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L Peter Galusky, Jr PE

5935 Exeter Circle Norcross, GA 30071 | 470 955-5335 | peter@bluerock.pro

April 1, 2022

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

RE: **2021 Annual Report**
Rice Operating Company
Vacuum K-35-1 Boot, UL K, Sec 35, T17S, R35E
OCD Case Number 1R425-03

Sent by E-mail

Mr. Billings:

This letter summarizes remediation history and progress made for this project over the past calendar year. Location and site schematic maps are given in the Appendix (Figures 1 and 2, respectively).

OCD granted termination of soil remediation requirements (soil closure) on October 13th, 2011, allowing for the cessation of groundwater withdrawals and stipulating that groundwater monitoring must continue semi-annually at wells MW-2, MW-3 and MW-4.

A Groundwater Recovery Notification was submitted to the NMOCD on September 4th, 2013 and NMOCD approved the notification on September 5th, 2013. Groundwater recovery began from RW-1 on September 13th, 2013. According to the NMOCD approved Groundwater Recovery Notification, ROC began sampling all the wells (MW-1, MW-2, MW-3, MW-4, and RW-1) on a semi-annual (twice a year) basis in 2013, and a quarterly basis in 2014. In 2020, NMOCD granted approval to temporarily cease groundwater recovery and reduce the sampling interval to semi-annual. ROC resumed quarterly sampling and groundwater recovery in 2021.

Summary of Groundwater Monitoring and Present Status
(See Appendix – Figure 3 and Tables 1&2)

- Approximately 34,445 barrels of chloride-affected groundwater have been withdrawn from a near-source recovery well (RW-1) from 2008 through 2021 resulting in the removal of an estimated 2,405 kg of chlorides. Recovered groundwater has been used for a beneficial use.

- The average annual groundwater chloride concentration in the near/at-source monitor well, MW-4, dropped slightly from 136 mg/l in 2020 to 122 mg/l in 2021.

- The average annual groundwater chloride concentration in the down-gradient monitor well, MW-2 remained low at 40 mg/l in 2020 and 58 mg/l in 2021.

- The average annual groundwater chloride concentration in the down-gradient recovery well, RW-1, dropped from 238 mg/l in 2020 to 189 mg/l in 2021.

- The average annual groundwater chloride concentration in the up-gradient monitor well (MW-3) dropped from 304 mg/l in 2020 to 145 mg/l in 2021.

ROC will continue quarterly groundwater sampling and groundwater recovery during 2022, reporting to NMOCD the results by April of next year.

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.

Please do not hesitate to contact either myself or Rice Operating Company if you have any questions or need additional information.

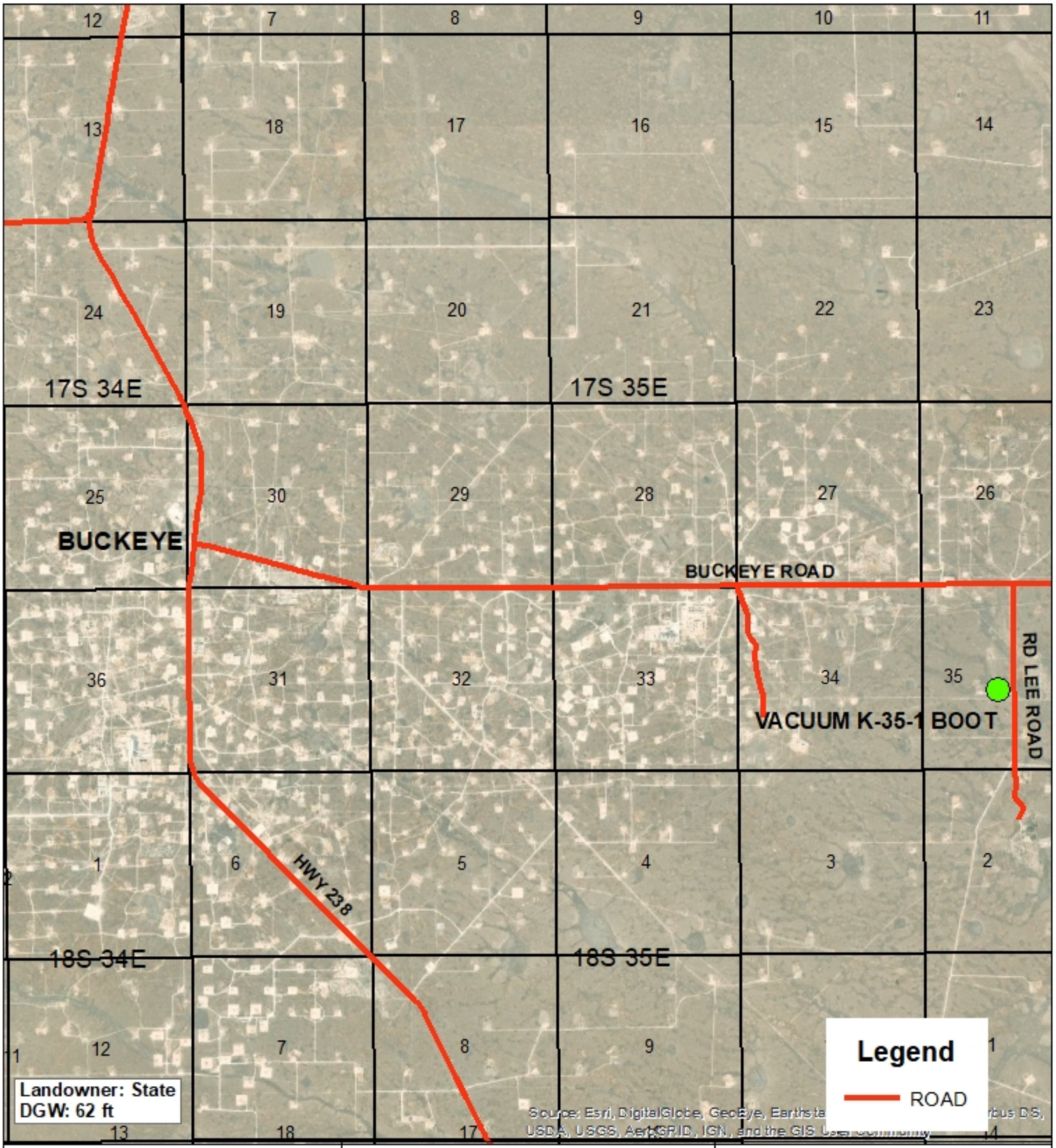
Sincerely,

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 K-35-1 JCT BOOT

1R425-03

UL K SECTION 35
T-17-S R-35-E
LEA COUNTY, NM

GPS: 32.790071 -103.429898
NAD83 STATE PLANE PROJ
NM EAST ZONE

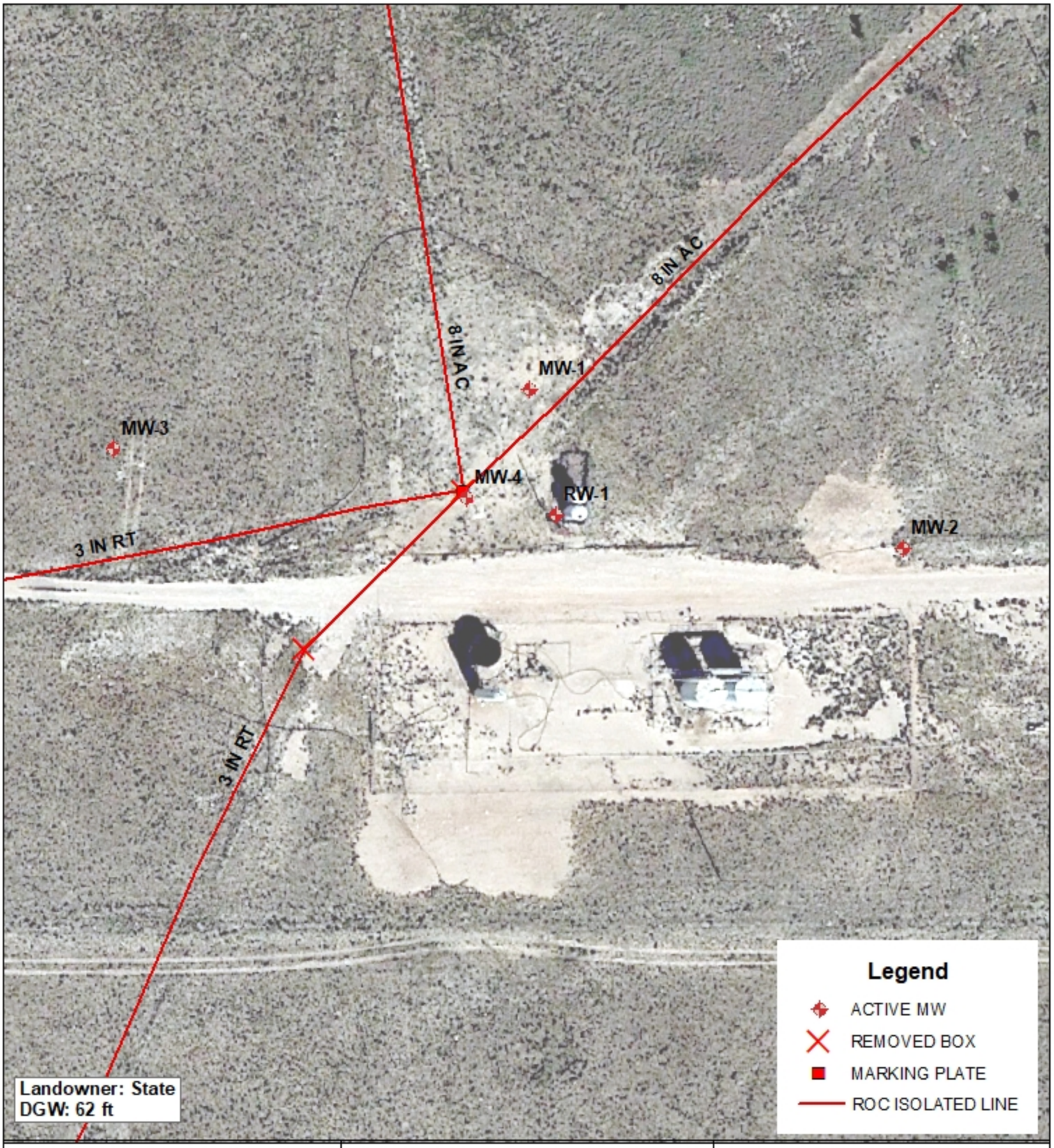
0 0.5 1 Miles

N W E S

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

Site Map

Figure 2



RICE OPERATING COMPANY
ROC
SINCE 1955

VACUUM
K-35-1 JCT BOOT

1R425-03

UL K SECTION 35
T-17-S R-35-E
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NAD83 STATE PLANE PROJ
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0 50 100
Feet

N
W E
S

Drawing date: 2/5/20
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Figure 3

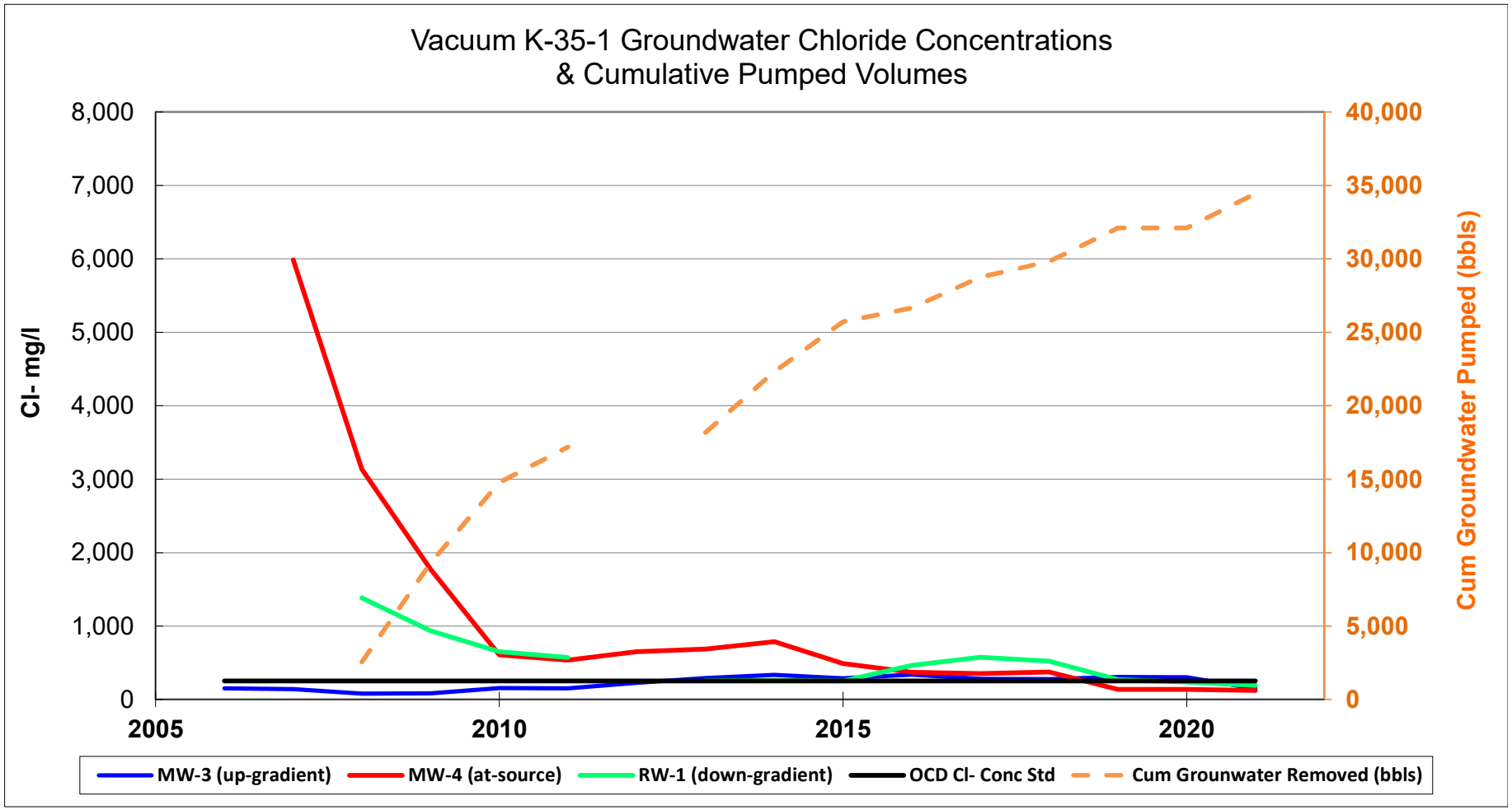
Vacuum K-35-1 Groundwater Chloride Concentrations
& Cumulative Pumped Volumes
Cl- mg/l
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
2005
2010
2015
2020
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Cum Groundwater Pumped (bbls)
MW-3 (up-gradient)
MW-4 (at-source)
RW-1 (down-gradient)
OCD Cl- Conc Std
Cum Grounwater Removed (bbls)

Table 1

Vacuum K-35-1 Groundwater Data

Average Annual Cl- Concentrations (mg/l) & **Groundwater Removal Volumes**

year	MW-1 (downgradient well)	MW-2 (down-gradient well)	MW-3 (up-gradient)	MW-4 (at source)	RW-1 (down-gradient)	OCD Cl- Conc Std	Cum Grounwater Removed (bbls)	Cl- Removed (kg)
2006	684	29	153			250		
2007	1,138	27	138	5,988		250		
2008	1,330	43	81	3,135	1,383	250	2,551	
2009	1,210	28	83	1,770	935	250	9,286	
2010	795	32	157	608	653	250	14,779	
2011	662	34	152	535	572	250	17,185	
2012		36	228	650		250		
2013	1,040	36	294	685	256	250	18,185	
2014	733	36	333	788	260	250	22,320	
2015	423	44	288	486	251	250	25,720	
2016	630	46	337	372	463	250	26,660	
2017	968	54	279	352	577	250	28,750	
2018	1,305	39	274	376	523	250	29,820	
2019	748	50	307	137	269	250	32,110	
2020	358	40	304	136	238	250	32,110	
2021	314	58	145	122	189	250	34,445	2,405

Table 2

ROC - Vacuum K-35-1 boot (1R425-03)
Groundwater Monitoring Dataset

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	55.06	67.0	1.9	10.0	6/28/2006	508	1,101	<0.002	<0.002	<0.002	<0.006	54.3	
1	55.15	67.0	1.9	10.0	10/19/2006	859	1,650	<0.001	<0.001	<0.001	<0.001	59.3	Silt to clear with no odor. Field conductivity results have increased since last sampling
1	55.40	66.9	1.8	8.0	2/21/2007	1,080	2,160	<0.001	<0.001	<0.001	<0.001	77.9	Silt to clear No odor
1	55.51	66.9	1.8	8.0	5/22/2007	923	2,330	<0.001	<0.001	<0.001	<0.001	79.8	Silt to clear No odor
1	55.74	66.9	1.8	8.0	8/7/2007	1,150	2,980	<0.001	<0.001	<0.001	<0.002	57.8	Silt to clear No odor
1	55.75	66.9	1.8	8.0	10/16/2007	1,400	2,634	<0.001	<0.001	<0.001	<0.001	70.0	Silt to clear No odor
1	55.92	66.8	1.7	8.0	1/30/2008	1,300	2,540	<0.001	<0.001	<0.001	<0.003	69.8	Silt to clear No odor
1	55.91	66.8	1.7	8.0	4/30/2008	1,440	2,800	<0.002	<0.002	<0.002	<0.006	78.6	Silt to clear No odor
1	56.21	66.8	1.7	8.0	7/30/2008	1,360	2,680	<0.001	<0.001	<0.001	<0.003	39.0	Silt to clear No odor
1	56.36	66.8	1.7	8.0	11/10/2008	1,220	2,400	<0.001	<0.001	<0.001	<0.003	74.8	Silt to clear No odor
1	55.92	66.9	1.7	8.0	1/30/2009	1,280	2,580	<0.001	<0.001	<0.001	<0.003	74.0	Silt to clear No odor
1	56.44	67.2	1.7	8.0	5/1/2009	1,420	2,170	<0.001	<0.001	<0.001	<0.003	68.8	Silt to clear No odor
1	56.61	67.2	1.7	6.0	8/4/2009	940	2,250	<0.001	<0.001	<0.001	<0.003	70.1	Silt to clear No odor
1	56.84	67.2	1.7	6.0	10/20/2009	1,200	2,520	<0.001	<0.001	<0.001	<0.003	70.1	Silt to clear No odor
1	56.92	67.1	1.6	6.0	1/27/2010	1,180	2,430	<0.001	<0.001	<0.001	<0.003	77.8	Silt to clear No odor
1	56.95	67.1	1.6	6.0	4/28/2010	460	1,050	<0.001	<0.001	<0.001	<0.003	64.1	Silt to clear No odor
1	57.13	67.1	1.6	6.0	7/29/2010	980	1,840	<0.001	<0.001	<0.001	<0.003	73.9	Silt to clear No odor
1	57.28	67.1	1.6	6.0	10/26/2010	560	1,330	<0.001	<0.001	<0.001	<0.003	81.2	Silt to clear No odor
1	57.24	67.1	1.6	6.0	2/16/2011	800	1,750	<0.001	<0.001	<0.001	<0.003	68.0	Silt to clear No odor
1	57.15	67.1	1.6	6.0	6/1/2011	396	965	<0.001	<0.001	<0.001	<0.003	69.4	Silt to clear No odor
1	57.21	67.1	1.6	6.0	8/30/2011	352	888	<0.001	<0.001	<0.001	<0.003	75.7	Silt to clear No odor
1	57.19	67.1	1.6	6.0	12/1/2011	1,100	2,310	<0.001	<0.001	<0.001	<0.003	76.3	Silt to clear No odor
					5/29/2012								
					11/15/2012								
					5/28/2013								
1	57.89	67.1	1.5	6.0	11/15/2013	1,040	2,250	XXX	XXX	XXX	XXX	69.4	Silt to clear No odor
1	57.98	67.1	1.5	6.0	3/4/2014	920	2,030	XXX	XXX	XXX	XXX	79.9	Silt to clear No odor
1	58.08	67.1	1.4	6.0	6/3/2014	800	1,720	XXX	XXX	XXX	XXX	55.2	Silt to clear No odor
1	58.16	67.1	1.4	6.0	8/28/2014	750	1,840	XXX	XXX	XXX	XXX	73.3	Silt to clear No odor
1	57.75	67.1	1.5	6.0	11/21/2014	460	1,070	XXX	XXX	XXX	XXX	43.3	Silt to clear No odor
1	57.67	67.1	1.5	6.0	3/3/2015	499	1,230	XXX	XXX	XXX	XXX	74.6	Silt to clear No odor
1	58.21	67.1	1.4	6.0	6/3/2015	470	1,250	XXX	XXX	XXX	XXX	75.6	Silt to clear No odor
1	58.43	67.1	1.4	6.0	8/22/2015	292	1,090	XXX	XXX	XXX	XXX	42.6	Silt to clear No odor
1	58.54	67.1	1.4	6.0	11/8/2015	432	1,210	XXX	XXX	XXX	XXX	76.3	Silt to clear No odor
1	58.53	67.1	1.4	6.0	2/26/2016	830	1,660	XXX	XXX	XXX	XXX	74.0	Silt to clear No odor
1	58.58	67.1	1.4	6.0	5/21/2016	740	2,040	XXX	XXX	XXX	XXX	68.0	Silt to clear No odor

Table 2

1	58.51	67.1	1.4	6.0	9/10/2016	520	1,560	XXX	XXX	XXX	XXX	71.0	Silt to clear No odor
1	58.74	67.1	1.3	6.0	11/10/2016	430	1,030	XXX	XXX	XXX	XXX	73.0	Silt to clear No odor
1	58.77	67.1	1.3	6.0	2/22/2017	850	1,840	XXX	XXX	XXX	XXX	79.0	Silt to clear No odor
1	58.77	67.1	1.3	6.0	5/25/2017	960	2,490	XXX	XXX	XXX	XXX	76.0	Silt to clear No odor
1	58.86	67.1	1.3	6.0	9/16/2017	1,040	2,330	XXX	XXX	XXX	XXX	76.0	Silt to clear No odor
1	58.91	67.1	1.3	6.0	12/2/2017	1,020	2,240	XXX	XXX	XXX	XXX	77.0	Silt to clear No odor
1	58.94	67.1	1.3	6.0	2/28/2018	1,300	2,310	XXX	XXX	XXX	XXX	77.8	Silt to clear No odor
1	59.05	67.1	1.3	6.0	5/15/2018	1,300	2,670	XXX	XXX	XXX	XXX	94.0	Silt to clear No odor
1	59.28	67.1	1.3	6.0	9/8/2018	1,120	2,640	XXX	XXX	XXX	XXX	77.5	Silt to clear No odor
1	59.58	67.1	1.2	6.0	11/13/2018	1,500	2,340	XXX	XXX	XXX	XXX	73.0	Silt to clear No odor
1	59.95	67.1	1.1	6.0	3/6/2019	870	1,840	XXX	XXX	XXX	XXX	72.0	Silt to clear No odor
1	59.93	67.1	1.2	6.0	5/29/2019	900	2,270	XXX	XXX	XXX	XXX	69.0	Silt to clear No odor
1	60.28	67.1	1.1	6.0	9/6/2019	640	1,660	XXX	XXX	XXX	XXX	73.0	Silt to clear No odor
1	60.26	67.1	1.1	6.0	11/16/2019	580	1,230	XXX	XXX	XXX	XXX	66.0	Silt to clear No odor
1	60.28	67.1	1.1	6.0	3/7/2020	328	824	XXX	XXX	XXX	XXX	71.8	Silt to clear No odor
1	60.43	67.1	1.1	6.0	9/12/2020	388	982	XXX	XXX	XXX	XXX	57.8	Silt to clear No odor
1	61.12	67.1	1.0	6.0	3/13/2021	352	909	XXX	XXX	XXX	XXX	61.4	Silt to clear No odor
1	61.65	67.1	0.9	6.0	6/19/2021	660	1,430	XXX	XXX	XXX	XXX	75.8	Silt to clear No odor
1	62.12	67.1	0.8	6.0	9/11/2021	88	474	XXX	XXX	XXX	XXX	72.0	Silt to clear No odor
1	62.12	67.1	0.8	6.0	11/15/2021	156	523	XXX	XXX	XXX	XXX	77.5	Silt to clear No odor

Table 2

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	54.42	65.2	1.7	10.0	6/28/2006	32	350	<0.002	<0.002	<0.002	<0.006	64.1	
2	54.51	65.2	1.7	10.0	10/19/2006	26	354	<0.001	<0.001	<0.001	<0.001	61.9	Clear some sand with no odor
2	54.75	65.5	1.7	8.0	2/21/2007	29	348	<0.001	<0.001	<0.001	<0.001	59.2	clear some sand with no odor
2	54.86	65.5	1.7	8.0	5/22/2007	25	376	<0.001	<0.001	<0.001	<0.001	47.9	clear some sand with no odor
2	55.12	65.5	1.7	8.0	8/7/2007	27	354	<0.001	<0.001	<0.001	<0.002	54.2	Clear Some Sand No Odor
2	XXX	XXX	XXX	8.0	10/16/2007	28	382	<0.001	<0.001	<0.001	<0.003	59.4	RISER AND PAD DISPLACED DEPTH READINGS NOT ACCURATE Clear some sand No odor
2	XXX	XXX	XXX	8.0	1/30/2008	80	418	<0.001	<0.001	<0.001	<0.003	72.9	Clear some sand No odor Well casing has been displaced
2	56.10	65.5	1.5	8.0	4/30/2008	32	417	<0.002	<0.002	<0.002	<0.006	64.7	Clear some sand No odor Well casing is displaced
2	56.34	65.5	1.5	8.0	7/30/2008	32	336	<0.001	<0.001	<0.001	<0.003	67.0	Clear some sand No odor
2	56.59	64.5	1.4	8.0	11/10/2008	28	397	<0.001	<0.001	<0.001	<0.003	69.4	Clear some sand No odor
2	56.58	65.4	1.4	8.0	1/30/2009	28	379	<0.001	<0.001	<0.001	<0.003	60.0	Clear some sand No odor
2	56.57	65.6	1.4	8.0	5/1/2009	28	299	<0.001	<0.001	<0.001	<0.003	60.5	Clear some sand No odor
2	56.84	65.6	1.4	6.0	8/4/2009	28	411	<0.001	<0.001	<0.001	<0.003	58.6	Clear some sand No odor
2	56.99	65.6	1.4	6.0	10/20/2009	28	406	<0.001	<0.001	<0.001	<0.003	58.6	Clear some sand No odor
2	57.10	65.6	1.4	6.0	1/27/2010	32	372	<0.001	<0.001	<0.001	<0.003	74.1	Clear some sand No odor
2	57.13	65.6	1.4	6.0	4/28/2010	32	396	<0.001	<0.001	<0.001	<0.003	75.8	Clear pumping some sand No odor
2	57.22	65.6	1.3	6.0	7/29/2010	32	423	<0.001	<0.001	<0.001	<0.003	64.2	Clear some sand No odor
2	57.36	65.6	1.3	6.0	10/26/2010	32	386	<0.001	<0.001	<0.001	<0.003	69.1	Clear some sand No odor
2	57.44	65.9	1.3	6.0	2/16/2011	32	407	<0.001	<0.001	<0.001	<0.003	57.0	Clear some sand No odor
2	57.38	65.9	1.4	6.0	6/1/2011	32	383	<0.001	<0.001	<0.001	<0.003	61.6	Clear some sand No odor
2	57.41	65.9	1.4	6.0	8/30/2011	32	362	<0.001	<0.001	<0.001	<0.003	59.2	Clear some sand No odor
2	57.51	65.9	1.3	6.0	12/1/2011	40	391	<0.001	<0.001	<0.001	<0.003	70.3	Clear some sand No odor
2	57.74	65.9	1.3	6.0	5/29/2012	36	434	XXX	XXX	XXX	XXX	65.7	Clear some sand No odor
2	57.92	65.9	1.3	6.0	11/15/2012	36	389	XXX	XXX	XXX	XXX	60.5	Clear some sand No odor
2	57.90	65.9	1.3	6.0	5/28/2013	36	424	XXX	XXX	XXX	XXX	66.1	Clear some sand No odor
2	58.09	65.9	1.2	6.0	11/15/2013	36	408	XXX	XXX	XXX	XXX	62.2	Clear some sand No odor
2	58.19	65.9	1.2	6.0	3/4/2014	32	520	XXX	XXX	XXX	XXX	36.6	Clear some sand No odor
2	58.26	65.9	1.2	6.0	6/3/2014	36	280	XXX	XXX	XXX	XXX	53.2	Clear some sand No odor
2	58.34	65.9	1.2	6.0	8/28/2014	44	432	XXX	XXX	XXX	XXX	56.1	Clear some sand No odor
2	57.95	65.9	1.3	6.0	11/21/2014	32	346	XXX	XXX	XXX	XXX	47.8	Clear some sand No odor
2	57.90	65.9	1.3	6.0	3/3/2015	40	372	XXX	XXX	XXX	XXX	45.4	Clear some sand No odor
2	58.28	65.9	1.2	6.0	6/3/2015	60	450	XXX	XXX	XXX	XXX	29.8	Clear some sand No odor
2	58.59	65.9	1.2	6.0	8/22/2015	36	436	XXX	XXX	XXX	XXX	41.2	Clear some sand No odor
2	58.66	65.9	1.2	6.0	11/8/2015	40	436	XXX	XXX	XXX	XXX	57.1	Clear some sand No odor
2	58.75	65.9	1.1	6.0	2/26/2016	48	450	XXX	XXX	XXX	XXX	60.6	Clear some sand No odor
2	58.79	65.9	1.4	6.0	5/21/2016	32	354	XXX	XXX	XXX	XXX	56.6	Clear some sand No odor
2	58.78	65.9	1.4	6.0	9/10/2016	36	420	XXX	XXX	XXX	XXX	50.0	Clear some sand No odor
2	58.95	65.9	1.1	6.0	11/10/2016	68	444	XXX	XXX	XXX	XXX	32.0	Clear some sand No odor

Table 2

2	58.98	65.9	1.1	6.0	2/22/2017	40	414	XXX	XXX	XXX	XXX	59.0	Clear some sand No odor
2	58.97	65.9	1.1	6.0	5/25/2017	84	586	XXX	XXX	XXX	XXX	53.0	Clear some sand No odor
2	59.10	65.9	1.1	6.0	9/16/2017	60	458	XXX	XXX	XXX	XXX	75.0	Clear some sand No odor
2	59.14	65.9	1.1	6.0	12/2/2017	32	390	XXX	XXX	XXX	XXX	59.0	Clear some sand No odor
2	59.20	65.9	1.1	6.0	2/28/2018	44	228	XXX	XXX	XXX	XXX	62.5	Clear some sand No odor
2	59.30	65.9	1.0	6.0	5/15/2018	36	208	XXX	XXX	XXX	XXX	68.4	Clear some sand No odor
2	59.45	65.9	1.0	6.0	9/8/2018	36	376	XXX	XXX	XXX	XXX	63.2	Clear some sand No odor
2	59.72	65.9	1.0	6.0	11/13/2018	40	258	XXX	XXX	XXX	XXX	57.6	Clear some sand No odor
2	60.10	65.9	0.9	6.0	3/6/2019	44	436	XXX	XXX	XXX	XXX	62.0	Clear some sand No odor
2	60.11	65.9	0.9	6.0	5/29/2019	32	453	XXX	XXX	XXX	XXX	63.0	Clear some sand No odor
2	60.31	65.9	0.9	6.0	9/6/2019	48	504	XXX	XXX	XXX	XXX	53.0	Clear some sand No odor
2	60.44	65.9	0.9	6.0	11/16/2019	76	485	XXX	XXX	XXX	XXX	71.0	Clear some sand No odor
2	60.42	65.9	0.9	6.0	3/7/2020	40	422	XXX	XXX	XXX	XXX	57.1	Clear some sand No odor
2	60.60	65.9	0.8	6.0	9/12/2020	40	414	XXX	XXX	XXX	XXX	49.7	Clear some sand No odor
2	61.20	65.9	0.7	6.0	3/13/2021	76	431	XXX	XXX	XXX	XXX	62.1	Clear some sand No odor
2	61.69	65.9	0.7	6.0	6/19/2021	56	416	XXX	XXX	XXX	XXX	51.4	Clear some sand No odor
2	62.06	65.9	0.6	6.0	9/11/2021	52	467	XXX	XXX	XXX	XXX	50.8	Clear some sand No odor
2	62.06	65.9	0.6	6.0	11/15/2021	48	382	XXX	XXX	XXX	XXX	84.5	Clear some sand No odor

Table 2

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	57.05	67.6	1.7	10.0	6/28/2006	140	540	<0.002	<0.002	<0.002	<0.002	117.0	
3	57.12	67.6	1.7	10.0	10/19/2006	165	570	<0.001	<0.001	<0.001	<0.001	75.8	Clear some sand No odor
3	57.35	66.7	1.5	8.0	2/21/2007	178	550	<0.001	<0.001	<0.001	<0.001	82.0	Clear some sand No odor
3	57.46	66.7	1.5	8.0	5/22/2007	128	530	<0.001	<0.001	<0.001	<0.001	61.4	Clear some sand No odor
3	57.75	66.7	1.4	8.0	8/7/2007	134	536	<0.001	<0.001	<0.001	<0.001	69.0	Clear some sand No odor
3	57.76	66.7	1.4	8.0	10/16/2007	112	537	<0.001	<0.001	<0.001	<0.003	83.1	Clear some sand No odor
3	57.92	66.8	1.4	8.0	1/30/2008	88	510	<0.001	<0.001	<0.001	<0.003	79.2	Some sand to clear No odor
3	57.88	66.8	1.4	8.0	4/30/2008	84	543	<0.002	<0.002	<0.002	<0.006	88.4	Clear some sand No odor
3	58.17	66.8	1.4	8.0	7/30/2008	76	418	<0.001	<0.001	<0.001	<0.003	77.0	Clear some sand No odor
3	58.40	66.8	1.3	8.0	11/10/2008	76	448	<0.001	<0.001	<0.001	<0.003	81.4	Clear some sand No odor
3	58.46	66.4	1.3	8.0	1/30/2009	76	442	<0.001	<0.001	<0.001	<0.003	68.7	Clear some sand No odor
3	58.45	66.4	1.3	8.0	5/1/2009	84	477	<0.001	<0.001	<0.001	<0.003	64.0	Clear some sand No odor
3	58.60	66.4	1.3	6.0	8/4/2009	72	424	<0.001	<0.001	<0.001	<0.003	63.8	Clear some sand No odor
3	58.88	66.4	1.2	6.0	10/20/2009	100	466	<0.001	<0.001	<0.001	<0.003	59.5	Clear some sand No odor
3	58.93	66.4	1.2	6.0	4/28/2010	152	534	<0.001	<0.001	<0.001	<0.003	74.7	Clear some sand No odor
3	58.92	66.4	1.2	6.0	3/27/2010	128	469	<0.001	<0.001	<0.001	<0.003	68.0	Clear some sand No odor
3	59.18	66.4	1.2	6.0	7/29/2010	184	608	<0.001	<0.001	<0.001	<0.003	84.5	Clear some sand No odor
3	59.35	66.4	1.1	6.0	10/26/2010	164	621	<0.001	<0.001	<0.001	<0.003	95.4	Clear some sand No odor
3	59.24	66.8	1.2	6.0	2/16/2011	128	522	<0.001	<0.001	<0.001	<0.003	63.7	Clear some sand No odor
3	59.12	66.8	1.2	6.0	6/1/2011	148	539	<0.001	<0.001	<0.001	<0.003	91.1	Clear some sand No odor
3	59.19	66.8	1.2	6.0	8/30/2011	156	560	<0.001	<0.001	<0.001	<0.003	91.7	Clear some sand No odor
3	59.20	66.8	1.2	6.0	12/1/2011	176	595	<0.001	<0.001	<0.001	<0.003	92.4	Clear some sand No odor
3	59.55	66.8	1.2	6.0	5/29/2012	204	676	XXX	XXX	XXX	XXX	71.9	Clear some sand No odor
3	59.63	66.8	1.2	6.0	11/15/2012	252	742	XXX	XXX	XXX	XXX	91.2	Clear some sand No odor
3	59.68	66.8	1.1	6.0	5/28/2013	280	823	XXX	XXX	XXX	XXX	81.7	Clear some sand No odor
3	59.82	66.8	1.1	6.0	11/15/2013	308	856	XXX	XXX	XXX	XXX	74.0	Clear some sand No odor
3	59.98	66.8	1.1	6.0	3/4/2014	312	790	XXX	XXX	XXX	XXX	96.0	Clear some sand No odor
3	60.07	66.8	1.1	6.0	6/3/2014	356	910	XXX	XXX	XXX	XXX	96.6	Clear some sand No odor
3	60.08	66.8	1.1	6.0	8/28/2014	328	926	XXX	XXX	XXX	XXX	84.0	Clear some sand No odor
3	59.74	66.8	1.1	6.0	11/21/2014	336	764	XXX	XXX	XXX	XXX	74.4	Clear some sand No odor
3	59.67	66.8	1.1	6.0	3/3/2015	304	848	XXX	XXX	XXX	XXX	89.0	Clear some sand No odor
3	60.20	66.8	1.1	6.0	6/3/2015	244	1,040	XXX	XXX	XXX	XXX	42.5	Clear some sand No odor
3	60.44	66.8	1.0	6.0	8/22/2015	284	964	XXX	XXX	XXX	XXX	41.8	Clear some sand No odor
3	60.62	66.8	1.0	6.0	11/8/2015	320	1,090	XXX	XXX	XXX	XXX	48.1	Clear some sand No odor
3	60.58	66.8	1.0	6.0	2/26/2016	430	1,110	XXX	XXX	XXX	XXX	76.0	Clear some sand No odor
3	60.62	66.8	1.0	6.0	5/21/2016	284	1,110	XXX	XXX	XXX	XXX	30.4	Clear some sand No odor
3	60.64	66.8	1.0	6.0	9/10/2016	332	964	XXX	XXX	XXX	XXX	64.0	Clear some sand No odor
3	60.78	66.8	1.0	6.0	11/10/2016	300	852	XXX	XXX	XXX	XXX	93.0	Clear some sand No odor
3	60.74	66.8	1.0	6.0	2/22/2017	280	1,110	XXX	XXX	XXX	XXX	71.0	Clear some sand No odor
3	60.75	66.8	1.0	6.0	5/25/2017	296	886	XXX	XXX	XXX	XXX	84.0	Clear some sand No odor
3	60.85	66.8	1.0	6.0	9/16/2017	320	898	XXX	XXX	XXX	XXX	99.0	Clear some sand No odor
3	60.89	66.8	1.0	6.0	12/2/2017	220	926	XXX	XXX	XXX	XXX	56.0	Clear some sand No odor

Table 2

3	60.92	66.8	0.9	8.0	2/28/2018	328	700	XXX	XXX	XXX	XXX	123.0	Clear some sand No odor
3	61.03	66.8	0.9	8.0	5/15/2018	180	468	XXX	XXX	XXX	XXX	56.2	Clear some sand No odor
3	61.23	66.8	0.9	8.0	9/8/2018	288	816	XXX	XXX	XXX	XXX	118.0	Clear some sand No odor
3	61.64	66.8	0.8	8.0	11/13/2018	300	697	XXX	XXX	XXX	XXX	126.0	Clear some sand No odor
3	62.02	66.8	0.8	6.0	3/6/2019	324	906	XXX	XXX	XXX	XXX	115.0	Clear some sand No odor
3	61.95	66.8	0.8	6.0	5/29/2019	312	889	XXX	XXX	XXX	XXX	114.0	Clear some sand No odor
3	62.32	66.8	0.7	6.0	9/6/2019	320	942	XXX	XXX	XXX	XXX	93.0	Clear some sand No odor
3	62.27	66.8	0.7	6.0	11/16/2019	272	833	XXX	XXX	XXX	XXX	162.0	Clear some sand No odor
3	60.23	66.8	1.1	6.0	3/7/2020	312	810	XXX	XXX	XXX	XXX	97.8	Clear some sand No odor
3	62.51	66.8	0.7	6.0	9/12/2020	296	703	XXX	XXX	XXX	XXX	76.7	Clear some sand No odor
3	63.28	66.8	0.6	6.0	3/13/2021	224	698	XXX	XXX	XXX	XXX	79.4	Clear some sand No odor
3	63.82	66.8	0.6	6.0	6/19/2021	148	579	XXX	XXX	XXX	XXX	83.2	Clear some sand No odor
3	64.33	66.8	0.4	6.0	9/11/2021	116	526	XXX	XXX	XXX	XXX	77.5	Clear some sand No odor
3	64.33	66.8	0.4	6.0	11/15/2021	92	459	XXX	XXX	XXX	XXX	88.2	Clear some sand No odor

Table 2

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
4	57.59	68.3	1.7	8.0	2/21/2007	6,770	9,320	<0.001	<0.001	<0.001	<0.001	178.0	Clear some sand No odor
4	58.16	68.3	1.6	10.0	5/22/2007	6,390	10,400	<0.001	<0.001	<0.001	<0.001	183.0	Clear some sand No odor
4	58.39	68.3	1.6	8.0	8/7/2007	6,790	13,000	<0.001	<0.001	<0.001	<0.002	89.5	Clear some sand No odor
4	58.41	68.3	1.6	8.0	10/16/2007	4,000	7,420	<0.001	<0.001	<0.001	<0.003	91.4	Clear some sand No odor
4	58.56	68.4	1.6	8.0	1/30/2008	4,550	8,260	<0.001	<0.001	<0.001	<0.003	89.9	Some sand to clear No odor
4	58.08	68.4	1.6	8.0	4/30/2008	3,450	6,430	<0.002	<0.002	<0.002	<0.006	99.2	Clear some sand No odor
4	58.36	68.4	1.6	8.0	7/30/2008	2,580	4,990	<0.001	<0.001	<0.001	<0.003	109.0	Clear some sand No odor
4	58.47	68.4	1.6	8.0	11/10/2008	1,960	3,860	<0.001	<0.001	<0.001	<0.003	81.8	Clear some sand No odor
4	58.49	68.3	1.6	8.0	1/30/2009	2,080	3,540	<0.001	<0.001	<0.001	<0.003	88.9	Clear some sand No odor
4	58.59	68.3	1.5	8.0	5/1/2009	2,300	4,600	<0.001	<0.001	<0.001	<0.003	74.5	Clear some sand No odor
4	58.73	68.3	1.5	6.0	8/4/2009	1,500	2,960	<0.001	<0.001	<0.001	<0.003	75.8	Clear some sand No odor
4	58.89	68.3	1.5	6.0	10/20/2009	1,200	2,540	<0.001	<0.001	<0.001	<0.003	72.7	Clear some sand No odor
4	59.08	68.2	1.5	8.0	4/28/2010	460	1,250	<0.001	<0.001	<0.001	<0.003	69.9	Clear some sand No odor
4	59.04	68.2	1.5	8.0	1/27/2010	800	1,800	<0.001	<0.001	<0.001	<0.003	86.0	Clear some sand No odor
4	59.27	66.2	1.4	8.0	7/29/2010	650	1,430	<0.001	<0.001	<0.001	<0.003	76.9	Clear some sand No odor
4	59.42	68.2	1.4	8.0	10/26/2010	520	1,300	<0.001	<0.001	<0.001	<0.003	75.0	Clear some sand No odor
4	59.15	68.2	1.4	8.0	2/16/2011	680	1,600	<0.001	<0.001	<0.001	<0.003	72.0	Clear some sand No odor
4	59.19	68.2	1.4	8.0	6/1/2011	380	941	<0.001	<0.001	<0.001	<0.003	69.1	Clear some sand No odor
4	59.35	68.2	1.4	8.0	8/30/2011	380	908	<0.001	<0.001	<0.001	<0.003	71.8	Clear some sand No odor
4	59.32	68.2	1.4	8.0	12/1/2011	700	1,470	<0.001	<0.001	<0.001	<0.003	78.3	Clear some sand No odor
4	59.64	68.2	1.4	8.0	5/29/2012	610	1,560	XXX	XXX	XXX	XXX	81.5	Clear some sand No odor
4	59.72	68.2	1.3	8.0	11/15/2012	690	1,660	XXX	XXX	XXX	XXX	80.6	Clear some sand No odor
4	59.83	68.2	1.3	8.0	5/28/2013	650	1,550	XXX	XXX	XXX	XXX	71.0	Clear some sand No odor
4	59.99	68.2	1.3	8.0	11/15/2013	720	1,630	XXX	XXX	XXX	XXX	75.5	Clear some sand No odor
4	60.07	68.2	1.3	8.0	3/4/2014	870	1,560	XXX	XXX	XXX	XXX	81.8	Clear some sand No odor
4	60.23	68.2	1.3	8.0	6/3/2014	810	1,730	XXX	XXX	XXX	XXX	78.8	Clear some sand No odor
4	60.31	68.2	1.3	8.0	8/28/2014	830	1,840	XXX	XXX	XXX	XXX	75.5	Clear some sand No odor
4	59.87	68.2	1.3	8.0	11/21/2014	640	1,350	XXX	XXX	XXX	XXX	67.5	Clear some sand No odor
4	59.79	68.2	1.3	8.0	3/3/2015	750	1,770	XXX	XXX	XXX	XXX	50.0	Clear some sand No odor
4	60.35	68.2	1.2	8.0	6/3/2015	510	1,210	XXX	XXX	XXX	XXX	71.6	Clear some sand No odor
4	60.55	68.2	1.2	8.0	8/22/2015	340	1,220	XXX	XXX	XXX	XXX	49.4	Clear some sand No odor
4	60.68	68.2	1.2	8.0	11/8/2015	344	1,210	XXX	XXX	XXX	XXX	59.6	Clear some sand No odor
4	60.72	68.2	1.2	8.0	2/26/2016	440	1,050	XXX	XXX	XXX	XXX	82.0	Clear some sand No odor
4	60.78	68.2	1.2	8.0	5/21/2016	280	1,100	XXX	XXX	XXX	XXX	34.1	Clear some sand No odor
4	60.67	68.2	1.2	8.0	9/10/2016	336	980	XXX	XXX	XXX	XXX	77.0	Clear some sand No odor
4	60.91	68.2	1.2	8.0	11/10/2016	430	1,150	XXX	XXX	XXX	XXX	69.0	Clear some sand No odor
4	60.90	68.2	1.2	8.0	2/22/2017	256	1,010	XXX	XXX	XXX	XXX	56.0	Clear some sand No odor
4	60.91	68.2	1.2	8.0	5/25/2017	392	974	XXX	XXX	XXX	XXX	63.0	Clear some sand No odor
4	61.01	68.2	1.1	8.0	9/16/2017	460	1,240	XXX	XXX	XXX	XXX	79.0	Clear some sand No odor
4	61.05	68.2	1.1	8.0	12/2/2017	300	836	XXX	XXX	XXX	XXX	74.0	Clear some sand No odor
4	61.07	68.2	1.1	8.0	2/28/2018	320	892	XXX	XXX	XXX	XXX	132.0	Clear some sand No odor
4	61.17	68.2	1.1	8.0	5/15/2018	228	868	XXX	XXX	XXX	XXX	57.9	Clear some sand No odor

Table 2

4	61.40	68.2	1.1	6.0	9/8/2018	610	1,260	XXX	XXX	XXX	XXX	74.0	Clear some sand No odor
4	61.69	68.2	1.0	6.0	11/13/2018	344	713	XXX	XXX	XXX	XXX	76.0	Clear some sand No odor
4	62.07	68.2	1.0	6.0	3/6/2019	128	496	XXX	XXX	XXX	XXX	74.0	Clear some sand No odor
4	62.08	68.2	1.0	6.0	5/29/2019	132	599	XXX	XXX	XXX	XXX	72.0	Clear some sand No odor
4	62.41	68.2	0.9	6.0	9/6/2019	148	572	XXX	XXX	XXX	XXX	68.0	Clear some sand No odor
4	62.37	64.2	0.9	6.0	11/16/2019	140	564	XXX	XXX	XXX	XXX	74.0	Clear some sand No odor
4	62.36	68.2	0.9	6.0	3/7/2020	132	543	XXX	XXX	XXX	XXX	77.6	Clear some sand No odor
4	62.57	68.2	0.9	6.0	9/12/2020	140	514	XXX	XXX	XXX	XXX	71.4	Clear some sand No odor
4	63.27	68.2	0.8	6.0	3/13/2021	156	594	XXX	XXX	XXX	XXX	66.1	Clear some sand No odor
4	63.81	68.2	0.7	6.0	6/19/2021	96	492	XXX	XXX	XXX	XXX	69.5	Clear some sand No odor
4	63.79	68.2	0.7	6.0	9/11/2021	84	457	XXX	XXX	XXX	XXX	70.1	Clear some sand No odor
4	64.79	68.2	0.5	6.0	11/15/2021	152	536	XXX	XXX	XXX	XXX	79.0	Clear some sand No odor

Table 2

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
RW-1	56.54	92.9	23.6	500.0	4/30/2008	1,880	920	<0.002	<0.002	<0.002	<0.006	77.7	Clear some sand No odor
RW-1	XXX	92.9	XXX	XXX	7/30/2008	1,070	2,200	<0.001	<0.001	<0.001	<0.003	61.0	Clear some sand No odor
RW-1	XXX	92.9	XXX	XXX	11/10/2008	1,200	2,360	<0.001	<0.001	<0.001	<0.003	57.9	Clear some sand No odor
RW-1	XXX	92.9	XXX	XXX	1/30/2009	1,680	3,170	<0.001	<0.001	<0.001	<0.003	103.0	Clear No odor
RW-1	XXX	92.9	XXX	50.0	5/1/2009	750	1,570	<0.001	<0.001	<0.001	<0.003	54.3	Clear No odor
RW-1	XXX	92.9	XXX	50.0	8/4/2009	580	1,290	<0.001	<0.001	<0.001	<0.003	60.5	Clear No odor
RW-1	XXX	92.2	XXX	50.0	10/20/2009	730	1,620	<0.001	<0.001	<0.001	<0.003	59.0	Clear No odor
RW-1	XXX	92.9	XXX	XXX	4/28/2010	490	1,160	<0.001	<0.001	<0.001	<0.003	72.1	Clear No odor
RW-1	XXX	92.9	XXX	100.0	1/27/2010	1,220	2,360	<0.001	<0.001	<0.001	<0.003	82.8	Clear No odor
RW-1	XXX	92.9	XXX	Pumping	7/29/2010	570	1,330	<0.001	<0.001	<0.001	<0.003	65.2	Clear No odor
RW-1	XXX	92..90	XXX	Pumping	10/26/2010	332	888	<0.001	<0.001	<0.001	<0.003	58.5	Clear No odor
RW-1	XXX	92.9	XXX	100.0	2/16/2011	750	1,670	<0.001	<0.001	<0.001	<0.003	71.3	Clear No odor
RW-1	XXX	92.9	XXX	100.0	6/1/2011	476	1,130	<0.001	<0.001	<0.001	<0.003	60.5	Clear No odor
RW-1	XXX	92.9	XXX	100.0	8/30/2011	490	1,090	<0.001	<0.001	<0.001	<0.003	63.1	Clear No odor
RW-1	XXX	92.9	XXX	100.0	12/1/2011	XXX	XXX	XXX	XXX	XXX	XXX	XXX	Well not sampled Solar pump down
RW-1	XXX	XXX	XXX	XXX	9/6/2013	212	645	XXX	XXX	XXX	XXX	XXX	XXX
RW-1	XXX	92.9	XXX	100.0	11/15/2013	300	779	XXX	XXX	XXX	XXX	65.5	Clear No Odor
RW-1	XXX	92.9	XXX	100.0	3/4/2014	364	902	XXX	XXX	XXX	XXX	85.0	Clear No odor
RW-1	XXX	92.9	XXX	Running	6/3/2014	300	838	XXX	XXX	XXX	XXX	60.0	Clear No odor
RW-1	XXX	92.9	XXX	Running	8/28/2014	292	762	XXX	XXX	XXX	XXX	58.6	Clear No odor
RW-1	XXX	92.9	XXX	100.0	11/21/2014	84	376	XXX	XXX	XXX	XXX	51.2	Clear No odor
RW-1	XXX	92.9	XXX	100.0	3/3/2015	252	1,040	XXX	XXX	XXX	XXX	45.9	Clear No odor
RW-1	XXX	92.9	XXX	Running	6/3/2015	240	1,010	XXX	XXX	XXX	XXX	49.1	Clear No odor
RW-1	XXX	92.9	XXX	Running	8/22/2015	292	812	XXX	XXX	XXX	XXX	59.7	Clear No odor
RW-1	XXX	92.9	0.0	Running	11/8/2015	220	636	XXX	XXX	XXX	XXX	60.2	Clear No odor
RW-1	XXX	92.9	XXX	100.0	2/26/2016	570	1,200	XXX	XXX	XXX	XXX	72.0	Clear No odor
RW-1	XXX	92.9	XXX	100.0	5/21/2016	620	1,580	XXX	XXX	XXX	XXX	57.0	Clear No odor
RW-1	XXX	92.9	XXX	Running	9/10/2016	368	1,060	XXX	XXX	XXX	XXX	65.0	Clear No odor
RW-1	XXX	92.9	XXX	100.0	11/10/2016	292	1,040	XXX	XXX	XXX	XXX	49.0	Clear No odor
RW-1	XXX	92.9	XXX	100.0	2/22/2017	690	1,610	XXX	XXX	XXX	XXX	68.0	Clear No odor
RW-1	XXX	92.9	XXX	Running	5/25/2017	810	2,020	XXX	XXX	XXX	XXX	76.0	Clear No odor
RW-1	XXX	92.9	XXX	Running	9/16/2017	156	558	XXX	XXX	XXX	XXX	61.0	Clear No odor
RW-1	XXX	92.9	XXX	100.0	12/2/2017	652	1,610	XXX	XXX	XXX	XXX	77.0	Clear No odor
RW-1	XXX	92.9	XXX	100.0	2/28/2018	680	1,500	XXX	XXX	XXX	XXX	102.0	Clear No odor
RW-1	XXX	92.9	XXX	100.0	5/15/2018	820	1,270	XXX	XXX	XXX	XXX	78.1	Clear No odor
RW-1	XXX	92.9	XXX	100.0	9/8/2018	112	452	XXX	XXX	XXX	XXX	56.0	Clear No odor
RW-1	XXX	92.9	XXX	100.0	11/13/2018	480	970	XXX	XXX	XXX	XXX	80.2	Clear No odor
RW-1	XXX	92.9	XXX	100.0	3/6/2019	820	1,840	XXX	XXX	XXX	XXX	73.0	Clear No odor
RW-1	XXX	92.9	XXX	Running	5/29/2019	108	465	XXX	XXX	XXX	XXX	56.0	Clear No odor
RW-1	XXX	92.9	XXX	Running	9/6/2019	108	490	XXX	XXX	XXX	XXX	53.0	Clear No odor
RW-1	XXX	92.9	XXX	100.0	11/16/2019	40	428	XXX	XXX	XXX	XXX	155.0	Clear No odor
RW-1	XXX	92.9	XXX	100.0	3/7/2020	212	642	XXX	XXX	XXX	XXX	68.6	Clear No odor

Table 2

RW-1	XXX	92.9	XXX	100.0	9/12/2020	264	764	XXX	XXX	XXX	XXX	78.4	Clear No odor
RW-1	XXX	92.9	XXX	100.0	3/13/2021	328	791	XXX	XXX	XXX	XXX	62.6	Clear No odor
RW-1	XXX	92.9	XXX	Running	6/19/2021	120	473	XXX	XXX	XXX	XXX	66.2	Clear No odor
RW-1	XXX	92.9	XXX	Running	9/11/2021	148	564	XXX	XXX	XXX	XXX	53.5	Clear No odor
RW-1	XXX	92.9	XXX	100.0	11/15/2021	160	538	XXX	XXX	XXX	XXX	74.7	Clear No odor

Laboratory Reports

CARDINAL Laboratories

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

March 22, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION K-35-1

Enclosed are the results of analyses for samples received by the laboratory on 03/16/21 13:00.

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

Laboratory Reports

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:	03/16/2021	Sampling Date:	03/13/2021
Reported:	03/22/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION K-35-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC35 K LEA COUNTY, NM		

Sample ID: MONITOR WELL #1 (H210661-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**352**	4.00	03/17/2021	ND	104	104	100	3.92	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**61.4**	10.0	03/17/2021	ND	19.2	96.0	20.0	14.2	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**909**	5.00	03/19/2021	ND	546	109	500	2.49	

Sample ID: MONITOR WELL #2 (H210661-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**76.0**	4.00	03/17/2021	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*	**62.1**	10.0	03/17/2021	ND	19.2	96.0	20.0	14.2	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**431**	5.00	03/19/2021	ND	546	109	500	2.49	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Laboratory Reports

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:	03/16/2021	Sampling Date:	03/13/2021
Reported:	03/22/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION K-35-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC35 K LEA COUNTY, NM		

Sample ID: MONITOR WELL #3 (H210661-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**224**	4.00	03/17/2021	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*	**79.4**	10.0	03/17/2021	ND	19.2	96.0	20.0	14.2	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**698**	5.00	03/19/2021	ND	546	109	500	2.49	

Sample ID: MONITOR WELL #4 (H210661-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**156**	4.00	03/17/2021	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*	**66.1**	10.0	03/17/2021	ND	19.2	96.0	20.0	14.2	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**594**	5.00	03/19/2021	ND	546	109	500	2.49	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Laboratory Reports

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:	03/16/2021	Sampling Date:	03/13/2021
Reported:	03/22/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION K-35-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC35 K LEA COUNTY, NM		

Sample ID: RECOVERY WELL #1 (H210661-05)

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	03/17/2021	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*	**62.6**	10.0	03/17/2021	ND	19.2	96.0	20.0	14.2	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**791**	5.00	03/19/2021	ND	546	109	500	2.49	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Laboratory Reports

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 Junction K-35-1
Project Location: T17S-R35E-Sec35 K ~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

H210661

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 #1	G	1	X								1		3/13	12:30
2	Monitor Well #2	G	1	X								1		3/13	8:50
3	Monitor Well #3	G	1	X								1		3/13	10:05
4	Monitor Well #4	G	1	X								1		3/13	11:15
5	Recovery Well #1	G	1	X								1		3/13	14:50

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: 3/16/21 Time: 12:55
Received by: Tamara Oldaker 3-16-21 1300

Relinquished by: 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) JO

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

REMARKS:

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

Laboratory Reports

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 JUNCTION K-35-1

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

Celey D. Keene

Lab Director/Quality Manager

Laboratory Reports

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:	06/19/2021
Reported:	06/25/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION K-35-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC35 K LEA COUNTY, NM		

Sample ID: MONITOR WELL #1 (H211612-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**660**	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*	**75.8**	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*	**1430**	5.00	06/24/2021	ND	515	103	500	0.0280	

Sample ID: MONITOR WELL #2 (H211612-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**56.0**	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*	**51.4**	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*	**416**	5.00	06/24/2021	ND	515	103	500	0.0280	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Laboratory Reports

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:	06/19/2021
Reported:	06/25/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION K-35-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC35 K LEA COUNTY, NM		

Sample ID: MONITOR WELL #3 (H211612-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**148**	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*	**83.2**	25.0	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*	**579**	5.00	06/24/2021	ND	515	103	500	0.0280	

Sample ID: MONITOR WELL #4 (H211612-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**96.0**	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*	**69.5**	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*	**492**	5.00	06/24/2021	ND	515	103	500	0.0280	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Laboratory Reports

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:	06/19/2021
Reported:	06/25/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION K-35-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC35 K LEA COUNTY, NM		

Sample ID: RECOVERY WELL #1 (H211612-05)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**120**	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*	**66.2**	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*	**473**	5.00	06/24/2021	ND	515	103	500	0.0280	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Laboratory Reports

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 Junction K-35-1
Project Location: T17S-R35E-Sec35 K ~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

ANALYSIS REQUEST
(Circle or Specify Method No.)

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	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
H21162																																					
1	Monitor Well #1	G	1	X								1		6/19	12:05																			X	X	X	
2	Monitor Well #2	G	1	X								1		6/19	7:45																			X	X	X	
3	Monitor Well #3	G	1	X								1		6/19	9:10																			X	X	X	
4	Monitor Well #4	G	1	X								1		6/19	10:50																			X	X	X	
5	Recovery Well #1	G	1	X								1		6/19	12:35																			X	X	X	

Relinquished by: Rozanne Johnson	Date: 6/22/2021	Time: 12:05	Received by: Tamara Oldaker
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)

Date: 6/22/21 Time: 1205

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 / No; Intact: Yes / No

CHECKED BY: (Initials) JD

Laboratory Reports

CARDINAL Laboratories

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

September 20, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION K-35-1

Enclosed are the results of analyses for samples received by the laboratory on 09/15/21 15:05.

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

Laboratory Reports

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:	09/15/2021	Sampling Date:	09/11/2021
Reported:	09/20/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION K-35-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC35 K LEA COUNTY, NM		

Sample ID: MONITOR WELL #1 (H212562-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**88.0**	4.00	09/16/2021	ND	100	100	100	3.92	

Sulfate 375.4 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**72.0**	10.0	09/16/2021	ND	23.0	115	20.0	16.4	

TDS 160.1 mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**474**	5.00	09/17/2021	ND	268	89.3	300	1.07	

Sample ID: MONITOR WELL #2 (H212562-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**52.0**	4.00	09/16/2021	ND	100	100	100	3.92	

Sulfate 375.4 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**50.8**	10.0	09/16/2021	ND	23.0	115	20.0	16.4	

TDS 160.1 mg/L Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**467**	5.00	09/17/2021	ND	268	89.3	300	1.07	

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:	09/15/2021	Sampling Date:	09/11/2021
Reported:	09/20/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION K-35-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC35 K LEA COUNTY, NM		

Sample ID: MONITOR WELL #3 (H212562-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**116**	4.00	09/16/2021	ND	100	100	100	3.92	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**77.5**	10.0	09/16/2021	ND	23.0	115	20.0	16.4	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**526**	5.00	09/17/2021	ND	268	89.3	300	1.07	

Sample ID: MONITOR WELL #4 (H212562-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**84.0**	4.00	09/16/2021	ND	100	100	100	3.92	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**70.1**	10.0	09/16/2021	ND	23.0	115	20.0	16.4	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**457**	5.00	09/17/2021	ND	268	89.3	300	1.07	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Laboratory Reports

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:	09/15/2021	Sampling Date:	09/11/2021
Reported:	09/20/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION K-35-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T17S-R35E-SEC35 K LEA COUNTY, NM		

Sample ID: RECOVERY WELL #1 (H212562-05)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**148**	4.00	09/16/2021	ND	100	100	100	3.92	

Sulfate 375.4 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**53.5**	10.0	09/16/2021	ND	23.0	115	20.0	16.4	

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	09/17/2021	ND	268	89.3	300	1.07	

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Laboratory Reports

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

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

Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240

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

Project #: Project Name: Vacuum Junction K-35-1

Project Location: T17S-R35E-Sec35 K ~ Lea County New Mexico

Sampler Signature: Rozanne Johnson (575)631-9310

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
H212562-1	Monitor Well #1	G	1	X								1		9/11	12:45
-2	Monitor Well #2	G	1	X								1		9/11	8:20
-3	Monitor Well #3	G	1	X								1		9/11	9:50
-4	Monitor Well #4	G	1	X								1		9/11	11:15
-5	Recovery Well #1	G	1	X								1		9/11	13:05

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	

Relinquished by: Rozanne Johnson Date: 9/15/2021 Time: 15:02

Received by: Date: 9-15-21 Time: 1505

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 / No; Intact: Yes / No

CHECKED BY: (Initials)

Laboratory Reports

CARDINAL Laboratories

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

November 29, 2021

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION K-35-1

Enclosed are the results of analyses for samples received by the laboratory on 11/18/21 15:31.

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:	11/18/2021	Sampling Date:	11/15/2021
Reported:	11/29/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION K-35-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC35 K LEA COUNTY, NM		

Sample ID: MONITOR WELL #1 (H213322-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**156**	4.00	11/19/2021	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*	**77.5**	25.0	11/22/2021	ND	24.0	120	20.0	0.418	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**523**	5.00	11/23/2021	ND	512	102	500	1.51	

Sample ID: MONITOR WELL #2 (H213322-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**48.0**	4.00	11/19/2021	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*	**84.5**	25.0	11/22/2021	ND	24.0	120	20.0	0.418	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**382**	5.00	11/23/2021	ND	512	102	500	1.51	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Laboratory Reports

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:	11/18/2021	Sampling Date:	11/15/2021
Reported:	11/29/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION K-35-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC35 K LEA COUNTY, NM		

Sample ID: MONITOR WELL #3 (H213322-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**92.0**	4.00	11/19/2021	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*	**88.2**	25.0	11/22/2021	ND	24.0	120	20.0	0.418	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**459**	5.00	11/23/2021	ND	512	102	500	1.51	

Sample ID: MONITOR WELL #4 (H213322-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**152**	4.00	11/19/2021	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*	**79.0**	25.0	11/22/2021	ND	24.0	120	20.0	0.418	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**536**	5.00	11/23/2021	ND	528	106	500	2.46	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Laboratory Reports

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:	11/18/2021	Sampling Date:	11/15/2021
Reported:	11/29/2021	Sampling Type:	Water
Project Name:	VACUUM JUNCTION K-35-1	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC35 K LEA COUNTY, NM		

Sample ID: RECOVERY WELL #1 (H213322-05)

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	11/19/2021	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*	**74.7**	25.0	11/22/2021	ND	24.0	120	20.0	0.418	

TDS 160.1 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**538**	5.00	11/23/2021	ND	528	106	500	2.46	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Laboratory Reports

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 Junction K-35-1	
Project Location: T17S-R35E-Sec35 K ~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

H213322

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
01	Monitor Well #1	G	1	X								1		11/15	13:05
02	Monitor Well #2	G	1	X								1		11/15	8:45
03	Monitor Well #3	G	1	X								1		11/15	10:05
04	Monitor Well #4	G	1	X								1		11/15	11:40
05	Recovery Well #1	G	1	X								1		11/15	16:20

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: Rozanne Johnson Date: 11/18/2021 Time: 15:30

Received by: Date: Time:

Relinquished by: Date: Time:

Received By: (Laboratory Staff) Jodi Henson Date: 11/18/21 Time: 15:31

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

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

CHECKED BY: (Initials) JA

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

REMARKS:

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 90582

CONDITIONS

Operator:	OGRID:
RICE OPERATING COMPANY 122 W Taylor Hobbs, NM 88240	19174
	Action Number: 90582
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Accepted for the record. Please see App ID 202305 for most updated status.	5/23/2023