.001	<0.001	<0.003	46.3	Sand to clear No odor
3	118.46	127.5	1.4	6	4/29/2009	24		229	<0.001	<0.001	<0.001	<0.003	36.1	Sand to clear No odor
3	118.77	127.5	1.4	6	8/7/2009	24		313	<0.001	<0.001	<0.001	<0.003	37.5	Sand to clear No odor
3	119.02	127.5	1.4	6	10/22/2009	24	27	319	<0.001	<0.001	<0.001	<0.003	34.5	Sand to clear No odor
3	119.38	127.6	1.3	6	4/26/2010	24		312	<0.001	<0.001	<0.001	<0.003	42	Sand to clear No odor
3	119.09	127.6	1.4	6	2/11/2010	24		297	<0.001	<0.001	<0.001	<0.003	45.2	Sand to clear No odor
3	119.43	127.6	1.3	6	8/5/2010	24		257	<0.001	<0.001	<0.001	<0.003	34.2	Sand to clear No odor
3	119.55	127.6	1.3	6	10/28/2010	20	23	289	<0.001	<0.001	<0.001	<0.003	32.9	Sand to clear No odor
3	119.21	127.7	1.4	6	2/21/2011	24		294	<0.001	<0.001	<0.001	<0.003	33.5	Sand to clear No odor
3	119.93	127.7	1.2	6	6/6/2011	32		291	<0.001	<0.001	<0.001	<0.003	41.2	Sand to clear No odor
3	120.17	127.7	1.2	6	9/2/2011	20		263	<0.001	<0.001	<0.001	<0.003	46.4	Sand to clear No odor
3	120.36	127.7	1.2	6	12/4/2011	24	25	275	<0.001	<0.001	<0.001	<0.003	40.9	Sand to clear No odor
3	120.39	127.4	1.2	6	2/24/2012	24		294	<0.001	<0.001	<0.001	<0.003	37.5	Sand to clear No odor

ROC - Vacuum N-6-1 (1R0479)
Unit Letter N, Section 6, T18S, 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
3	120.5	127.7	1.1	6	6/1/2012	20		307	<0.001	<0.001	<0.001	<0.003	32.4	Sand to clear No odor
3	120.75	127.7	1.1	6	8/31/2012	28		289	<0.001	<0.001	<0.001	<0.003	41.8	Sand to clear No odor
3	120.81	127.7	1.1	6	11/16/2012	24	24	296	<0.001	<0.001	<0.001	<0.003	32.2	Sand to clear No odor
3	120.87	127.7	1.1	6	2/14/2013	28		278	<0.001	<0.001	<0.001	<0.003	38.4	Sand to clear No odor
3	121.04	127.7	1.1	6	5/23/2013	28		287	<0.001	<0.001	<0.001	<0.003	43.8	Sand to clear No odor
3	121.3	127.7	1	6	9/4/2013	24		305	<0.001	<0.001	<0.001	<0.003	34.8	Sand to clear No odor
3	121.26	127.7	1	6	11/13/2013	32	28	316	<0.001	<0.001	<0.001	<0.003	45.2	Sand to clear No odor
3	121.53	127.7	1	6	3/14/2014	40		138	<0.001	<0.001	<0.001	<0.003	46.8	Sand to clear No odor
3	121.67	127.7	1	6	6/24/2014	24		286	<0.001	<0.001	<0.001	<0.003	37.9	Sand to clear No odor
3	121.78	127.7	0.9	6	8/22/2014	24		300	<0.001	<0.001	<0.001	<0.003	33.8	Silt to clear No odor
3	121.18	127.7	1	6	12/12/2014	24	28	266	<0.001	<0.001	<0.001	<0.003	32.5	Sand to clear No odor
3	122.02	127.7	0.9	6	3/9/2015	24		296	<0.001	<0.001	<0.001	<0.003	30.4	Sand to clear No odor
3	122.06	127.7	0.9	6	6/8/2015	28		266	<0.001	<0.001	<0.001	<0.003	43.3	Sand to clear No odor
3	122.23	127.7	0.9	6	8/25/2015	28		270	<0.001	<0.001	<0.001	<0.003	26	Sand to clear No odor
3	122.36	127.7	0.85	6	11/17/2015	28	27	330	<0.001	<0.001	<0.001	<0.003	37	Sand to clear No odor
3	122.39	127.7	0.8	6	3/21/2016	28		272	<0.001	<0.001	<0.001	<0.003	19.2	Sand to clear No odor
3	122.47	127.7	0.8	6	6/3/2016	4		180	<0.001	<0.001	<0.001	<0.003	16.9	Sand to clear No odor
3	122.9	127.7	0.8	6	9/21/2016	28		294	<0.001	<0.001	<0.001	<0.003	38	Sand to clear No odor
3	122.97	127.7	0.7	6	11/28/2016	36	24	286	<0.001	<0.001	<0.001	<0.003	42	Sand to clear No odor
3	123.14	127.7	0.7	5	3/8/2017	32		292	<0.001	<0.001	<0.001	<0.003	41	Sand to clear No odor
3	123.22	127.7	0.7	5	6/8/2017	32		312	<0.001	<0.001	<0.001	<0.003	40	Sand to clear No odor
3	123.1	127.7	0.7	6	9/20/2017	28		310	<0.001	<0.001	<0.001	<0.003	47	Sand to clear No odor
3	123.15	127.7	0.7	6	12/11/2017	44	34	334	<0.001	<0.001	<0.001	<0.003	47	Sand to clear No odor
3	123.44	127.7	0.7	5	3/13/2018	44		330	<0.001	<0.001	<0.001	<0.003	43	Sand to clear No odor
3	123.64	127.7	0.6	5	6/8/2018	44		168	<0.001	<0.001	<0.001	<0.003	46	Sand to clear No odor
3	123.74	127.7	0.6	3	9/17/2018	28		276	<0.001	<0.001	<0.001	<0.003	41	Sand to clear No odor
3	123.86	127.7	0.6	3	11/29/2018	32	37	285	<0.001	<0.001	<0.001	<0.003	45.3	Sand to clear No odor
3	123.84	127.7	0.6	3	3/19/2019	48		261	<0.001	<0.001	<0.001	<0.003	37	Sand to clear No odor
3	123.84	127.7	0.6	3	6/14/2019	28		303	<0.001	<0.001	<0.001	<0.003	40	Sand to clear No odor
3	124.07	127.7	0.6	3	9/18/2019	28		266	<0.001	<0.001	<0.001	<0.003	42	Sand to clear No odor
3	124.21	127.7	0.6	3	12/3/2019	32	34	160	<0.001	<0.001	<0.001	<0.003	43	Sand to clear No odor
3	124.44	127.7	0.5	3	3/23/2020	28		285	<0.001	<0.001	<0.001	<0.003	64.7	Sand to clear No odor
3	124.64	127.7	0.5	3	9/22/2020	28	28	291	XXX	XXX	XXX	XXX	36	Sand to clear No odor

ROC - Vacuum N-6-1 (1R0479)
Unit Letter N, Section 6, T18S, 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
3	124.83	127.7	0.5	3	3/19/2021	44		320	XXX	XXX	XXX	XXX	67.2	Sand to clear No odor
3	125.01	127.7	0.5	3	6/18/2021	28		282	XXX	XXX	XXX	XXX	39.3	Sand to clear No odor
3	125.2	127.7	0.4	3	9/20/2021	28		348	XXX	XXX	XXX	XXX	54	Sand to clear No odor
3	125.26	127.7	0.4	3	11/19/2021	32	33	328	XXX	XXX	XXX	XXX	50.5	Sand to clear No odor
3	125.29	127.7	0.5	3	3/22/2022	32		349	XXX	XXX	XXX	XXX	61.2	Sand to clear No odor
3	125.31	127.7	0.4	2	6/17/2022	40		318	XXX	XXX	XXX	XXX	67.1	Sand to clear No odor
3	125.35	127.7	0.4	2	9/9/2022	36		282	XXX	XXX	XXX	XXX	53.5	Sand to clear No odor
3	125.43	127.7	0.4	2	12/6/2022	44	38	370	XXX	XXX	XXX	XXX	74.1	Sand to clear No odor
3	125.52	127.7	0.3	2	3/21/2023	32		278	XXX	XXX	XXX	XXX	44.7	Sand to clear No odor
3	125.65	127.7	0.3	2	6/9/2023	40		342	XXX	XXX	XXX	XXX	61.3	Sand to clear No odor
3	125.84	127.7	0.3	2	9/14/2023	40		339	XXX	XXX	XXX	XXX	59.2	Sand to clear No odor
3	126.08	127.7	0.3	2	10/10/2023	44	39	340	XXX	XXX	XXX	XXX	61.4	Sand to 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
4	115.79	125.3	1.5	8	3/7/2007	39		296	<0.001	<0.001	<0.001	<0.001	42.7	Silt to clear No odor
4	115.85	125.2	1.5	8	5/29/2007	37		316	<0.001	<0.001	<0.001	<0.001	40.4	Silt to clear No odor
4	116.1	125.2	1.5	6	9/25/2007	44		358	<0.002	<0.002	<0.002	<0.006	54.1	Silt to clear No odor
4	116.11	125.2	1.5	6	10/17/2007	44	41	337	<0.001	0.004	<0.001	<0.003	48.3	Silt to clear No odor
4	116.23	125	1.4	6	1/31/2008	40		326	<0.001	<0.001	<0.001	<0.003	50	Silt to clear No odor
4	116.4	125	1.4	6	4/24/2008	40		297	<0.001	<0.001	<0.001	<0.003	40.2	Silt to clear No odor
4	116.62	125	1.3	6	8/7/2008	44		357	<0.001	<0.001	<0.001	<0.003	52	Silt to clear No odor
4	116.76	125	1.3	6	10/30/2008	40	41	358	<0.001	<0.001	<0.001	<0.003	49.3	Silt to clear No odor
4	116.87	124.5	1.2	6	1/23/2009	36		354	<0.001	<0.001	<0.001	<0.003	45.4	Silt to clear No odor
4	117.08	124.5	1.2	6	4/29/2009	40		247	<0.001	<0.001	<0.001	<0.003	44.6	Silt to clear No odor
4	117.28	124.5	1.2	6	8/7/2009	24		351	<0.001	<0.001	<0.001	<0.003	37.3	Silt to clear No odor
4	117.24	124.5	1.2	6	10/22/2009	36	34	362	<0.001	<0.001	<0.001	<0.003	42.3	Silt to clear No odor
4	117.76	125	1.2	6	4/26/2010	36		330	<0.001	<0.001	<0.001	<0.003	71.4	Silt to clear No odor
4	117.54	125	1.2	6	2/11/2010	36		325	<0.001	<0.001	<0.001	<0.003	49.8	Silt to clear No odor
4	117.88	125	1.1	6	8/5/2010	40		284	<0.001	<0.001	<0.001	<0.003	43.7	Silt to clear No odor
4	117.96	125	1.1	6	10/28/2010	40	38	246	<0.001	<0.001	<0.001	<0.003	41.1	Silt to clear No odor
4	118.22	125.9	1.2	6	2/21/2011	40		338	<0.001	<0.001	<0.001	<0.003	40.8	Silt to clear No odor

ROC - Vacuum N-6-1 (1R0479)
Unit Letter N, Section 6, T18S, 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
4	118.36	125.9	1.2	6	6/6/2011	40		321	<0.001	<0.001	<0.001	<0.003	49.7	Silt to clear No odor
4	118.62	125.9	1.2	6	9/2/2011	24		268	<0.001	<0.001	<0.001	<0.003	44.2	Silt to clear No odor
4	118.81	125.9	1.1	6	12/4/2011	44	37	304	<0.001	<0.001	<0.001	<0.003	63.2	Silt to clear No odor
4	118.82	125.9	1.1	6	2/24/2012	36		323	<0.001	<0.001	<0.001	<0.003	38.6	Silt to clear No odor
4	118.94	125.9	1.1	6	6/1/2012	40		349	<0.001	<0.001	<0.001	<0.003	51.4	Silt to clear No odor
4	119.22	125.9	1.1	6	8/31/2012	36		302	<0.001	<0.001	<0.001	<0.003	42.8	Silt to clear No odor
4	119.33	125.9	1	6	11/16/2012	40	38	340	<0.001	<0.001	<0.001	<0.003	43.1	Silt to clear No odor
4	119.35	125.9	1	6	2/14/2013	44		317	<0.001	<0.001	<0.001	<0.003	52.4	Silt to clear No odor
4	119.54	125.9	1	6	5/23/2013	28		265	<0.001	<0.001	<0.001	<0.003	43.2	Silt to clear No odor
4	119.78	125.9	1	6	9/4/2013	24		296	<0.001	<0.001	<0.001	<0.003	33.4	Silt to clear No odor
4	119.75	125.9	1	6	11/13/2013	28	31	283	<0.001	<0.001	<0.001	<0.003	43.7	Silt to clear No odor
4	119.98	125.9	0.9	6	3/14/2014	40		316	<0.001	<0.001	<0.001	<0.003	45.7	Silt to clear No odor
4	120.12	125.9	0.9	6	6/24/2014	20		216	<0.001	<0.001	<0.001	<0.003	38	Silt to clear No odor
4	120.22	125.9	0.9	6	8/22/2014	28		294	<0.001	<0.001	<0.001	<0.003	34.2	Silt to clear No odor
4	119.62	125.9	1	6	12/12/2014	60	37	400	<0.001	<0.001	<0.001	<0.003	27.3	Silt to clear No odor
4	120.35	125.9	0.9	6	3/9/2015	36		338	<0.001	<0.001	<0.001	<0.003	25.3	Silt to clear No odor
4	120.38	125.9	0.9	6	6/8/2015	32		264	<0.001	<0.001	<0.001	<0.003	36.3	Silt to clear No odor
4	120.54	125.9	0.9	6	8/25/2015	24		318	<0.001	<0.001	<0.001	<0.003	35.8	Silt to clear No odor
4	120.73	125.9	0.83	6	11/17/2015	28	30	210	<0.001	<0.001	<0.001	<0.003	35.7	Silt to clear No odor
4	120.77	125.9	0.8	6	3/21/2016	60		356	<0.001	<0.001	<0.001	<0.003	43.3	Silt to clear No odor
4	120.85	125.9	0.8	5	6/3/2016	40		286	<0.001	<0.001	<0.001	<0.003	20	Silt to clear No odor
4	121.31	125.9	0.7	6	9/21/2016	32		250	<0.001	<0.001	<0.001	<0.003	59	Silt to clear No odor
4	121.36	125.9	0.7	6	11/28/2016	40	43	336	<0.001	<0.001	<0.001	<0.003	44	Silt to clear No odor
4	121.59	125.9	0.7	5	3/8/2017	32		314	<0.001	<0.001	<0.001	<0.003	41	Silt to clear No odor
4	121.74	125.9	0.7	5	6/8/2017	36		338	<0.001	<0.001	<0.001	<0.003	39	Silt to clear No odor
4	121.63	125.9	0.7	5	9/20/2017	24		472	<0.001	<0.001	<0.001	<0.003	54	Silt to clear No odor
4	121.61	125.9	0.7	5	12/11/2017	56	37	332	<0.001	<0.001	<0.001	<0.003	49	Silt to clear No odor
4	121.79	125.9	0.7	5	3/13/2018	60		348	<0.001	<0.001	<0.001	<0.003	44	Silt to clear No odor
4	121.95	125.9	0.6	5	6/8/2018	44		286	<0.001	<0.001	<0.001	<0.003	40.9	Silt to clear No odor
4	122.25	125.9	0.6	3	9/17/2018	28		244	<0.001	<0.001	<0.001	<0.003	40	Silt to clear No odor
4	122.28	125.9	0.6	3	11/29/2018	32	41	253	<0.001	<0.001	<0.001	<0.003	41.7	Silt to clear No odor
4	122.3	125.9	0.6	3	3/19/2019	48		333	<0.001	<0.001	<0.001	<0.003	48	Silt to clear No odor
4	122.25	125.9	0.6	3	6/14/2019	24		311	<0.001	<0.001	<0.001	<0.003	43	Silt to clear No odor

ROC - Vacuum N-6-1 (1R0479)
Unit Letter N, Section 6, T18S, 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
4	122.47	125.9	0.6	3	9/18/2019	28		308	<0.001	<0.001	<0.001	<0.003	41	Silt to clear No odor
4	123.7	125.9	0.4	3	12/3/2019	28	32	283	<0.001	<0.001	<0.001	<0.003	42	Silt to clear No odor
4	122.93	125.9	0.5	3	3/23/2020	72		310	<0.001	<0.001	<0.001	<0.003	88.6	Silt to clear No odor
4	123.11	125.9	0.4	3	9/22/2020	28	50	137	XXX	XXX	XXX	XXX	38.8	Silt to clear No odor
4	123.3	125.9	0.4	3	3/19/2021	40		349	XXX	XXX	XXX	XXX	63.2	Silt to clear No odor
4	123.58	125.9	0.4	3	6/18/2021	28		278	XXX	XXX	XXX	XXX	40.7	Silt to clear No odor
4	123.67	125.9	0.4	3	9/20/2021	64		343	XXX	XXX	XXX	XXX	39.3	Silt to clear No odor
4	123.73	125.9	0.3	3	11/19/2021	36	42	311	XXX	XXX	XXX	XXX	48.4	Silt to clear No odor
4	123.81	125.9	0.4	3	3/22/2022	28		289	XXX	XXX	XXX	XXX	60.1	Silt to clear No odor
4	123.85	125.9	0.3	2	6/17/2022	40		358	XXX	XXX	XXX	XXX	62.3	Silt to clear No odor
4	123.87	125.9	0.3	2	9/9/2022	40		345	XXX	XXX	XXX	XXX	89.1	Silt to clear No odor
4	123.92	125.9	0.3	2	12/6/2022	44	38	375	XXX	XXX	XXX	XXX	73.3	Silt to clear No odor
4	124	125.9	0.3	2	3/21/2023	28		247	XXX	XXX	XXX	XXX	44.7	Silt to clear No odor
4	124.15	125.9	0.3	2	6/9/2023	36		262	XXX	XXX	XXX	XXX	67.4	Silt to clear No odor
4	124.38	125.9	0.2	2	9/14/2023	40		329	XXX	XXX	XXX	XXX	77.6	Silt to clear No odor
4	124.61	125.9	0.2	2	10/10/2023	40	36	343	XXX	XXX	XXX	XXX	79.2	Silt to 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
RW-1	116.25	143.3	17.6	60	9/25/2007	5,398		9,775	<0.002	<0.002	<0.002	<0.006	67.2	Silt to clear Slight odor
RW-1	XXX	XXX	XXX	60	10/17/2007	5,400	5,399	9,071	<0.001	0.004	<0.001	<0.003	56.5	Clear Slight odor
RW-1	XXX	XXX	XXX	XXX	1/31/2008	5,300		9,320	<0.001	<0.001	<0.001	<0.003	55.4	Clear Slight odor
RW-1	XXX	XXX	XXX	XXX	4/24/2008	3,900		6,870	<0.001	<0.001	<0.001	<0.003	44.9	Clear Slight odor
RW-1	XXX	XXX	XXX	XXX	8/7/2008	3,800		7,180	<0.001	<0.001	<0.001	<0.003	68	Clear Slight odor
RW-1	XXX	XXX	XXX	XXX	10/30/2008	5,850	4,713	13,700	<0.001	<0.001	<0.001	<0.003	82.8	Clear Slight odor
RW-1	XXX	XXX	XXX	XXX	1/26/2009	5,600		10,700	<0.001	<0.001	<0.001	<0.003	83.3	Clear Slight odor
RW-1	XXX	XXX	XXX	XXX	4/29/2009	4,050		7,700	<0.001	<0.001	<0.001	<0.003	54.3	Clear Slight odor
RW-1	XXX	XXX	XXX	XXX	8/7/2009	3,000		5,450	<0.001	<0.001	<0.001	<0.003	53.8	Clear Slight odor
RW-1	XXX	XXX	XXX	XXX	10/22/2009	3,550	4,050	5,820	<0.001	<0.001	<0.001	<0.003	55.8	Clear Slight odor
RW-1	XXX	XXX	XXX	XXX	4/26/2010	4,200		7,240	<0.001	<0.001	<0.001	<0.003	71.4	Clear Slight odor
RW-1	XXX	XXX	XXX	80	2/11/2010	3,900		6,600	<0.001	<0.001	<0.001	<0.003	88.5	Clear Slight odor
RW-1	XXX	XXX	XXX	Running	8/5/2010	3,800		6,480	<0.001	<0.001	<0.001	<0.003	62.2	Clear Slight odor

ROC - Vacuum N-6-1 (1R0479)
Unit Letter N, Section 6, T18S, 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
RW-1	XXX	XXX	XXX	Running	10/28/2010	3,200	3,775	6,970	<0.001	<0.001	<0.001	<0.003	53.7	Clear Slight odor
RW-1	XXX	XXX	XXX	80	2/21/2011	4,800		8,430	<0.001	<0.001	<0.001	<0.003	77.6	Clear Slight odor
RW-1	XXX	XXX	XXX	80	6/6/2011	4,200		5,850	<0.001	<0.001	<0.001	<0.003	62.1	Clear Slight odor
RW-1	XXX	XXX	XXX	Running	9/2/2011	3,250		4,850	<0.001	<0.001	<0.001	<0.003	63.3	Clear Slight odor
RW-1	XXX	XXX	XXX	Running	12/4/2011	2,800	3,763	4,790	<0.001	<0.001	<0.001	<0.003	62.1	Clear Slight odor
RW-1	XXX	XXX	XXX	Running	2/24/2012	3,250		5,170	<0.001	<0.001	<0.001	<0.003	59.7	Clear Slight odor
RW-1	XXX	XXX	XXX	Running	6/1/2012	2,550		4,960	<0.001	<0.001	<0.001	<0.003	59.5	Purged with Solar Pump Clear Slight odor
RW-1	XXX	XXX	XXX	Running	8/31/2012	2,270		4,150	<0.001	<0.001	<0.001	<0.003	58.6	Purged with Solar Pump Clear Slight odor
RW-1	XXX	XXX	XXX	Running	11/16/2012	3,900	2,993	6,800	<0.001	<0.001	<0.001	<0.003	77.5	Purged with Solar Pump Clear Slight odor
RW-1	Pump in Well	XXX	XXX	100	2/14/2013	4,200		6,840	<0.001	<0.001	<0.001	<0.003	72	Purged with Solar Pump Clear Slight odor
RW-1	XXX	XXX	XXX	Running	5/23/2013	2,550		4,480	<0.001	<0.001	<0.001	<0.003	66.6	Purged with Solar Pump Clear Slight odor
RW-1	XXX	XXX	XXX	Running	9/4/2013	1,880		3,730	<0.001	<0.001	<0.001	<0.003	65.2	Purged with Solar Pump Clear Slight odor
RW-1	XXX	XXX	XXX	Running	11/13/2013	1,800	2,608	3,550	<0.001	<0.001	<0.001	<0.003	60.2	Purged with Solar Pump Clear Slight odor
RW-1	XXX	XXX	XXX	100	3/14/2014	2,070		3,900	<0.001	<0.001	<0.001	<0.003	67.1	Purged with Solar Pump
RW-1	XXX	XXX	XXX	Running	6/24/2014	1,640		3,730	<0.001	<0.001	<0.001	<0.003	59.8	Purged with Solar Pump
RW-1	XXX	XXX	XXX	Running	8/22/2014	1,400		3,180	<0.001	<0.001	<0.001	<0.003	51.8	Purged with Solar Pump Clear Slight odor
RW-1	120.33	143.3	14.9	60	12/12/2014	1,500	1,653	3,140	<0.001	<0.001	<0.001	<0.003	54.3	Clear Slight odor
RW-1	120.44	143.3	14.9	60	3/10/2015	1,300		2,960	<0.001	<0.001	<0.001	<0.003	60.9	Clear Slight odor
RW-1	120.52	143.3	14.8	50	6/8/2015	1,020		2,670	<0.001	<0.001	<0.001	<0.003	49.4	Clear Slight odor
RW-1	120.69	143.5	14.7	50	8/25/2015	1,100		2,070	<0.001	<0.001	<0.001	<0.003	36.7	Clear Slight odor
RW-1	120.87	143.3	14.58	50	11/17/2015	880	1,075	1,780	<0.001	<0.001	<0.001	<0.003	52.6	Clear Slight odor
RW-1	XXX	143.3	XXX	50	3/21/2016	840		1,690	<0.001	<0.001	<0.001	<0.003	39.2	Clear Slight odor
RW-1	XXX	143.3	XXX	50	6/3/2016	1,040		2,100	<0.001	<0.001	<0.001	<0.003	57	Clear Slight odor
RW-1	XXX	143.3	XXX	50	9/21/2016	2,130		4,110	<0.001	<0.001	<0.001	<0.003	77	Clear Slight odor
RW-1	XXX	143.3	XXX	50	11/28/2016	1,930	1,485	3,690	<0.001	<0.001	<0.001	<0.003	75	Clear Slight odor

ROC - Vacuum N-6-1 (1R0479)
Unit Letter N, Section 6, T18S, 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
RW-1	XXX	143.3	XXX	50	3/8/2017	1,930		3,680	<0.001	<0.001	<0.001	<0.003	78	Clear Slight odor
RW-1	XXX	143.3	XXX	50	6/8/2017	1,740		3,560	<0.001	<0.001	<0.001	<0.003	70	Clear Slight odor
RW-1	XXX	143.3	XXX	50	9/20/2017	1,580		3,850	<0.001	<0.001	<0.001	<0.003	88	Clear Slight odor
RW-1	XXX	143.3	XXX	50	12/11/2017	1,580	1,708	2,740	<0.001	<0.001	<0.001	<0.003	72	Clear Slight odor
RW-1	XXX	143.3	XXX	100	3/12/2018	1,580		2,700	<0.001	<0.001	<0.001	<0.003	71.1	Clear Slight odor
RW-1	XXX	143.3	XXX	100	6/8/2018	1,480		2,740	<0.001	<0.001	<0.001	<0.003	68.9	Clear Slight odor
RW-1	XXX	143.3	XXX	50	9/17/2018	1,500		2370	<0.001	<0.001	<0.001	<0.003	63	Clear Slight odor
RW-1	XXX	143.3	XXX	100	11/30/2018	880	1,360	1,870	<0.001	<0.001	<0.001	<0.003	92.6	Clear Slight odor
RW-1	XXX	143.3	XXX	100	3/20/2019	870		1,770	<0.001	<0.001	<0.001	<0.003	76	Clear Slight odor
RW-1	XXX	143.3	XXX	100	6/14/2019	710		1,410	<0.001	<0.001	<0.001	<0.003	79	Clear Slight odor
RW-1	XXX	143.3	XXX	100	9/18/2019	650		1,450	<0.001	<0.001	<0.001	<0.003	74	Clear Slight odor
RW-1	XXX	143.3	XXX	100	12/4/2019	620	713	1,420	<0.001	<0.001	<0.001	<0.003	72	Clear Slight odor
RW-1	XXX	143.3	XXX	100	3/24/2020	550		1,260	<0.001	<0.001	<0.001	<0.003	69.3	Clear Slight odor
RW-1	XXX	143.3	XXX	100	9/21/2020	510	530	1,300	XXX	XXX	XXX	XXX	62.6	Clear Slight odor
RW-1	XXX	143.3	XXX	100	3/19/2021	430		1,160	XXX	XXX	XXX	XXX	53	Clear Slight odor
RW-1	XXX	143.3	XXX	100	6/18/2021	760		1,610	XXX	XXX	XXX	XXX	56.5	Clear Slight odor
RW-1	XXX	143.3	XXX	100	9/20/2021	720		1,520	XXX	XXX	XXX	XXX	66.9	Clear Slight odor
RW-1	XXX	143.3	XXX	100	11/19/2021	328	560	808	XXX	XXX	XXX	XXX	42.1	Clear Slight odor
RW-1	XXX	143.3	XXX	100	3/22/2022	292		808	XXX	XXX	XXX	XXX	47.2	Clear Slight odor
RW-1	XXX	143.3	XXX	100	6/17/2022	780		1,580	XXX	XXX	XXX	XXX	47.4	Clear Slight odor
RW-1	XXX	143.3	XXX	100	9/9/2022	590		1,240	XXX	XXX	XXX	XXX	46.7	Clear Slight odor
RW-1	XXX	143.3	XXX	100	12/6/2022	670	583	1,360	XXX	XXX	XXX	XXX	43.2	Clear Slight odor
RW-1	XXX	143.3	XXX	100	3/20/2023	300		820	XXX	XXX	XXX	XXX	35.2	Clear Slight odor
RW-1	XXX	143.3	XXX	100	6/9/2023	304		582	XXX	XXX	XXX	XXX	35.4	Clear Slight odor
RW-1	XXX	143.3	XXX	Running	9/14/2023	520		1,110	XXX	XXX	XXX	XXX	45	Clear Slight odor
RW-1	XXX	143.3	XXX	Running	10/10/2023	212	334	602	XXX	XXX	XXX	XXX	35	Clear Slight odor

CARDINAL Laboratories

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

April 01, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM N-6-1

Enclosed are the results of analyses for samples received by the laboratory on 03/24/21 15:45.

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 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:	03/24/2021	Sampling Date:	03/19/2021
Reported:	04/01/2021	Sampling Type:	Water
Project Name:	VACUUM N-6-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC6 N-LEA CTY., NM		

Sample ID: MONITOR WELL #1R (H210744-01)

Chloride, SM4500Cl-B mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**440**	4.00	03/25/2021	ND	92.0	92.0	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*	**57.6**	10.0	03/26/2021	ND	23.3	116	20.0	1.54	

TDS 160.1 mg/L **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**1030**	5.00	03/29/2021	ND	475	95.0	500	16.3	

Sample ID: MONITOR WELL #2 (H210744-02)

Chloride, SM4500Cl-B mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**48.0**	4.00	03/25/2021	ND	92.0	92.0	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*	**70.5**	10.0	03/26/2021	ND	23.3	116	20.0	1.54	

TDS 160.1 mg/L **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**338**	5.00	03/29/2021	ND	475	95.0	500	16.3	

Cardinal Laboratories *=Accredited Analyte

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:	03/24/2021	Sampling Date:	03/19/2021
Reported:	04/01/2021	Sampling Type:	Water
Project Name:	VACUUM N-6-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC6 N-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H210744-03)

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	03/25/2021	ND	92.0	92.0	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*	**67.2**	10.0	03/26/2021	ND	23.3	116	20.0	1.54	

TDS 160.1 mg/L **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**320**	5.00	03/29/2021	ND	475	95.0	500	16.3	

Sample ID: MONITOR WELL #4 (H210744-04)

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	03/25/2021	ND	92.0	92.0	100	0.00	

Sulfate 375.4 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**63.2**	10.0	03/26/2021	ND	23.3	116	20.0	1.54	

TDS 160.1 mg/L **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**349**	5.00	03/29/2021	ND	475	95.0	500	16.3	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	03/24/2021	Sampling Date:	03/19/2021
Reported:	04/01/2021	Sampling Type:	Water
Project Name:	VACUUM N-6-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC6 N-LEA CTY., NM		

Sample ID: RECOVERY WELL #1 (H210744-05)

Chloride, SM4500Cl-B mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**430**	4.00	03/25/2021	ND	92.0	92.0	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*	**53.0**	10.0	03/26/2021	ND	23.3	116	20.0	1.54	

TDS 160.1 mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**1160**	5.00	03/29/2021	ND	475	95.0	500	16.3	

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

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 N-6-1
Project Location: T17S-R35E-Sec 6 N ~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

H210744

LAB # (LAB USE ONLY)	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 (2021)	TIME
1	Monitor Well #1R	G	1	X								1		3/19	15:00
2	Monitor Well #2	G	1	X								1		3/19	12:40
3	Monitor Well #3	G	1	X								1		3/19	11:00
4	Monitor Well #4	G	1	X								1		3/19	9:45
5	Recovery Well #1	G	1	X								1		3/20	11:05

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
																		X	X	X	
																		X	X	X	
																		X	X	X	
																		X	X	X	
																		X	X	X	
																		X	X	X	

Relinquished by: Rozanne Johnson	Date: 3/24/2021	Time: 15:25	Received by:	Date: 3-24-21	Time: 1545
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)	Date:	Time:

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

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Sample Condition	Cool	Intact
Yes	✓	✓
No		

CHECKED BY: (Initials) TD

REMARKS:

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

CARDINAL Laboratories

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

June 25, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM N-6-1

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

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is 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

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:	06/22/2021	Sampling Date:	06/18/2021
Reported:	06/25/2021	Sampling Type:	Water
Project Name:	VACUUM N-6-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC6 N-LEA CTY., NM		

Sample ID: MONITOR WELL #1R (H211611-01)

Chloride, SM4500Cl-B mg/L **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**780**	4.00	06/22/2021	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*	**60.9**	10.0	06/23/2021	ND	19.4	97.2	20.0	8.04	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**1580**	5.00	06/24/2021	ND	515	103	500	0.0280	

Sample ID: MONITOR WELL #2 (H211611-02)

Chloride, SM4500Cl-B mg/L **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**28.0**	4.00	06/22/2021	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*	**36.5**	10.0	06/23/2021	ND	19.4	97.2	20.0	8.04	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**264**	5.00	06/24/2021	ND	515	103	500	0.0280	

Cardinal Laboratories *=Accredited Analyte

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:	06/22/2021	Sampling Date:	06/18/2021
Reported:	06/25/2021	Sampling Type:	Water
Project Name:	VACUUM N-6-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC6 N-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H211611-03)

Chloride, SM4500Cl-B mg/L **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**28.0**	4.00	06/22/2021	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*	**39.3**	10.0	06/23/2021	ND	19.4	97.2	20.0	8.04	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**282**	5.00	06/24/2021	ND	515	103	500	0.0280	

Sample ID: MONITOR WELL #4 (H211611-04)

Chloride, SM4500Cl-B mg/L **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**28.0**	4.00	06/22/2021	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*	**40.7**	10.0	06/23/2021	ND	19.4	97.2	20.0	8.04	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**278**	5.00	06/24/2021	ND	515	103	500	0.0280	

Cardinal Laboratories *=Accredited Analyte

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:	06/22/2021	Sampling Date:	06/18/2021
Reported:	06/25/2021	Sampling Type:	Water
Project Name:	VACUUM N-6-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC6 N-LEA CTY., NM		

Sample ID: RECOVERY WELL #1 (H211611-05)

Chloride, SM4500Cl-B mg/L **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**760**	4.00	06/22/2021	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*	**56.5**	10.0	06/23/2021	ND	19.4	97.2	20.0	8.04	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**1610**	5.00	06/24/2021	ND	515	103	500	0.0280	

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

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 N-6-1

Project Location: T17S-R35E-Sec 6 N ~ Lea County New Mexico

Sampler Signature: Rozanne Johnson (575)631-9310

H211611 LAB # (LAB USE ONLY)

	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 (2021)	TIME
1	Monitor Well #1R	G	1	X								1		6/18	15:20
2	Monitor Well #2	G	1	X								1		6/18	12:10
3	Monitor Well #3	G	1	X								1		6/18	10:25
4	Monitor Well #4	G	1	X								1		6/18	8:50
5	Recovery Well #1	G	1	X								1		6/18	15:45

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
																		X	X	X	
																		X	X	X	
																		X	X	X	
																		X	X	X	
																		X	X	X	

Relinquished by: Rozanne Johnson Date: 6/22/2021 Time: 12:05

Received by: Tamara Oldaker 6/22/21 1205

Relinquished by: Date: Time:

Received By: (Laboratory Staff) Date Time:

Phone Results: Yes No

Fax Results: Yes No Additional Fax Number:

REMARKS:

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

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

Sample Condition: Cool: Yes / Intact: Yes

CHECKED BY: (Initials) T.O.

Lab Reports

CARDINAL Laboratories

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

September 28, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM N-6-1

Enclosed are the results of analyses for samples received by the laboratory on 09/22/21 16:00.

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 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:	09/22/2021	Sampling Date:	09/20/2021
Reported:	09/28/2021	Sampling Type:	Water
Project Name:	VACUUM N-6-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC6 N-LEA CTY., NM		

Sample ID: MONITOR WELL #1R (H212640-01)

Chloride, SM4500Cl-B mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**320**	4.00	09/23/2021	ND	100	100	100	3.92	

Sulfate 375.4 mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**44.9**	10.0	09/24/2021	ND	20.0	100	20.0	1.10	

TDS 160.1 mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**840**	5.00	09/27/2021	ND	268	89.3	300	2.79	

Sample ID: MONITOR WELL #2 (H212640-02)

Chloride, SM4500Cl-B mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**68.0**	4.00	09/23/2021	ND	100	100	100	3.92	

Sulfate 375.4 mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**37.7**	10.0	09/24/2021	ND	20.0	100	20.0	1.10	

TDS 160.1 mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**373**	5.00	09/27/2021	ND	268	89.3	300	2.79	

Cardinal Laboratories *=Accredited Analyte

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:	09/22/2021	Sampling Date:	09/20/2021
Reported:	09/28/2021	Sampling Type:	Water
Project Name:	VACUUM N-6-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC6 N-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H212640-03)

Chloride, SM4500Cl-B mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**28.0**	4.00	09/23/2021	ND	100	100	100	3.92	

Sulfate 375.4 mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**54.0**	10.0	09/24/2021	ND	20.0	100	20.0	1.10	

TDS 160.1 mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**348**	5.00	09/27/2021	ND	268	89.3	300	2.79	

Sample ID: MONITOR WELL #4 (H212640-04)

Chloride, SM4500Cl-B mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**64.0**	4.00	09/23/2021	ND	100	100	100	3.92	

Sulfate 375.4 mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**39.3**	10.0	09/24/2021	ND	20.0	100	20.0	1.10	

TDS 160.1 mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**343**	5.00	09/27/2021	ND	268	89.3	300	2.79	

Cardinal Laboratories

*=Accredited Analyte

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:	09/22/2021	Sampling Date:	09/20/2021
Reported:	09/28/2021	Sampling Type:	Water
Project Name:	VACUUM N-6-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC6 N-LEA CTY., NM		

Sample ID: RECOVERY WELL #1 (H212640-05)

Chloride, SM4500Cl-B mg/L **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**720**	4.00	09/23/2021	ND	100	100	100	3.92	

Sulfate 375.4 mg/L **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**66.9**	10.0	09/24/2021	ND	20.0	100	20.0	1.10	

TDS 160.1 mg/L **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**1520**	5.00	09/27/2021	ND	268	89.3	300	2.79	

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

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 N-6-1
Project Location: T17S-R35E-Sec 6 N ~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

LAB # (LAB USE ONLY): H212640

	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 (2021)	TIME
1	Monitor Well #1R	G	1	X								1		9/20	13:10
2	Monitor Well #2	G	1	X								1		9/20	12:15
3	Monitor Well #3	G	1	X								1		9/20	10:50
4	Monitor Well #4	G	1	X								1		9/20	9:15
5	Recovery Well #1	G	1	X								1		9/20	13:20

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
																		X	X	X	
																		X	X	X	
																		X	X	X	
																		X	X	X	
																		X	X	X	

Relinquished by: Ozanne Johnson Date: 9/22/2021 Time: 15:55

Relinquished by: Date: Time:

Received by: Tamara Baker 9-22-21 1600 Date: Time:

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) TB

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, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM N-6-1

Enclosed are the results of analyses for samples received by the laboratory on 11/23/21 14:15.

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 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:	11/23/2021	Sampling Date:	11/20/2021
Reported:	12/01/2021	Sampling Type:	Water
Project Name:	VACUUM N-6-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC6 N-LEA CTY., NM		

Sample ID: MONITOR WELL #1R (H213377-01)

Chloride, SM4500Cl-B mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**700**	4.00	11/30/2021	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*	**56.4**	10.0	11/24/2021	ND	23.5	117	20.0	1.20	

TDS 160.1 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**1520**	5.00	11/29/2021	ND	528	106	500	2.46	

Sample ID: MONITOR WELL #2 (H213377-02)

Chloride, SM4500Cl-B mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**92.0**	4.00	11/30/2021	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*	**39.9**	10.0	11/24/2021	ND	23.5	117	20.0	1.20	

TDS 160.1 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**392**	5.00	11/29/2021	ND	528	106	500	2.46	

Cardinal Laboratories *=Accredited Analyte

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:	11/23/2021	Sampling Date:	11/19/2021
Reported:	12/01/2021	Sampling Type:	Water
Project Name:	VACUUM N-6-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC6 N-LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H213377-03)

Chloride, SM4500Cl-B mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**32.0**	4.00	11/30/2021	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*	**50.5**	10.0	11/24/2021	ND	23.5	117	20.0	1.20	

TDS 160.1 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**328**	5.00	11/29/2021	ND	528	106	500	2.46	

Sample ID: MONITOR WELL #4 (H213377-04)

Chloride, SM4500Cl-B mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**36.0**	4.00	11/30/2021	ND	100	100	100	0.00	

Sulfate 375.4 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**48.4**	10.0	11/24/2021	ND	23.5	117	20.0	1.20	

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	11/29/2021	ND	528	106	500	2.46	

Cardinal Laboratories

*=Accredited Analyte

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:	11/23/2021	Sampling Date:	11/19/2021
Reported:	12/01/2021	Sampling Type:	Water
Project Name:	VACUUM N-6-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC6 N-LEA CTY., NM		

Sample ID: RECOVERY WELL #1 (H213377-05)

Chloride, SM4500Cl-B mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**328**	4.00	11/30/2021	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*	**42.1**	10.0	11/24/2021	ND	23.5	117	20.0	1.20	

TDS 160.1 mg/L **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**808**	5.00	11/30/2021	ND	528	106	500	2.46	

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

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 N-6-1	
Project Location: T17S-R35E-Sec 6 N ~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

LAB # (LAB USE ONLY): H213377

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB #	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 (2021)	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 #1R	G	1	X								1		11/20	11:40																		X	X	X	
2	Monitor Well #2	G	1	X								1		11/19	12:55																		X	X	X	
3	Monitor Well #3	G	1	X								1		11/19	11:20																		X	X	X	
4	Monitor Well #4	G	1	X								1		11/19	9:50																		X	X	X	
5	Recovery Well #1	G	1	X								1		11/19	15:15																		X	X	X	

Relinquished by: Rozanne Johnson	Date: 11/23/2021	Time: 14:15	Received by:
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)

Date: 11-23-21 Time: 1415

Phone Results: Yes / No

Fax Results: Yes / No Additional Fax Number:

REMARKS:

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

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

Sample Condition: Cool: Yes / Intact: Yes

CHECKED BY: (Initials) AB

Exhibit 1

From: OCDOnline@state.nm.us
To: Katie Jones
Subject: The Oil Conservation Division (OCD) has approved the application, Application ID: 202307
Date: Tuesday, May 23, 2023 8:26:29 AM

To whom it may concern (c/o Katie Davis for RICE OPERATING COMPANY),

The OCD has approved the submitted *Ground Water Abatement* (GROUND WATER ABATEMENT), for incident ID (n#) nAPP2110350805,
with the following conditions:

- **Review of 2022 Annual Groundwater Report: Content satisfactory 1. Continue sampling on a quarterly schedule 2. Continue groundwater recovery 3. Submit next annual report no later than April 1, 2024.**

The signed GROUND WATER ABATEMENT can be found in the OCD Online: Imaging under the incident ID (n#).

If you have any questions regarding this application, please contact me.

Thank you,
Nelson Velez
Environmental Specialist - Advanced
505-469-6146
Nelson.Velez@emnrd.nm.gov

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

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 327871

CONDITIONS

Operator: RICE OPERATING COMPANY 122 W Taylor Hobbs, NM 88240	OGRID: 19174
	Action Number: 327871
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2023 Annual Report for Vacuum N-6-1 Jct (1R0479): content satisfactory 1. Continue to conduct groundwater recovery as prescribed in the report. 2. Conduct groundwater sampling on a quarterly schedule for the 2024 calendar year. 3. Submit the 2024 annual report to OCD by April 1, 2025.	9/17/2024