

# **RICE** *Operating Company*

112 West Taylor • Hobbs, New Mexico 88240

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

**April 1, 2020**

## **Bradford Billings**

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

**RE: 2019 Annual Groundwater Report  
Rice Operating Company – BD SWD System  
BD Santa Rita EOL Release Site (AP-58): UL/A, Sec. 27, T22S, R37E**

Mr. Billings:

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

The site is located approximately 4.5 miles southeast of Eunice, New Mexico at UL/A, Sec. 27, T22S, R37E as shown on the Geographic Location Map. Groundwater sampling at the site indicated that the depth to groundwater is located at approximately 54 feet below ground surface (bgs).

On November 22<sup>nd</sup>, 2003, ROC discovered a leak from a 2-inch PVC compression coupling. After initial backhoe characterization, the site was disclosed to NMOCD as a potential groundwater impact site on January 6<sup>th</sup>, 2004. Since groundwater impact was suspected, MW-1 was installed on August 30<sup>th</sup>, 2005. On October 30<sup>th</sup>, 2007, an up gradient well, MW-2, and a down gradient well, MW-3, were installed to fully delineate groundwater. NMOCD approved the Amended Stage 2 Abatement Plan on February 4<sup>th</sup>, 2009. As a result, MW-1 was plugged and abandoned on February 27<sup>th</sup>, 2009, and the excavation for liner installation commenced on March 24<sup>th</sup>, 2009. Two, 1 ft thick clay liners, one with dimensions of 40x20 ft at 30 ft bgs and one with dimensions of 40x50 ft at 12 ft bgs, were installed and a 20-mil plastic liner of equal size was placed above both clay layers. Each plastic liner was padded with a foot of blow sand. The site was backfilled with clean soil, contoured to the surrounding location, and seeded with a native vegetative mix. On June 16<sup>th</sup> and 17<sup>th</sup>, 2009, MW-4 and RW-1 were installed at the site. On October 10<sup>th</sup>, 2012, ROC submitted a Soil Closure Request which was approved by NMOCD on the same day.

Groundwater recovery began on June 22<sup>nd</sup>, 2010 from RW-1. Since that time, approximately 53,651 barrels of groundwater have been removed (6,040 barrels were removed in 2019). Based on the most recent sampling event, this equates to approximately 3,583 Kg of chlorides removed from the site (403 Kg were removed in 2019). Since pumping efforts began, quarterly groundwater sampling results for chloride have decreased in the down gradient wells (RW-1,

April 1, 2020

MW-3, and MW-4). This indicates that the pumping program at the site has been effective in reducing the chloride load in the groundwater.

Due to the current climate, and in the interest of safety, ROC proposes to reduce groundwater monitoring from quarterly to semi-annually beginning this year. In addition, ROC is proposing to suspend groundwater recovery for this year. These proposals are only temporary and regularly scheduled groundwater monitoring and recovery will commence as soon as possible.

Attached is the Appendix, which contains:

1. A Geographic Location Map.
2. A map showing well locations.
3. A table presenting all laboratory results and depth to groundwater for each well at the site, and a graph showing recent laboratory results.
4. The laboratory analytical results for 2019.

Rice Operating Company appreciates the opportunity to work with you on this project. Please contact me at (575) 393-9174 or Edward Hansen at (505) 920-4965 if you have any questions or wish to further discuss this site. Thank you for your time and consideration.

Sincerely,

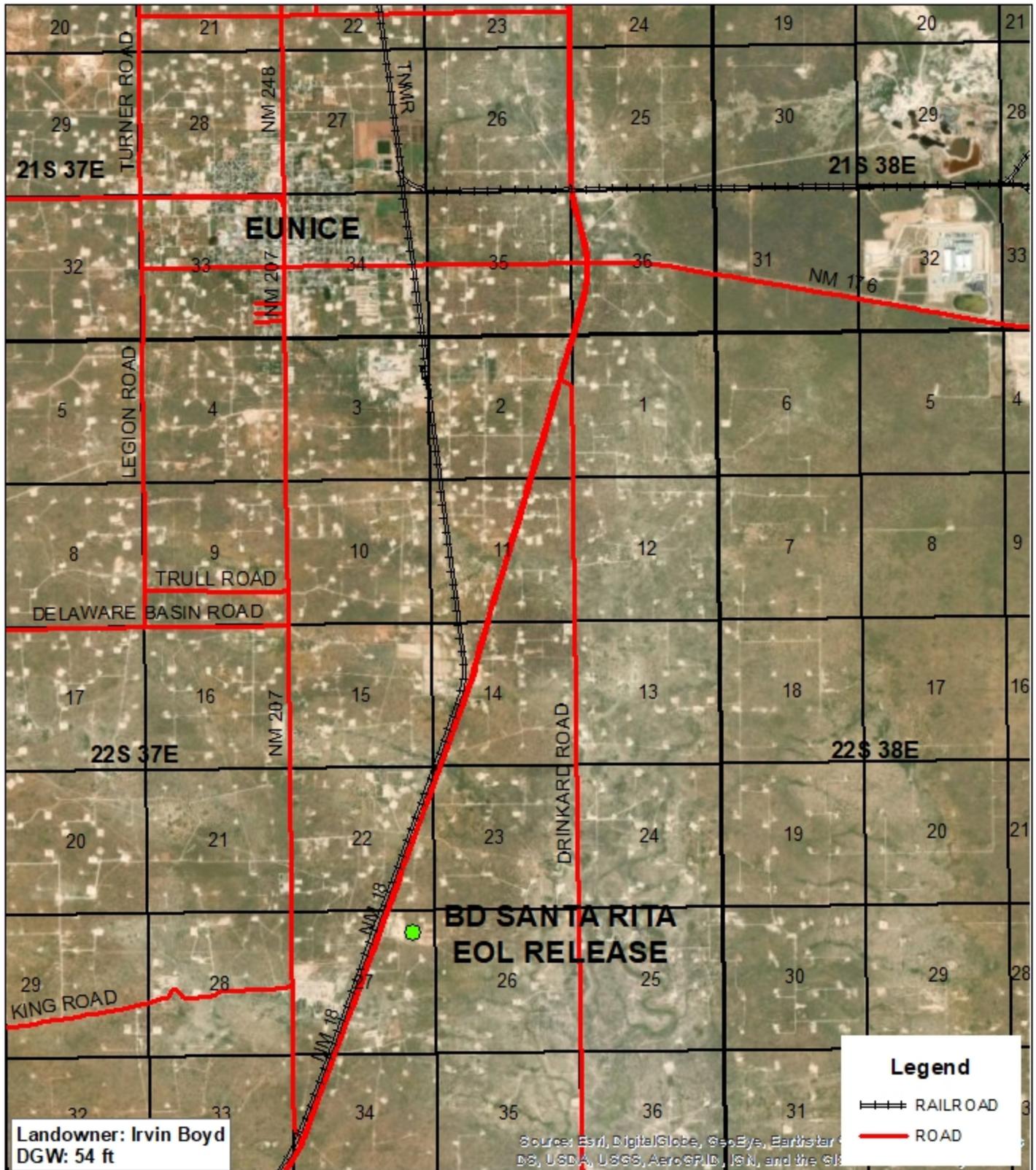
A handwritten signature in cursive script that reads "Katie Davis".

Katie Davis  
Environmental Manager  
RICE Operating Company (ROC)

Cc – Edward J. Hansen (ROC)

appendix

# Geographic Location Map



Landowner: Irvin Boyd  
DGW: 54 ft

Sources: Esri, DigitalGlobe, GeoEye, Earthstar, USDA, USGS, AeroGRID, IGN, and the GIS User Community

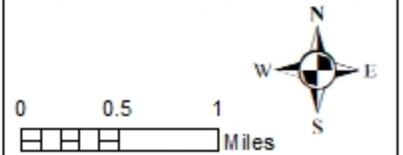


## **BD SANTA RITA EOL RELEASE**

AP-58

UL A SECTION 27  
T22S, R37E  
LEA COUNTY, NM

GPS: 32.367966 -103.145217  
NAD 83 STATE PLANE PROJ.  
NEW MEXICO EAST ZONE



Drawing date: 3/6/19  
Drafted by: T. Grieco

# Site Map



**Legend**

- ACTIVE MW
- REMOVED MW
- ROC ACTIVE LINE
- EXCAVATED AREA
- REMOVED WOOD JCT BOX
- NON ROC BATTERY

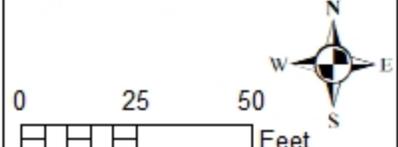
Landowner: Irvin Boyd  
DGW: 54 ft



## BD SANTA RITA EOL RELEASE AP-58

UL A SECTION 27  
T22S, R37E  
LEA COUNTY, NM

GPS: 32.367966 -103.145217  
NAD 83 STATE PLANE PROJ.  
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Drawing date: 3/6/19  
Drafted by: T. Grieco

**ROC - BD Santa Rita EOL (AP-58)**  
**Unit Letter A, Section 27, T2S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	54.04	63.58	1.53	4.752	9/2/2005	4,480	7,600	<0.001	<0.001	<0.001	<0.001	1,380	red & silty
1	53.85	63.58	1.6	5	10/24/2005	7,170	16,400	<0.001	<0.001	<0.001	<0.001	726	red & silty
1	53.98	63.58	1.5	5	1/23/2006	7,450	14,300	<0.001	<0.001	<0.001	<0.001	723	red & silty
1	54.07	63.58	1.5	6	4/24/2006	7,100	14,300	<0.001	<0.001	<0.001	<0.001	675	
1	54.08	63.58	1.5	10	7/19/2006	6,180	14,000	<0.001	<0.001	<0.001	<0.001	583	
1	53.99	63.58	1.5	15	10/11/2006	2,100	4,560	<0.001	<0.001	<0.001	<0.001	408	Clear
1	54.1	63.58	1.5	5	1/25/2007	2,740	4,560	<0.001	<0.001	<0.001	<0.001	449	
1	54.11	63.58	1.5	5.5	4/4/2007	2,610	5,720	<0.001	<0.001	<0.001	<0.003	314	Clear No odor
1	53.8	63.58	1.6	6	7/9/2007	363	1,470	<0.001	<0.001	<0.001	<0.003	267	Clear No odor
1	53.87	63.58	1.6	6	11/12/2007	356	1,398	<0.001	<0.001	<0.001	<0.003	331	Clear No odor
1	53.88	63.58	1.6	6	1/15/2008	408	1,499	<0.001	<0.001	<0.001	<0.003	232	Clear No odor
1	53.98	63.58	1.5	6	4/7/2008	420	1,460	<0.001	<0.001	<0.001	<0.003	346	Sand to clear No odor
1	54.06	63.58	1.5	6	7/22/2008	440	1,460	<0.002	<0.002	<0.002	<0.006	271	Sand to clear No odor
1	54.11	63.58	1.5	6	10/2/2008	392	1,390	<0.001	<0.001	<0.001	<0.003	281	Sand to clear No odor
1	54.08	63.2	1.5	6	1/14/2009	352	1,250	<0.001	<0.001	<0.001	<0.003	250	Sand to clear No odor
MW-1 Plugged 2/27/2009													

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	54.55	62.58	1.3	6	11/12/2007	160	930	<0.001	<0.001	<0.001	<0.003	257	Clear No odor
2	54.57	63.7	1.5	6	1/15/2008	128	1,001	<0.001	<0.001	<0.001	<0.003	340	Clear No odor
2	54.65	63.7	1.4	6	4/7/2008	100	982	<0.001	<0.001	<0.001	<0.003	411	Sand to clear No odor
2	54.74	63.7	1.4	6	7/22/2008	92	931	<0.002	<0.002	<0.002	<0.006	377	Sand to clear No odor
2	54.81	63.7	1.4	6	10/2/2008	88	902	<0.001	<0.001	<0.001	<0.003	333	Sand to clear No odor
2	54.78	64.2	1.5	6	1/14/2009	84	850	<0.001	<0.001	<0.001	<0.003	309	Sand to clear No odor
2	54.82	64.2	1.5	6	4/14/2009	80	858	<0.001	<0.001	<0.001	<0.003	319	Sand to clear No odor
2	54.79	64.43	1.5	6	7/13/2009	76	802	<0.001	<0.001	<0.001	<0.003	279	Sand to clear No odor
2	54.79	64.43	1.5	6	10/8/2009	64	776	<0.001	<0.001	<0.001	<0.003	244	Sand to clear No odor

**ROC - BD Santa Rita EOL (AP-58)**  
**Unit Letter A, Section 27, T22S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	54.83	64.42	1.5	6	1/6/2010	60	726	<0.001	<0.001	<0.001	<0.003	268	Sand to clear No odor
2	54.85	64.42	1.5	6	4/9/2010	52	710	<0.001	<0.001	<0.001	<0.003	250	Sand to clear No odor
2	55.1	64.42	1.5	6	7/9/2010	52	644	<0.001	<0.001	<0.001	<0.003	201	Sand to clear No odor
2	55.05	64.42	1.5	6	10/6/2010	40	530	<0.001	<0.001	<0.001	<0.003	115	Sand to clear No odor
2	54.82	64.42	1.5	6	2/11/2011	88	601	<0.001	<0.001	<0.001	<0.003	123	Sand to clear No odor
2	54.92	64.42	1.5	6	4/12/2011	40	470	<0.001	<0.001	<0.001	<0.003	117	Sand to clear No odor
2	55.23	64.42	1.5	6	7/18/2011	36	491	<0.001	<0.001	<0.001	<0.003	106	Sand to clear No odor
2	55.33	64.42	1.5	6	10/13/2011	44	496	<0.001	<0.001	<0.001	<0.003	121	Sand to clear No odor
2	54.98	64.42	1.5	6	1/18/2012	40	414	<0.001	<0.001	<0.001	<0.003	116	Sand to clear No odor
2	55.34	64.42	1.5	6	4/17/2012	32	458	<0.001	<0.001	<0.001	<0.003	94.6	Sand to clear No odor
2	55.06	64.42	1.5	6	7/16/2012	80	613	<0.001	<0.001	<0.001	<0.003	327	Sand to clear No odor
2	55.33	64.42	1.5	6	10/5/2012	40	510	<0.001	<0.001	<0.001	<0.003	108	Sand to clear No odor
2	55.03	64.42	1.5	6	1/8/2013	40	456	<0.001	<0.001	<0.001	<0.003	94	Sand to clear No odor
2	55.03	64.42	1.5	6	4/19/2013	44	428	<0.001	<0.001	<0.001	<0.003	83	Sand to clear No odor
2	55.07	64.42	1.5	6	7/16/2013	44	424	<0.001	<0.001	<0.001	<0.003	99	Sand to clear No odor
2	55.14	64.42	1.5	6	10/17/2013	40	437	<0.001	<0.001	<0.001	<0.003	85.2	Sand to clear No odor
2	54.92	64.42	1.5	6	1/17/2014	36	406	<0.001	<0.001	<0.001	<0.003	82.3	Sand to clear No odor
2	55.02	64.42	1.5	6	4/7/2014	44	456	<0.001	<0.001	<0.001	<0.003	111	Sand to clear No odor
2	55.05	64.42	1.5	6	7/16/2014	40	472	<0.001	<0.001	<0.001	<0.003	77.4	Sand to clear No odor
2	54.01	64.42	1.7	6	10/23/2014	52	454	<0.001	<0.001	<0.001	<0.003	116	Sand to clear No odor
2	53.83	64.42	1.7	6	2/2/2015	56	438	<0.001	<0.001	<0.001	<0.003	117	Sand to clear No odor
2	54.05	64.42	1.7	6	4/21/2015	40	434	<0.001	<0.001	<0.001	<0.003	89.7	Sand to clear No odor
2	54.32	64.42	1.62	6	7/21/2015	60	480	<0.001	<0.001	<0.001	<0.003	83	Sand to clear No odor
2	54.34	64.42	1.61	6	11/18/2015	76	626	<0.001	<0.001	<0.001	<0.003	135	Sand to clear No odor
2	53.84	64.42	1.7	6	1/28/2016	68	608	<0.001	<0.001	<0.001	<0.003	161	Sand to clear No odor
2	54.15	64.42	1.6	6	4/21/2016	112	518	<0.001	<0.001	<0.001	<0.003	95.8	Sand to clear No odor
2	54.21	64.42	1.6	6	7/21/2016	60	652	<0.001	<0.001	<0.001	<0.003	172	Sand to clear No odor
2	53.64	64.42	1.7	6	10/21/2016	68	658	<0.001	<0.001	<0.001	<0.003	184	Sand to clear No odor
2	53.72	64.42	1.7	6	2/3/2017	60	572	<0.001	<0.001	<0.001	<0.003	139	Sand to clear No odor

**ROC - BD Santa Rita EOL (AP-58)**  
**Unit Letter A, Section 27, T22S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	53.91	64.42	1.7	6	4/6/2017	52	534	<0.001	<0.001	<0.001	<0.003	128	Sand to clear No odor
2	53.82	64.42	1.7	6	7/28/2017	48	538	<0.001	<0.001	<0.001	<0.003	103	Sand to clear No odor
2	53.74	64.42	1.7	6	10/20/2017	44	532	<0.001	<0.001	<0.001	<0.003	118	Sand to clear No odor
2	53.7	64.42	1.7	6	1/16/2018	36	436	<0.001	<0.001	<0.001	<0.003	108	Sand to clear No odor
2	53.78	64.42	1.7	6	4/26/2018	44	464	<0.001	<0.001	<0.001	<0.003	121	Sand to clear No odor
2	54.05	64.42	1.7	6	8/2/2018	56	474	<0.001	<0.001	<0.001	<0.003	96.8	Sand to clear No odor
2	54.07	64.42	1.7	6	10/30/2018	48	476	<0.001	<0.001	<0.001	<0.003	102	Sand to clear No odor
2	53.68	64.42	1.7	6	2/4/2019	52	460	<0.001	<0.001	<0.001	<0.003	98	Sand to clear No odor
2	53.78	64.42	1.7	6	4/22/2019	44	360	<0.001	<0.001	<0.001	<0.003	88	Sand to clear No odor
2	54.1	64.42	1.7	6	7/19/2019	48	444	<0.001	<0.001	<0.001	<0.003	101	Sand to clear No odor
2	53.94	64.42	1.7	6	10/23/2019	40	416	<0.001	<0.001	<0.001	<0.003	87	Sand to clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	53.86	65.44	1.9	6	10/2/2008	1,020	2,830	<0.001	<0.001	<0.001	<0.003	280	Sand to clear No odor
3	53.83	65.42	1.9	6	1/14/2009	1,050	2,670	<0.001	<0.001	<0.001	<0.003	280	Sand to clear No odor
3	53.9	65.42	1.8	6	4/14/2009	960	2,200	<0.001	<0.001	<0.001	<0.003	294	Sand to clear No odor
3	53.88	65.45	1.9	6	7/13/2009	900	2,080	<0.001	<0.001	<0.001	<0.003	270	Sand to clear No odor
3	53.85	65.45	1.9	6	10/8/2009	900	2,340	<0.001	<0.001	<0.001	<0.003	254	Sand to clear No odor
3	54.04	65.45	1.8	6	1/6/2010	910	2,170	<0.001	<0.001	<0.001	<0.003	254	Sand to clear No odor
3	53.94	65.45	1.8	6	4/9/2010	1,110	2,150	<0.001	<0.001	<0.001	<0.003	181	Sand to clear No odor
3	54.94	65.45	1.7	6	7/9/2010	780	1,840	<0.001	<0.001	<0.001	<0.003	276	Sand to clear No odor
3	54.98	65.45	1.7	6	10/6/2010	1,000	2,360	<0.001	<0.001	<0.001	<0.003	266	Sand to clear No odor
3	54.38	65.43	1.8	6	2/11/2011	780	1,560	<0.001	<0.001	<0.001	<0.003	192	Sand to clear No odor
3	55.03	65.43	1.7	6	4/12/2011	1,080	2,350	<0.001	<0.001	<0.001	<0.003	274	Sand to clear No odor
3	54.61	65.43	1.7	6	7/18/2011	720	1,740	<0.001	<0.001	<0.001	<0.003	234	Sand to clear No odor
3	54.7	65.43	1.7	6	10/13/2011	670	1,590	<0.001	<0.001	<0.001	<0.003	247	Sand to clear No odor
3	54.18	65.43	1.8	6	1/18/2012	630	1,520	<0.001	<0.001	<0.001	<0.003	244	Sand to clear No odor

**ROC - BD Santa Rita EOL (AP-58)**  
**Unit Letter A, Section 27, T22S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	54.69	65.43	1.7	6	4/17/2012	520	1,410	<0.001	<0.001	<0.001	<0.003	208	Sand to clear No odor
3	54.48	65.43	1.8	6	7/16/2012	520	1,460	<0.001	<0.001	<0.001	<0.003	267	Sand to clear No odor
3	54.64	65.43	1.7	6	10/5/2012	520	1,520	<0.001	<0.001	<0.001	<0.003	226	Sand to clear No odor
3	54.06	65.43	1.8	6	1/8/2013	730	1,520	<0.001	<0.001	<0.001	<0.003	177	Sand to clear No odor
3	54.42	65.43	1.8	6	4/19/2013	750	1,620	<0.001	<0.001	<0.001	<0.003	202	Sand to clear No odor
3	54.26	65.43	1.8	6	7/16/2013	448	1,280	<0.001	<0.001	<0.001	<0.003	220	Sand to clear No odor
3	54.28	65.43	1.8	6	10/17/2013	600	1,490	<0.001	<0.001	<0.001	<0.003	174	Sand to clear No odor
3	54.02	65.43	1.8	6	1/17/2014	540	1,320	<0.001	<0.001	<0.001	<0.003	176	Sand to clear No odor
3	54.22	65.43	1.8	6	4/7/2014	580	1,510	<0.001	<0.001	<0.001	<0.003	251	Sand to clear No odor
3	54.24	65.43	1.8	6	7/16/2014	460	1,400	<0.001	<0.001	<0.001	<0.003	215	Sand to clear No odor
3	53.82	65.43	1.9	6	10/23/2014	490	1,420	<0.001	<0.001	<0.001	<0.003	206	Sand to clear No odor
3	53.39	65.43	1.9	6	2/2/2015	520	1,520	<0.001	<0.001	<0.001	<0.003	349	Sand to clear No odor
3	53.49	65.43	1.9	6	4/21/2015	580	1,560	<0.001	<0.001	<0.001	<0.003	219	Sand to clear No odor
3	53.88	65.43	1.85	6	7/21/2015	500	1,430	<0.001	<0.001	<0.001	<0.003	185	Sand to clear No odor
3	53.85	65.43	1.85	6	11/18/2015	540	1,420	<0.001	<0.001	<0.001	<0.003	190	Sand to clear No odor
3	53.37	65.43	1.9	6	1/28/2016	830	1,990	<0.001	<0.001	<0.001	<0.003	356	Sand to clear No odor
3	53.7	65.43	1.9	6	4/21/2016	560	1,500	<0.001	<0.001	<0.001	<0.003	248	Sand to clear No odor
3	53.81	65.43	1.9	6	7/21/2016	530	1,300	<0.001	<0.001	<0.001	<0.003	222	Sand to clear No odor
3	53.68	65.43	1.9	6	10/21/2016	388	1,240	<0.001	<0.001	<0.001	<0.003	208	Sand to clear No odor
3	53.39	65.43	1.9	6	2/3/2017	780	1,710	<0.001	<0.001	<0.001	<0.003	132	Sand to clear No odor
3	53.49	65.43	1.9	6	4/6/2017	660	1,590	<0.001	<0.001	<0.001	<0.003	241	Sand to clear No odor
3	53.55	65.43	1.9	6	7/28/2017	500	1,520	<0.001	<0.001	<0.001	<0.003	201	Sand to clear No odor
3	53.46	65.43	1.9	6	10/20/2017	530	1,370	<0.001	<0.001	<0.001	<0.003	241	Sand to clear No odor
3	53.51	65.43	1.9	6	1/16/2018	640	1,330	<0.001	<0.001	<0.001	<0.003	230	Sand to clear No odor
3	53.56	65.43	1.9	6	4/26/2018	590	1,560	<0.001	<0.001	<0.001	<0.003	233	Sand to clear No odor
3	53.94	65.43	1.8	6	8/2/2018	540	1,290	<0.001	<0.001	<0.001	<0.003	224	Sand to clear No odor
3	54.01	65.43	1.8	6	10/30/2018	790	1,720	<0.001	<0.001	<0.001	<0.003	207	Sand to clear No odor
3	53.48	65.43	1.9	6	2/4/2019	440	1,200	<0.001	<0.001	<0.001	<0.003	220	Sand to clear No odor
3	53.37	65.43	1.9	6	4/22/2019	528	1,510	<0.001	<0.001	<0.001	<0.003	243	Sand to clear No odor

**ROC - BD Santa Rita EOL (AP-58)**  
**Unit Letter A, Section 27, T22S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	53.89	65.43	1.9	6	7/19/2019	428	1,340	<0.001	<0.001	<0.001	<0.003	227	Sand to clear No odor
3	53.74	65.43	1.9	6	10/23/2019	396	1,200	<0.001	<0.001	<0.001	<0.003	205	Sand to clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
4	52.28	64.4	1.9	6	7/13/2009	1,040	2,260	<0.001	<0.001	<0.001	<0.003	230	Sand to clear No odor
4	52.23	64.4	1.9	6	10/8/2009	1,240	3,320	<0.001	<0.001	<0.001	<0.003	233	Sand to clear No odor
4	52.23	64.29	1.9	6	1/6/2010	1,200	2,750	<0.001	<0.001	<0.001	<0.003	209	Sand to clear No odor
4	52.24	64.29	1.9	6	4/9/2010	900	2,100	<0.001	<0.001	<0.001	<0.003	313	Sand to clear No odor
4	52.76	64.29	1.8	6	7/9/2010	1,450	2,810	<0.001	<0.001	<0.001	<0.003	280	Sand to clear No odor
4	52.83	64.29	1.8	6	10/6/2010	1,040	2,320	<0.001	<0.001	<0.001	<0.003	251	Sand to clear No odor
4	52.22	65.2	2.1	8	2/11/2011	610	1,490	<0.001	<0.001	<0.001	<0.003	208	Sand to clear No odor
4	52.92	65.2	2	8	4/12/2011	640	1,580	<0.001	<0.001	<0.001	<0.003	238	Sand to clear No odor
4	52.95	65.2	2	8	7/18/2011	640	1,530	<0.001	<0.001	<0.001	<0.003	232	Sand to clear No odor
4	52.91	65.2	2	8	10/13/2011	450	1,160	<0.001	<0.001	<0.001	<0.003	235	Sand to clear No odor
4	52.32	65.2	2.1	8	1/18/2012	380	915	<0.001	<0.001	<0.001	<0.003	216	Sand to clear No odor
4	52.81	65.2	2	8	4/17/2012	344	1,110	<0.001	<0.001	<0.001	<0.003	207	Sand to clear No odor
4	52.64	65.2	2	8	7/16/2012	344	1,190	<0.001	<0.001	<0.001	<0.003	244	Sand to clear No odor
4	52.79	65.2	2	8	10/5/2012	352	1,180	<0.001	<0.001	<0.001	<0.003	218	Sand to clear No odor
4	52.41	65.2	2	8	1/8/2013	380	980	<0.001	<0.001	<0.001	<0.003	149	Sand to clear No odor
4	52.73	65.2	2	8	4/19/2013	410	1,140	<0.001	<0.001	<0.001	<0.003	213	Sand to clear No odor
4	52.57	65.2	2	8	7/16/2013	388	1,140	<0.001	<0.001	<0.001	<0.003	202	Sand to clear No odor
4	52.57	65.2	2	8	10/17/2013	368	1,100	<0.001	<0.001	<0.001	<0.003	197	Sand to clear No odor
4	52.34	65.2	2.1	8	1/17/2014	360	1,070	<0.001	<0.001	<0.001	<0.003	192	Sand to clear No odor
4	52.58	65.2	2	8	4/7/2014	448	1,200	<0.001	<0.001	<0.001	<0.003	204	Sand to clear No odor
4	52.59	65.2	2	8	7/16/2014	384	1,140	<0.001	<0.001	<0.001	<0.003	174	Sand to clear No odor
4	51.97	65.2	2.1	8	10/23/2014	360	1,100	<0.001	<0.001	<0.001	<0.003	157	Sand to clear No odor
4	51.52	65.2	2.2	8	2/2/2015	460	1,310	<0.001	<0.001	<0.001	<0.003	188	Sand to clear No odor

**ROC - BD Santa Rita EOL (AP-58)**  
**Unit Letter A, Section 27, T22S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
4	51.58	65.2	2.2	8	4/21/2015	500	1,350	<0.001	<0.001	<0.001	<0.003	207	Sand to clear No odor
4	51.89	65.2	2.13	8	7/21/2015	550	1,450	<0.001	<0.001	<0.001	<0.003	190	Sand to clear No odor
4	51.88	65.2	2.13	8	11/18/2015	500	1,350	<0.001	<0.001	<0.001	<0.003	228	Sand to clear No odor
4	51.42	65.2	2.2	8	1/28/2016	490	1,240	<0.001	<0.001	<0.001	<0.003	223	Sand to clear No odor
4	51.72	65.2	2.2	8	4/21/2016	450	1,360	<0.001	<0.001	<0.001	<0.003	224	Sand to clear No odor
4	51.64	65.2	2.2	8	7/21/2016	400	1,200	<0.001	<0.001	<0.001	<0.003	208	Sand to clear No odor
4	51.52	65.2	2.2	8	10/21/2016	420	1,160	<0.001	<0.001	<0.001	<0.003	111	Sand to clear No odor
4	51.24	65.2	2.2	8	2/3/2017	430	1,240	<0.001	<0.001	<0.001	<0.003	219	Sand to clear No odor
4	51.32	65.2	2.2	8	4/6/2017	440	1,410	<0.001	<0.001	<0.001	<0.003	208	Sand to clear No odor
4	51.38	65.2	2.2	8	7/28/2017	510	1,440	<0.001	<0.001	<0.001	<0.003	218	Sand to clear No odor
4	51.27	65.2	2.2	8	10/20/2017	520	1,330	<0.001	<0.001	<0.001	<0.003	206	Sand to clear No odor
4	51.12	65.2	2.3	8	1/16/2018	540	1,420	<0.001	<0.001	<0.001	<0.003	242	Sand to clear No odor
4	51.15	65.2	2.2	8	4/26/2018	500	1,460	<0.001	<0.001	<0.001	<0.003	247	Sand to clear No odor
4	51.55	65.2	2.2	8	8/2/2018	436	1,070	<0.001	<0.001	<0.001	<0.003	208	Sand to clear No odor
4	51.62	65.2	2.2	8	10/30/2018	450	1,190	<0.001	<0.001	<0.001	<0.003	206	Sand to clear No odor
4	51.14	65.2	2.2	8	2/4/2019	620	1,500	<0.001	<0.001	<0.001	<0.003	235	Sand to clear No odor
4	51.61	65.2	2.2	8	4/22/2019	432	1,210	<0.001	<0.001	<0.001	<0.003	246	Sand to clear No odor
4	51.61	65.2	2.2	8	7/19/2019	448	1,330	<0.001	<0.001	<0.001	<0.003	228	Sand to clear No odor
4	51.55	65.2	2.2	8	10/23/2019	380	1,210	<0.001	<0.001	<0.001	<0.003	214	Sand to clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
RW-1	53.02	98.85	29.8	90	7/13/2009	1,340	2,750	<0.001	<0.001	<0.001	<0.003	288	Sand to clear No odor
RW-1	53.01	98.85	29.8	90	10/8/2009	1,520	2,970	<0.001	<0.001	<0.001	<0.003	251	Sand to clear No odor
RW-1	53.04	98.85	29.8	90	1/6/2010	1,480	2,880	<0.001	<0.001	<0.001	<0.003	224	Sand to clear No odor
RW-1	53.06	98.85	29.8	90	4/9/2010	1,300	2,620	<0.001	<0.001	<0.001	<0.003	290	Sand to clear No odor
RW-1	XXX	98.85	XXX	XXX	7/9/2010	1,260	2,750	<0.001	<0.001	<0.001	<0.003	291	Solar pump used to purge

**ROC - BD Santa Rita EOL (AP-58)**  
**Unit Letter A, Section 27, T22S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
RW-1	XXX	98.85	XXX	XXX	10/6/2010	930	2,360	<0.001	<0.001	<0.001	<0.003	298	Solar pump used to purge
RW-1	XXX	98.85	XXX	90	2/11/2011	850	1,800	<0.001	<0.001	<0.001	<0.003	180	Solar pump used to purge
RW-1	XXX	98.85	XXX	XXX	4/12/2011	1,000	2,190	<0.001	<0.001	<0.001	<0.003	298	Solar pump used to purge
RW-1	XXX	98.85	XXX	XXX	7/18/2011	740	1,740	<0.001	<0.001	<0.001	<0.001	255	Solar pump used to purge
RW-1	XXX	98.85	XXX	pumping	10/13/2011	680	1,630	<0.001	<0.001	<0.001	<0.003	199	Solar pump used to purge
RW-1	XXX	98.85	XXX	pumping	1/18/2012	630	1,500	<0.001	<0.001	<0.001	<0.003	244	Solar pump used to purge
RW-1	XXX	98.85	XXX	pumping	4/17/2012	580	1,490	<0.001	<0.001	<0.001	<0.003	277	Solar pump used to purge
RW-1	XXX	98.85	XXX	pumping	7/16/2012	650	1,710	<0.001	<0.001	<0.001	<0.003	250	Solar pump used to purge
RW-1	XXX	98.85	XXX	pumping	10/5/2012	680	1,760	<0.001	<0.001	<0.001	<0.003	218	Solar pump used to purge
RW-1	XXX	98.85	XXX	pumping	1/7/2013	750	1,600	<0.001	<0.001	<0.001	<0.003	188	Solar pump used to purge
RW-1	XXX	98.85	XXX	pumping	4/19/2013	570	1,480	<0.001	<0.001	<0.001	<0.003	224	Solar pump used to purge
RW-1	XXX	98.85	XXX	pumping	7/16/2013	540	1,480	<0.001	<0.001	<0.001	<0.003	247	Solar pump used to purge
RW-1	XXX	98.85	XXX	pumping	10/17/2013	520	1,430	<0.001	<0.001	<0.001	<0.003	195	Solar pump used to purge
RW-1	XXX	98.85	XXX	pumping	1/17/2014	570	1,300	<0.001	<0.001	<0.001	<0.003	188	Solar pump used to purge

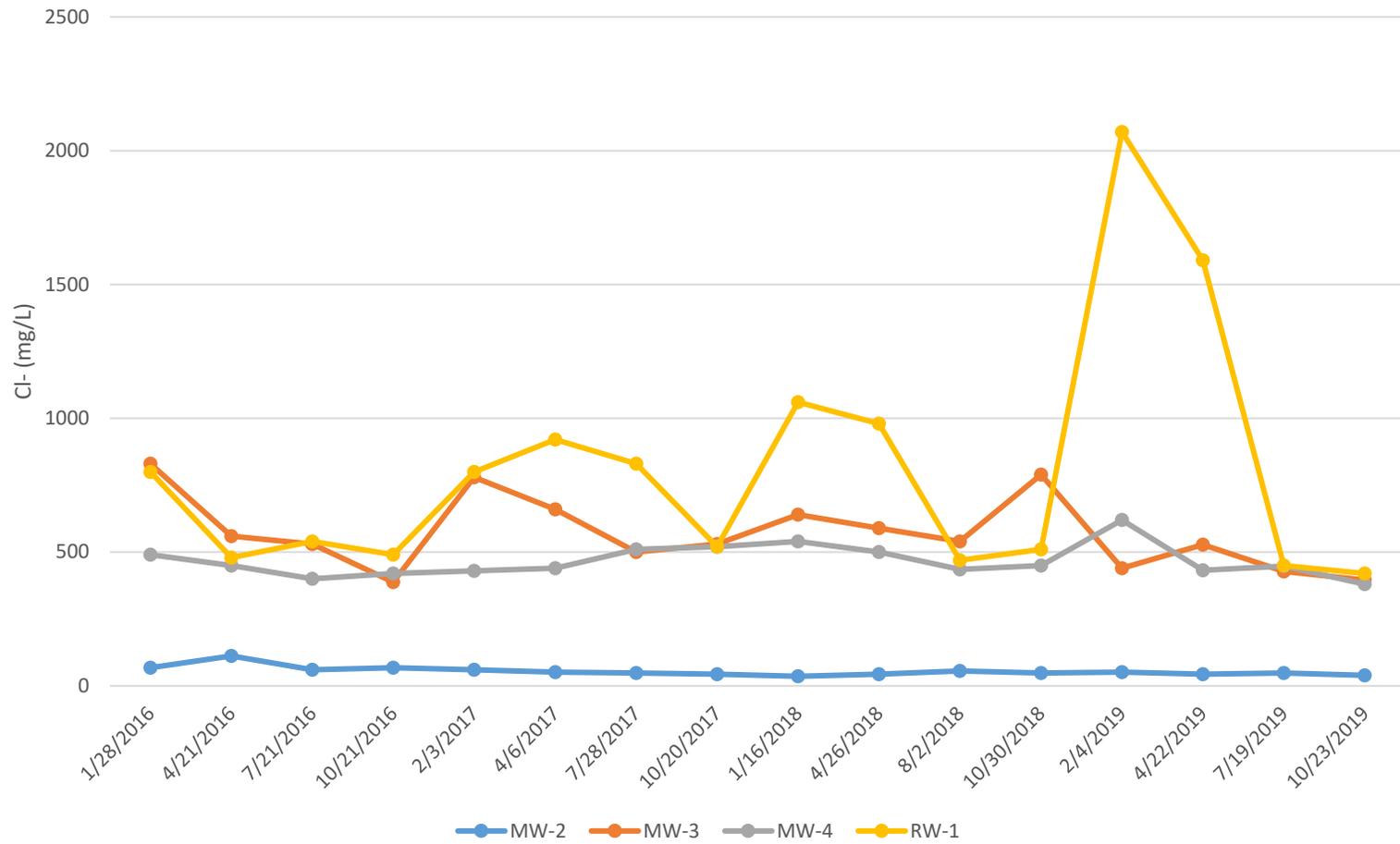
**ROC - BD Santa Rita EOL (AP-58)**  
**Unit Letter A, Section 27, T22S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
RW-1	XXX	98.85	XXX	pumping	4/7/2014	770	1,800	<0.001	<0.001	<0.001	<0.003	258	Solar pump used to purge
RW-1	XXX	98.85	XXX	pumping	7/16/2014	470	1,410	<0.001	<0.001	<0.001	<0.003	210	Solar pump used to purge
RW-1	XXX	98.85	XXX	pumping	10/23/2014	440	1,430	<0.001	<0.001	<0.001	<0.003	200	Solar pump used to purge
RW-1	XXX	98.85	XXX	100	2/2/2015	550	1,450	<0.001	<0.001	<0.001	<0.003	220	Solar pump used to purge
RW-1	XXX	98.85	XXX	100	4/21/2015	890	2,030	<0.001	<0.001	<0.001	<0.003	198	Solar pump used to purge
RW-1	XXX	98.85	XXX	100	7/21/2015	520	1,430	<0.001	<0.001	<0.001	<0.003	195	Solar pump used to purge
RW-1	XXX	98.85	XXX	pumping	11/18/2015	520	1,380	<0.001	<0.001	<0.001	<0.003	259	Solar pump used to purge
RW-1	XXX	98.85	XXX	100	1/28/2016	800	1,730	<0.001	<0.001	<0.001	<0.003	332	Solar pump used to purge
RW-1	XXX	98.85	XXX	running	4/21/2016	480	1,480	<0.001	<0.001	<0.001	<0.003	221	Solar pump used to purge
RW-1	XXX	98.85	XXX	running	7/21/2016	540	1,220	<0.001	<0.001	<0.001	<0.003	224	Solar pump used to purge
RW-1	XXX	98.85	XXX	running	10/21/2016	490	962	<0.001	<0.001	<0.001	<0.003	226	Solar pump used to purge
RW-1	XXX	98.85	XXX	100	2/3/2017	800	1,500	<0.001	<0.001	<0.001	<0.003	194	Solar Pump Used to Purge
RW-1	XXX	98.85	XXX	100	4/6/2017	920	1,990	<0.001	<0.001	<0.001	<0.003	242	Solar Pump Used to Purge
RW-1	XXX	98.85	XXX	Running	7/28/2017	830	2,150	<0.001	<0.001	<0.001	<0.003	212	Solar Pump Used to Purge

**ROC - BD Santa Rita EOL (AP-58)**  
**Unit Letter A, Section 27, T22S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
RW-1	XXX	98.85	XXX	Running	10/20/2017	520	1,320	<0.001	<0.001	<0.001	<0.003	229	Solar Pump Used to Purge
RW-1	XXX	98.85	XXX	100	1/16/2018	1,060	2,450	<0.001	<0.001	<0.001	<0.003	227	Solar pump used to purge
RW-1	XXX	98.85	XXX	100	4/26/2018	980	2,250	<0.001	<0.001	<0.001	<0.003	185	Solar pump used to purge
RW-1	XXX	98.85	XXX	100	8/2/2018	470	1,380	<0.001	<0.001	<0.001	<0.003	232	Solar pump used to purge
RW-1	XXX	98.85	XXX	100	10/30/2018	510	1,300	<0.001	<0.001	<0.001	<0.003	210	Solar pump used to purge
RW-1	XXX	98.85	XXX	100	2/4/2019	2,070	3,230	<0.001	<0.001	<0.001	<0.003	263	Solar pump used to purge
RW-1	XXX	98.85	XXX	100	4/22/2019	1,590	3,220	<0.001	<0.001	<0.001	<0.003	238	Solar pump used to purge
RW-1	XXX	98.85	XXX	Running	7/19/2019	450	1,350	<0.001	<0.001	<0.001	<0.003	196	Solar pump used to purge
RW-1	XXX	98.85	XXX	Running	10/23/2019	420	1,170	<0.001	<0.001	<0.001	<0.003	204	Solar pump used to purge

### BD Santa Rita EOL (AP-58)





February 14, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD SANTA RITA LEAK

Enclosed are the results of analyses for samples received by the laboratory on 02/07/19 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/07/2019	Sampling Date:	02/04/2019
Reported:	02/14/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: MONITOR WELL #2 (H900489-01)**

BTEX 8021B		mg/L		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	02/10/2019	ND	0.023	114	0.0200	2.40	
Toluene*	<0.001	0.001	02/10/2019	ND	0.022	108	0.0200	1.01	
Ethylbenzene*	<0.001	0.001	02/10/2019	ND	0.022	108	0.0200	0.235	
Total Xylenes*	<0.003	0.003	02/10/2019	ND	0.067	112	0.0600	0.952	
Total BTEX	<0.006	0.006	02/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride*</b>	<b>52.0</b>	4.00	02/11/2019	ND	104	104	100	3.77	

Sulfate 375.4		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Sulfate*</b>	<b>98.0</b>	25.0	02/12/2019	ND	22.9	115	20.0	6.39	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>TDS*</b>	<b>460</b>	5.00	02/12/2019	ND	524	99.4	527	2.58	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/07/2019	Sampling Date:	02/04/2019
Reported:	02/14/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: MONITOR WELL #3 (H900489-02)**

BTEX 8021B		mg/L		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	02/10/2019	ND	0.023	114	0.0200	2.40		
Toluene*	<0.001	0.001	02/10/2019	ND	0.022	108	0.0200	1.01		
Ethylbenzene*	<0.001	0.001	02/10/2019	ND	0.022	108	0.0200	0.235		
Total Xylenes*	<0.003	0.003	02/10/2019	ND	0.067	112	0.0600	0.952		
Total BTEX	<0.006	0.006	02/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride*</b>	<b>440</b>	4.00	02/11/2019	ND	104	104	100	3.77		

Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Sulfate*</b>	<b>220</b>	50.0	02/12/2019	ND	22.9	115	20.0	6.39		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>TDS*</b>	<b>1200</b>	5.00	02/12/2019	ND	524	99.4	527	2.58		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/07/2019	Sampling Date:	02/04/2019
Reported:	02/14/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: MONITOR WELL #4 (H900489-03)**

BTEX 8021B		mg/L		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	02/10/2019	ND	0.023	114	0.0200	2.40		
Toluene*	<0.001	0.001	02/10/2019	ND	0.022	108	0.0200	1.01		
Ethylbenzene*	<0.001	0.001	02/10/2019	ND	0.022	108	0.0200	0.235		
Total Xylenes*	<0.003	0.003	02/10/2019	ND	0.067	112	0.0600	0.952		
Total BTEX	<0.006	0.006	02/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	620	4.00	02/11/2019	ND	104	104	100	3.77		

Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	235	50.0	02/12/2019	ND	22.9	115	20.0	6.39		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1500	5.00	02/12/2019	ND	524	99.4	527	2.58		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/07/2019	Sampling Date:	02/04/2019
Reported:	02/14/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: RECOVERY WELL #1 (H900489-04)**

BTEX 8021B		mg/L		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	02/10/2019	ND	0.023	114	0.0200	2.40		
Toluene*	<0.001	0.001	02/10/2019	ND	0.022	108	0.0200	1.01		
Ethylbenzene*	<0.001	0.001	02/10/2019	ND	0.022	108	0.0200	0.235		
Total Xylenes*	<0.003	0.003	02/10/2019	ND	0.067	112	0.0600	0.952		
Total BTEX	<0.006	0.006	02/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride*</b>	<b>2070</b>	4.00	02/11/2019	ND	104	104	100	3.77		

Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Sulfate*</b>	<b>263</b>	50.0	02/12/2019	ND	22.9	115	20.0	6.39		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>TDS*</b>	<b>3230</b>	5.00	02/12/2019	ND	524	99.4	527	2.58		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**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





May 02, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD SANTA RITA LEAK

Enclosed are the results of analyses for samples received by the laboratory on 04/25/19 14:51.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	04/25/2019	Sampling Date:	04/22/2019
Reported:	05/02/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: MONITOR WELL #2 (H901492-01)**

BTEX 8021B		mg/L		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	04/27/2019	ND	0.021	104	0.0200	1.04	
Toluene*	<0.001	0.001	04/27/2019	ND	0.021	107	0.0200	0.520	
Ethylbenzene*	<0.001	0.001	04/27/2019	ND	0.020	102	0.0200	0.0147	
Total Xylenes*	<0.003	0.003	04/27/2019	ND	0.062	103	0.0600	1.67	
Total BTEX	<0.006	0.006	04/27/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride*</b>	<b>44.0</b>	4.00	04/30/2019	ND	108	108	100	3.77	

Sulfate 375.4		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Sulfate*</b>	<b>88.0</b>	25.0	05/01/2019	ND	20.5	103	20.0	12.7	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>TDS*</b>	<b>360</b>	5.00	05/01/2019	ND	554	105	527	26.0	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	04/25/2019	Sampling Date:	04/22/2019
Reported:	05/02/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: MONITOR WELL #3 (H901492-02)**

BTEX 8021B		mg/L		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	04/27/2019	ND	0.021	104	0.0200	1.04		
Toluene*	<0.001	0.001	04/27/2019	ND	0.021	107	0.0200	0.520		
Ethylbenzene*	<0.001	0.001	04/27/2019	ND	0.020	102	0.0200	0.0147		
Total Xylenes*	<0.003	0.003	04/27/2019	ND	0.062	103	0.0600	1.67		
Total BTEX	<0.006	0.006	04/27/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride*</b>	<b>528</b>	4.00	04/30/2019	ND	108	108	100	3.77		

Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Sulfate*</b>	<b>243</b>	50.0	05/01/2019	ND	20.5	103	20.0	12.7		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>TDS*</b>	<b>1510</b>	5.00	05/01/2019	ND	554	105	527	26.0		

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	04/25/2019	Sampling Date:	04/22/2019
Reported:	05/02/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: MONITOR WELL #4 (H901492-03)**

BTEX 8021B		mg/L		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	04/27/2019	ND	0.021	104	0.0200	1.04		
Toluene*	<0.001	0.001	04/27/2019	ND	0.021	107	0.0200	0.520		
Ethylbenzene*	<0.001	0.001	04/27/2019	ND	0.020	102	0.0200	0.0147		
Total Xylenes*	<0.003	0.003	04/27/2019	ND	0.062	103	0.0600	1.67		
Total BTEX	<0.006	0.006	04/27/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	432	4.00	04/30/2019	ND	108	108	100	3.77		

Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	246	50.0	05/01/2019	ND	20.5	103	20.0	12.7		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1210	5.00	05/01/2019	ND	554	105	527	26.0		

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	04/25/2019	Sampling Date:	04/22/2019
Reported:	05/02/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: RECOVERY WELL #1 (H901492-04)**

BTEX 8021B		mg/L		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	04/27/2019	ND	0.021	104	0.0200	1.04		
Toluene*	<0.001	0.001	04/27/2019	ND	0.021	107	0.0200	0.520		
Ethylbenzene*	<0.001	0.001	04/27/2019	ND	0.020	102	0.0200	0.0147		
Total Xylenes*	<0.003	0.003	04/27/2019	ND	0.062	103	0.0600	1.67		
Total BTEX	<0.006	0.006	04/27/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.7 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	1590	4.00	04/30/2019	ND	108	108	100	3.77		

Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	238	50.0	05/01/2019	ND	20.5	103	20.0	12.7		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	3220	5.00	05/01/2019	ND	554	105	527	26.0		

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Celey D. Keene, Lab Director/Quality Manager

### 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



---

Celey D. Keene, Lab Director/Quality Manager



July 29, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD SANTA RITA LEAK

Enclosed are the results of analyses for samples received by the laboratory on 07/23/19 14:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	07/23/2019	Sampling Date:	07/19/2019
Reported:	07/29/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: MONITOR WELL #2 (H902536-01)**

BTEX 8021B		mg/L		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	07/26/2019	ND	0.019	93.7	0.0200	0.468	
Toluene*	<0.001	0.001	07/26/2019	ND	0.018	89.2	0.0200	3.72	
Ethylbenzene*	<0.001	0.001	07/26/2019	ND	0.019	93.8	0.0200	3.77	
Total Xylenes*	<0.003	0.003	07/26/2019	ND	0.053	88.1	0.0600	3.89	
Total BTEX	<0.006	0.006	07/26/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride*</b>	<b>48.0</b>	4.00	07/24/2019	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
<b>Sulfate*</b>	<b>101</b>	25.0	07/29/2019	ND	24.0	120	20.0	8.47	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>TDS*</b>	<b>444</b>	5.00	07/25/2019	ND	516	97.9	527	2.51	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	07/23/2019	Sampling Date:	07/19/2019
Reported:	07/29/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: MONITOR WELL #3 (H902536-02)**

BTEX 8021B		mg/L		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	07/26/2019	ND	0.019	93.7	0.0200	0.468		
Toluene*	<0.001	0.001	07/26/2019	ND	0.018	89.2	0.0200	3.72		
Ethylbenzene*	<0.001	0.001	07/26/2019	ND	0.019	93.8	0.0200	3.77		
Total Xylenes*	<0.003	0.003	07/26/2019	ND	0.053	88.1	0.0600	3.89		
Total BTEX	<0.006	0.006	07/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	428	4.00	07/24/2019	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*	227	50.0	07/29/2019	ND	24.0	120	20.0	8.47		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1340	5.00	07/25/2019	ND	516	97.9	527	2.51		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	07/23/2019	Sampling Date:	07/19/2019
Reported:	07/29/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: MONITOR WELL #4 (H902536-03)**

BTEX 8021B		mg/L		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	07/26/2019	ND	0.019	93.7	0.0200	0.468		
Toluene*	<0.001	0.001	07/26/2019	ND	0.018	89.2	0.0200	3.72		
Ethylbenzene*	<0.001	0.001	07/26/2019	ND	0.019	93.8	0.0200	3.77		
Total Xylenes*	<0.003	0.003	07/26/2019	ND	0.053	88.1	0.0600	3.89		
Total BTEX	<0.006	0.006	07/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 118 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	448	4.00	07/24/2019	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*	228	50.0	07/29/2019	ND	24.0	120	20.0	8.47		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1330	5.00	07/25/2019	ND	516	97.9	527	2.51		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	07/23/2019	Sampling Date:	07/19/2019
Reported:	07/29/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: RECOVERY WELL #1 (H902536-04)**

BTEX 8021B		mg/L		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	07/26/2019	ND	0.019	93.7	0.0200	0.468		
Toluene*	<0.001	0.001	07/26/2019	ND	0.018	89.2	0.0200	3.72		
Ethylbenzene*	<0.001	0.001	07/26/2019	ND	0.019	93.8	0.0200	3.77		
Total Xylenes*	<0.003	0.003	07/26/2019	ND	0.053	88.1	0.0600	3.89		
Total BTEX	<0.006	0.006	07/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	<b>450</b>	4.00	07/24/2019	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*	<b>196</b>	50.0	07/29/2019	ND	24.0	120	20.0	8.47		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	<b>1350</b>	5.00	07/25/2019	ND	516	97.9	527	2.51		

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

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



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Celey D. Keene, Lab Director/Quality Manager



November 01, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD SANTA RITA LEAK

Enclosed are the results of analyses for samples received by the laboratory on 10/24/19 14:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/24/2019	Sampling Date:	10/23/2019
Reported:	11/01/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: MONITOR WELL #2 (H903653-01)**

BTEX 8021B		mg/L		Analyzed By: MS				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	10/30/2019	ND	0.022	110	0.0200	2.88		
Toluene*	<0.001	0.001	10/30/2019	ND	0.019	96.8	0.0200	0.762		
Ethylbenzene*	<0.001	0.001	10/30/2019	ND	0.022	108	0.0200	5.41		
Total Xylenes*	<0.003	0.003	10/30/2019	ND	0.061	102	0.0600	0.991		
Total BTEX	<0.006	0.006	10/30/2019	ND						

*Surrogate: 4-Bromofluorobenzene (PID) 111 % 74-98*

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride*</b>	<b>40.0</b>	4.00	10/25/2019	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	
<b>Sulfate*</b>	<b>87.0</b>	25.0	10/25/2019	ND	23.9	120	20.0	10.7		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>TDS*</b>	<b>416</b>	5.00	10/30/2019	ND	522	99.1	527	1.90		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/24/2019	Sampling Date:	10/23/2019
Reported:	11/01/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: MONITOR WELL #3 (H903653-02)**

BTEX 8021B		mg/L		Analyzed By: MS				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	10/30/2019	ND	0.022	110	0.0200	2.88		
Toluene*	<0.001	0.001	10/30/2019	ND	0.019	96.8	0.0200	0.762		
Ethylbenzene*	<0.001	0.001	10/30/2019	ND	0.022	108	0.0200	5.41		
Total Xylenes*	<0.003	0.003	10/30/2019	ND	0.061	102	0.0600	0.991		
Total BTEX	<0.006	0.006	10/30/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 74-98

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	396	4.00	10/25/2019	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*	205	50.0	10/25/2019	ND	23.9	120	20.0	10.7		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	1200	5.00	10/30/2019	ND	522	99.1	527	1.90		

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/24/2019	Sampling Date:	10/23/2019
Reported:	11/01/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: MONITOR WELL #4 (H903653-03)**

BTEX 8021B		mg/L		Analyzed By: MS				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	10/30/2019	ND	0.022	110	0.0200	2.88		
Toluene*	<0.001	0.001	10/30/2019	ND	0.019	96.8	0.0200	0.762		
Ethylbenzene*	<0.001	0.001	10/30/2019	ND	0.022	108	0.0200	5.41		
Total Xylenes*	<0.003	0.003	10/30/2019	ND	0.061	102	0.0600	0.991		
Total BTEX	<0.006	0.006	10/30/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 74-98

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	<b>380</b>	4.00	10/25/2019	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*	<b>214</b>	50.0	10/25/2019	ND	23.9	120	20.0	10.7		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	<b>1210</b>	5.00	10/30/2019	ND	522	99.1	527	1.90		

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/24/2019	Sampling Date:	10/23/2019
Reported:	11/01/2019	Sampling Type:	Water
Project Name:	BD SANTA RITA LEAK	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T22S R37E SEC27 A-LEA CTY., NM		

**Sample ID: RECOVERY WELL #1 (H903653-04)**

BTEX 8021B		mg/L		Analyzed By: MS				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	10/31/2019	ND	0.022	110	0.0200	2.88		
Toluene*	<0.001	0.001	10/31/2019	ND	0.019	96.8	0.0200	0.762		
Ethylbenzene*	<0.001	0.001	10/31/2019	ND	0.022	108	0.0200	5.41		
Total Xylenes*	<0.003	0.003	10/31/2019	ND	0.061	102	0.0600	0.991		
Total BTEX	<0.006	0.006	10/31/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 74-98

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride*</b>	<b>420</b>	4.00	10/25/2019	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	
<b>Sulfate*</b>	<b>204</b>	50.0	11/01/2019	ND	23.9	120	20.0	10.7		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>TDS*</b>	<b>1170</b>	5.00	11/01/2019	ND	522	99.1	527	1.90		

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- 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



