

# **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 J-30 vent (1R426-217): UL/J, Sec. 30, T21S, R37E**

Mr. Billings:

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

## **Background and Previous Work**

The site is located approximately 2.3 miles northwest of Eunice, New Mexico at UL/J, Sec. 30, T21S, R37E as shown on the Geographical Location Map. Groundwater sampling at the site indicated the depth to groundwater is approximately 106 feet below ground surface (bgs).

In 2007, ROC initiated work on the former J-30 vent junction box. The site was delineated using a backhoe to form a 30x30x12-ft deep excavation and soil samples were screened at regular intervals for both hydrocarbon and chloride. The excavated soil was blended on site and representative samples were collected from the excavation walls and excavation bottom and sent to a commercial laboratory for analysis, resulting in elevated chloride concentrations and low hydrocarbon concentrations. The excavation was backfilled with the blended soil to 6 ft below ground surface (bgs). At 6-5 ft bgs, a 1 ft thick clay barrier was installed. The remaining backfill was blended with clean, imported soil and used to backfill the remainder of the excavation to ground surface and contoured to the surrounding area. On 3/16/2007, the site was seeded with a blend of native vegetation. To further investigate the presence of chloride, two soil bores were installed on April 18<sup>th</sup>, 2007. Soil samples were collected at regular intervals and field titrated for chlorides. Representative samples from each bore were sent to a commercial laboratory resulting in elevated chloride concentrations. Each bore hole was plugged with bentonite to ground surface. NMOCD was notified of potential groundwater impact on August 5<sup>th</sup>, 2008. A junction box disclosure report was submitted to NMOCD with all the 2009 junction box closures and disclosures.

An Investigation and Characterization Plan (ICP) was submitted to NMOCD on February 17<sup>th</sup>, 2015 and approved on February 20<sup>th</sup>, 2015. According to the ICP, nine soil bores were installed to further delineate the vadose zone. Representative samples were collected from each bore and were sent to a commercial laboratory for analysis of chloride and hydrocarbon, resulting in elevated chloride concentrations. Each soil bore was plugged with bentonite to ground surface.

A Corrective Action Plan (CAP) was submitted and approved by NMOCD on August 12<sup>th</sup>, 2015. According to the NMOCD approved CAP, a 20-mil reinforced liner measuring 84x91-ft was installed and properly seated at 4.5 ft bgs. The site was backfilled and seeded with a blend of native vegetation. A CAP Report and Soil Closure Request detailing this work was submitted to NMOCD on August 24<sup>th</sup>, 2017. The report also requested monitoring wells installation. NMOCD approved this report and granted 'Soil Closure' on August 24<sup>th</sup>, 2017.

On December 11-12<sup>th</sup>, 2018, ROC installed two monitor wells. MW3 was installed down-gradient well and MW-1 was installed as a near-source monitoring well. On April 26, 2019, an up-gradient monitor well (MW-2) was installed. Lithology soil samples were collected from each well at regular intervals. The wells were developed and have been sampled quarterly since installation. Groundwater chloride concentrations in MW-1 averaged 1,145 mg/L in 2019. Chloride concentrations in MW-2 and MW-3 have remained low, below 136 mg/L. BTEX concentrations have remained below detectable limits since the wells were installed.

Given that BTEX concentrations have been below detectable limits since installation, ROC requests to suspend BTEX sampling in all three wells (MW-1, MW-2 and MW-3). Further, 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. This request is only temporary and regularly scheduled groundwater monitoring will commence as soon as possible.

Attached is the Appendix, which contains:

1. A Geographical Location Map.
2. A map showing well locations.
3. Monitoring well installation logs and photos.
4. A table presenting all laboratory results and depth to groundwater for each well at the site, and a graph showing recent laboratory results.
5. 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".

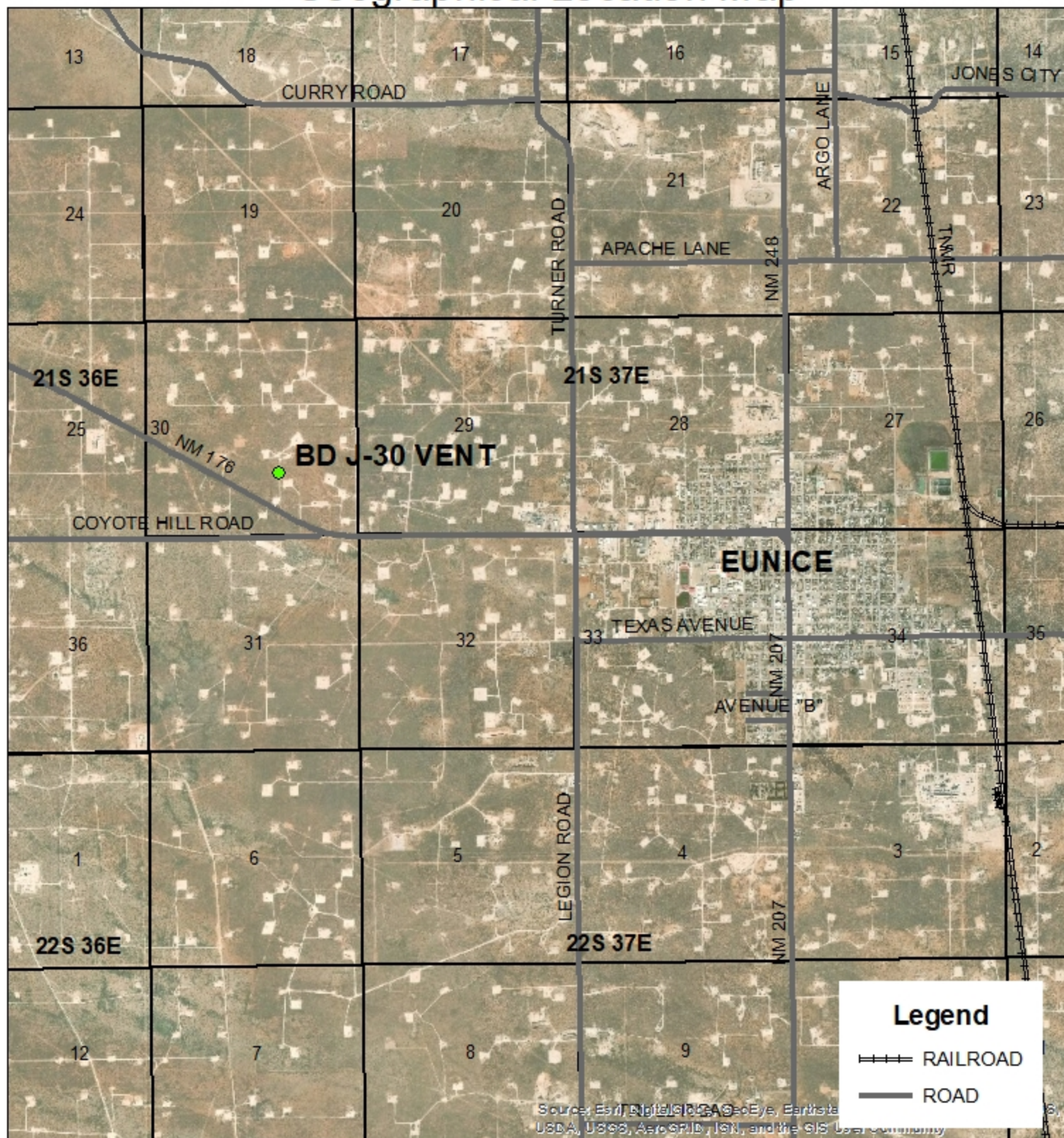
Katie Davis  
Environmental Manager  
RICE Operating Company (ROC)

Cc – Edward J. Hansen (ROC)

appendix



# Geographical Location Map

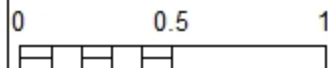


***BD J-30 VENT***

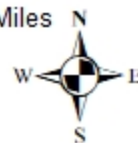
1R426-217

LEGALS: UL J SECTION 30  
T-21-S R-37-E  
LEA COUNTY, NM

GPS: 32.446879, -103.199905  
NAD 83 STATE PLANE PROJ  
NM EAST ZONE

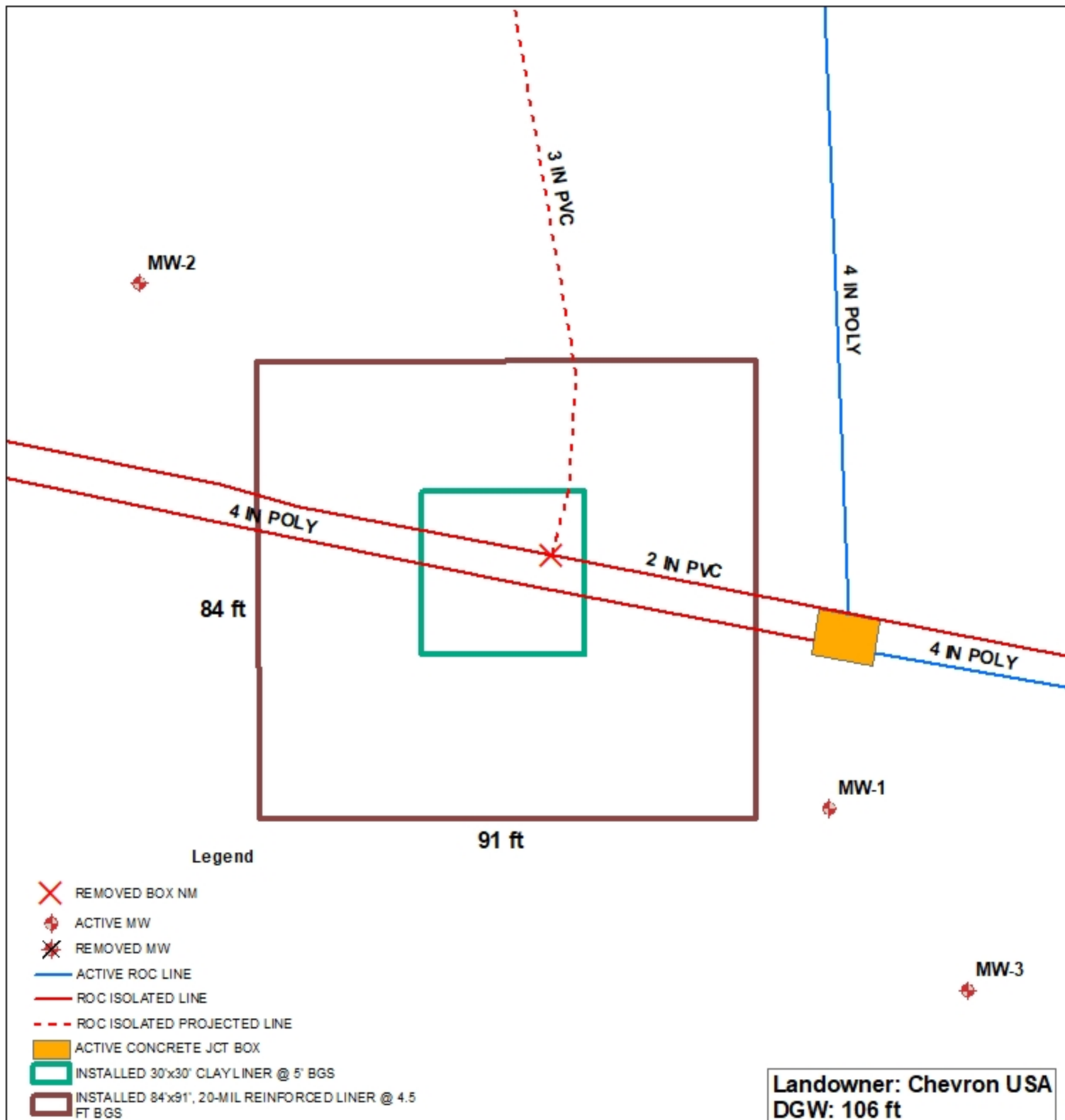


Drawing date: 1/28/20  
Drafted by: T. Grieco





# Site Map

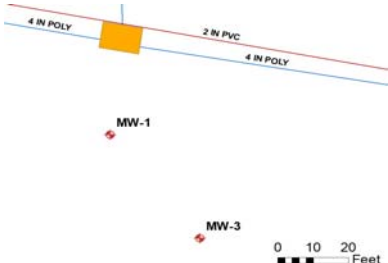



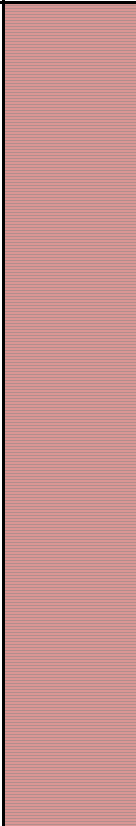


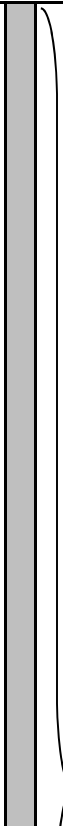
**BD J-30 VENT**

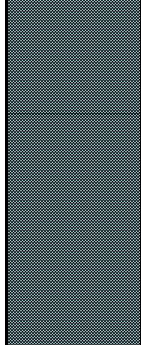
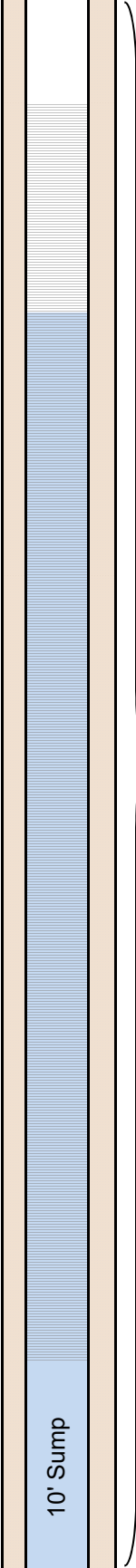
1R426-217

LEGALS: UL J SECTION 30  
T-21-S R-37-E  
LEA COUNTY, NM



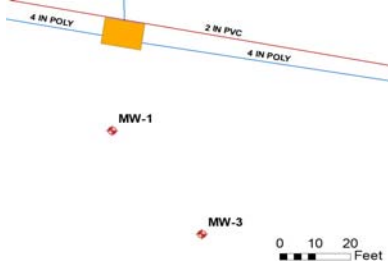


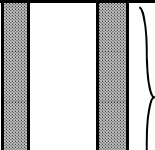

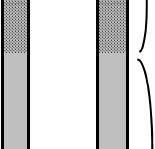

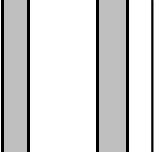

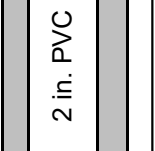

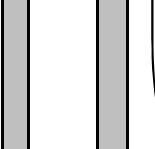

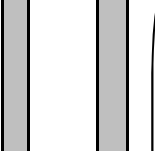

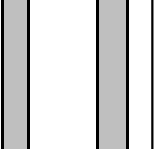

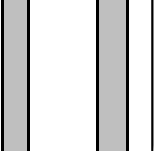
<b>Logger:</b>	Nick Kopiasz						
<b>Driller:</b>	Harrison & Cooper, Inc.						
<b>Drilling Method:</b>	Air rotary						
<b>Start Date:</b>	12/11/2018						
<b>End Date:</b>	12/11/2018			<b>Project Name:</b>	<b>Well ID:</b>		
				BD J-30 vent	MW-1		
				<b>Project Consultant:</b> Tasman			
<b>Comments:</b> Located approximately 75 ft southeast of the former junction box vent. Soil samples were collected from drill cuttings at specified intervals.				<b>Location:</b>			
				Unit J, Section 30, T21S, R37E			
<b>DRAFTED BY:</b> N.Kopiasz TD = 141 ft                      GW = 106 ft				<b>Lat:</b> 32.446749			
				<b>Long:</b> -103.199741 (NAD83)			
				<b>County:</b> Lea			
				<b>State:</b> NM			
<b>Depth (feet)</b>	<b>Chloride field tests</b>	<b>LAB</b>	<b>PID</b>	<b>Description</b>	<b>Lithology</b>	<b>Well Construction</b>	
				SM-reddish brown, silty sand			Concrete
SS							
				SC-reddish brown, clayey silt			
5 ft							
				SC-Same As Above (SAA)			
10 ft							
				SM-reddish brown, silty sand			4 in. PVC
15 ft							
				GM-tan, gravelly silt, caliche			Bentonite Seal
20 ft							
				SM-reddish tan, silty sand			
25 ft							
				SM-tan, silty sand			
30 ft							
				SM-SAA			
35 ft							

Depth (feet)	Chloride field tests	LAB	PID	Description		Lithology		Well Construction		
				SM-light tan, silty sand						Bentonite Seal
40 ft										
				SM-light tan, silty sand, occasional caliche						
45 ft										
				SM-SAA						
50 ft										
				SM-SAA						
55 ft										
				SM-SAA						
60 ft										
				GM-reddish tan, gravelly silt, caliche						
65 ft										
				SM-reddish tan, silty sand, occasional caliche						
70 ft										
				SM-SAA						
75 ft										
				SM-light tan, silty sand						
80 ft										
				GM-light brown, silty gravel, caliche and sandstone						
85 ft										

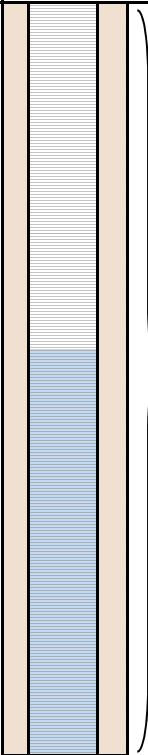
Depth (feet)	Chloride field tests	LAB	PID	Description		Lithology		Well Construction		
				GM-tan, gravelly silt, caliche and sandstone					Sand Pack	
90 ft										
				GM-SAA						
95 ft										
				Not Sampled (NS)						
100 ft										
				NS						
105 ft										
				NS						
110 ft										
				NS						
115 ft										
				NS						
120 ft										
				NS						
125 ft										
				NS						
130 ft										
				NS						
135 ft										



Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				NS		<div><div></div><div></div><div></div></div> <div>Sand</div>
						<div></div> <div>Pack</div>
140 ft						

<b>Logger:</b>	Nick Kopiasz							
<b>Driller:</b>	Harrison & Cooper, Inc.							
<b>Drilling Method:</b>	Air Rotary				<b>Project Name:</b>		<b>Well ID:</b>	
<b>Start Date:</b>	12/12/2018				BD J-30 vent		MW-3	
<b>End Date:</b>	12/12/2018				<b>Project Consultant:</b> Tasman			
<b>Comments:</b> Located approximately 125 ft southeast of the former junction box vent. Soil samples were collected from drill cuttings at specified intervals.  DRAFTED BY: N.Kopiasz TD = 110 ft                      GW = 106 ft					<b>Location:</b>			
					Unit J, Section 30, T21S, R37E			
					<b>Lat:</b> 32.446657		<b>County:</b> Lea	
					<b>Long:</b> -103.199660 (NAD83)		<b>State:</b> NM	
<b>Depth (feet)</b>	<b>Chloride field tests</b>	<b>LAB</b>	<b>PID</b>	<b>Description</b>	<b>Lithology</b>	<b>Well Construction</b>		
				SM-reddish brown, silty sand			Concrete	
SS								
				SW-light brown, well graded sand, caliche				
5 ft								
				SM-off-white, sandy silt, occasional caliche				
10 ft								
				SM-Same As Above (SAA)				
15 ft								
				SM-light tan, sandy silt			Bentonite Seal	
20 ft								
				SM-off-white, sandy silt				
25 ft								
				SM-SAA				
30 ft								
				SM-SAA				
35 ft								

Depth (feet)	Chloride field tests	LAB	PID	Description		Lithology		Well Construction		
				SM-light tan, sandy silt, occasional caliche						
40 ft										
				SM-light tan, sandy silt						
45 ft										
				Not Sampled (NS)						
50 ft										
				NS						
55 ft										
				NS						
60 ft										
				NS						
65 ft										
				NS						
70 ft										
				NS						
75 ft										
				NS						
80 ft										
				NS						
85 ft										

Depth (feet)	Chloride field tests	LAB	PID	Description		Lithology		Well Construction	
				NS				Sand Pack	
90 ft									
				NS					
95 ft									
				NS					
100 ft									
				NS					
105 ft									
				NS					
110 ft									

<b>Logger:</b>	Nick Kopiasz					
<b>Driller:</b>	Harrison & Cooper, Inc.					
<b>Drilling Method:</b>	6" Air rotary		<b>Project Name:</b>	<b>Well ID:</b>		
<b>Start Date:</b>	4/26/2019		BD J-30 Vent	MW-2		
<b>End Date:</b>	4/26/2019		<b>Project Consultant:</b> Tasman			
<b>Comments:</b> Located approximately 70 ft northwest of the former junction box vent. Soil samples were collected from drill cuttings at specified intervals.  <div style="display: flex; justify-content: space-around;"> <span><b>DRAFTED BY:</b> N.Kopiasz</span> </div> <div style="display: flex; justify-content: space-around;"> <span>TD = 117 ft</span> <span>GW = 106 ft</span> </div>		<b>Location:</b> Unit J, Section 30, T21S, R37E  <b>Lat:</b> 32.447018 <b>County:</b> Lea <b>Long:</b> -103.200148 (NAD83) <b>State:</b> NM				
Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				SM-reddish brown, silty sand		
SS						
				SC-reddish brown, clayey silt		
5 ft						
				SW-reddish tan, well graded sand, chunks of clayey sand		
10 ft						
				SW-tan, well graded sand with caliche		
15 ft						
				SM-tan, silty fine sand, some chunks of caliche		
20 ft						
				SM-Same As Above (SAA)		
25 ft						
				SM-SAA		
30 ft						
				GM-light tan, gravelly silty sand, caliche cobbles		
35 ft						



Depth (feet)	Chloride field tests	LAB	PID	Description		Lithology		Well Construction		
				SM-tan, silty fine sand, some chunks of caliche						
40 ft										
				SW-tan, well graded sand, some sandstone cobbles						
45 ft										
				SM-tan, silty fine sand						
50 ft										
				SW-tan, well graded sand with fines, cobbles of sandstone						
55 ft										
				SW-SAA						
60 ft										
				GM-reddish tan, gravelly silt, sandstone cobbles						
65 ft										
				GM-SAA						
70 ft										
				GM-SAA						
75 ft										
				GM-SAA						
80 ft										
				SM-reddish tan, silty fine sand, some sandstone chunks						
85 ft										

Bentonite  
Seal

Depth (feet)	Chloride field tests	LAB	PID	Description		Lithology		Well Construction											
				SM-SAA						Bentonite Seal									
90 ft																			
				SM-SAA															
95 ft																			
				SM-SAA															
100 ft																			
				Not Sampled (NS)															
105 ft																			
				NS															
110 ft																			
				NS															
115 ft																			
				NS															
120 ft																			

Rice Operating Company  
BD J-30 Vent  
Drilling Photo Log



MW-1 drilling



Rice Operating Company  
BD J-30 Vent  
Drilling Photo Log



Rice Operating Company  
BD J-30 vent  
Monitoring Well Drilling  
4/26/2019



Overview



Drilling



Rice Operating Company  
BD J-30 vent  
Monitoring Well Drilling  
4/26/2019



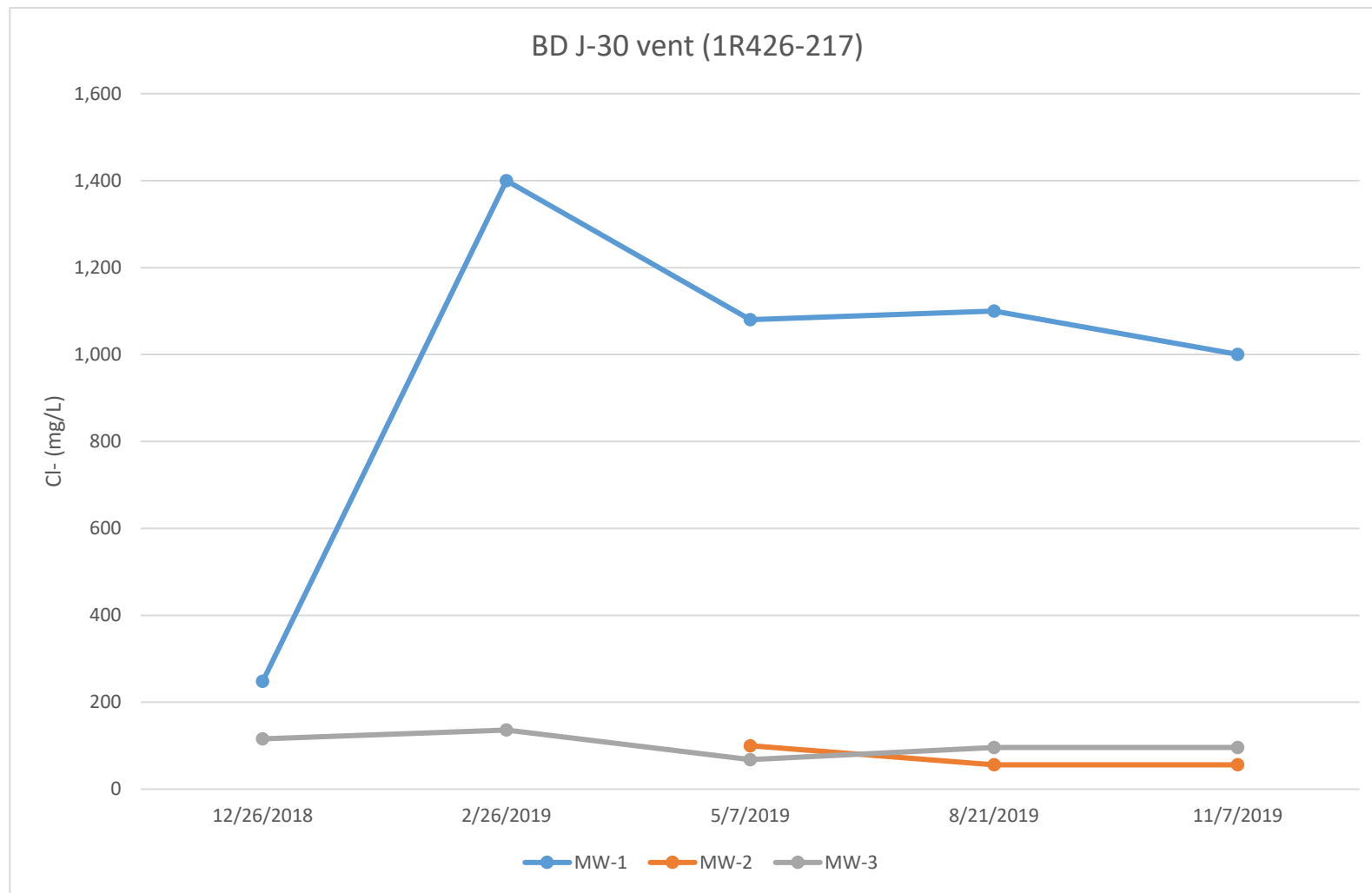
Set

**ROC - BD J-30 vent (1R426-217)****Unit Letter J, Section 30, T21S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	106.38	141.6	23	75	12/26/2018	248	664	<0.001	<0.001	<0.001	<0.003	157	Clear No odor
1	106.51	141.6	23	75	2/26/2019	1,400	1,900	<0.001	<0.001	<0.001	<0.003	52	Clear No odor
1	106.5	141.6	23	75	5/7/2019	1,080	2,120	<0.001	<0.001	<0.001	<0.003	65	Clear No odor
1	106.5	141.6	23	75	8/21/2019	1,100	2,220	<0.001	<0.001	<0.001	<0.003	53	Clear No odor
1	106.54	141.6	23	75	11/7/2019	1,000	2,000	<0.001	<0.001	<0.001	<0.003	47	Clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	107.52	120.05	2	6	5/7/2019	100	459	<0.001	<0.001	<0.001	<0.003	91	Clear No odor
2	107.51	120.05	2	6	8/21/2019	56	400	<0.001	<0.001	<0.001	<0.003	74	Clear No odor
2	107.55	120.05	2	6	11/7/2019	56	411	<0.001	<0.001	<0.001	<0.003	69	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	106.38	110.38	0.6	3	12/27/2018	116	321	<0.001	<0.001	<0.001	<0.003	107	Clear No odor
3	106.38	110.38	0.6	3	2/26/2019	136	478	<0.001	<0.001	<0.001	<0.003	86	Clear No odor
3	106.38	110.38	0.6	3	5/7/2019	68	531	<0.001	<0.001	<0.001	<0.003	83	Clear No odor
3	106.37	110.38	0.6	3	8/21/2019	96	536	<0.001	<0.001	<0.001	<0.003	74	Clear No odor
3	106.41	110.38	0.6	3	11/7/2019	96	547	<0.001	<0.001	<0.001	<0.003	78	Clear No odor





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

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March 06, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD J-30 VENT

Enclosed are the results of analyses for samples received by the laboratory on 02/27/19 13:20.

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". The signature is written in a cursive, flowing style.

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:	02/27/2019	Sampling Date:	02/26/2019
Reported:	03/06/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

**Sample ID: MONITOR WELL #1 (H900744-01)**

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	03/05/2019	ND	0.021	106	0.0200	0.538	
Toluene*	<0.001	0.001	03/05/2019	ND	0.019	97.0	0.0200	0.862	
Ethylbenzene*	<0.001	0.001	03/05/2019	ND	0.020	102	0.0200	1.06	
Total Xylenes*	<0.003	0.003	03/05/2019	ND	0.064	106	0.0600	1.06	
Total BTEX	<0.006	0.006	03/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 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*	1400	4.00	02/28/2019	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*	52.4	10.0	02/28/2019	ND	22.9	114	20.0	0.263	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1900	5.00	03/04/2019	ND	514	97.5	527	0.847	

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	02/27/2019	Sampling Date:	02/26/2019
Reported:	03/06/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

**Sample ID: MONITOR WELL #3 (H900744-02)**

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	03/05/2019	ND	0.021	106	0.0200	0.538		
Toluene*	<0.001	0.001	03/05/2019	ND	0.019	97.0	0.0200	0.862		
Ethylbenzene*	<0.001	0.001	03/05/2019	ND	0.020	102	0.0200	1.06		
Total Xylenes*	<0.003	0.003	03/05/2019	ND	0.064	106	0.0600	1.06		
Total BTEX	<0.006	0.006	03/05/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 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*	136	4.00	02/28/2019	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*	86.4	25.0	02/28/2019	ND	22.9	114	20.0	0.263		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	478	5.00	03/04/2019	ND	514	97.5	527	0.847		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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

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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: <b>RICE Operating Company</b>		BILL TO Company: PO# <b>RICE Operating Company</b>	
Project Manager: <b>Katie Jones</b>		Address: (Street, City, Zip) <b>122 W Taylor Street ~ Hobbs, New Mexico 88240</b>	
Address: (Street, City, Zip) <b>122 W Taylor Street ~ Hobbs, New Mexico 88240</b>		Phone#: <b>(575) 393-9174</b>	Fax#: <b>(575)397-1471</b>
Phone #: <b>(575) 393-9174</b>		Fax #: <b>(575) 397-1471</b>	
Project #:		Project Name: <b>BD J-30 Vent</b>	
Project Location: <b>T21S R37E Sec30 J~ Lea County New Mexico</b>		Sampler Signature: <b>Rozanne Johnson (575)631-9310</b>	

## ANALYSIS REQUEST

(Circle or Specify Method No.)

[illegible]

May 20, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD J-30 VENT

Enclosed are the results of analyses for samples received by the laboratory on 05/09/19 14:16.

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:	05/09/2019	Sampling Date:	05/07/2019
Reported:	05/20/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

**Sample ID: MONITOR WELL #1 (H901709-01)**

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	05/09/2019	ND	0.022	111	0.0200	0.838	
Toluene*	<0.001	0.001	05/09/2019	ND	0.023	115	0.0200	1.16	
Ethylbenzene*	<0.001	0.001	05/09/2019	ND	0.024	120	0.0200	1.86	
Total Xylenes*	<0.003	0.003	05/09/2019	ND	0.074	123	0.0600	0.994	
Total BTEX	<0.006	0.006	05/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 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*	1080	4.00	05/20/2019	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*	65.8	10.0	05/15/2019	ND	22.8	114	20.0	2.22	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	2120	5.00	05/17/2019	ND	459	87.1	527	1.66	

Cardinal Laboratories

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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:	05/09/2019	Sampling Date:	05/07/2019
Reported:	05/20/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

**Sample ID: MONITOR WELL #2 (H901709-02)**

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	05/09/2019	ND	0.022	111	0.0200	0.838		
Toluene*	<0.001	0.001	05/09/2019	ND	0.023	115	0.0200	1.16		
Ethylbenzene*	<0.001	0.001	05/09/2019	ND	0.024	120	0.0200	1.86		
Total Xylenes*	<0.003	0.003	05/09/2019	ND	0.074	123	0.0600	0.994		
Total BTEX	<0.006	0.006	05/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 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*	100	4.00	05/20/2019	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*	91.6	25.0	05/15/2019	ND	22.8	114	20.0	2.22		

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	05/17/2019	ND	459	87.1	527	1.66		

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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:	05/09/2019	Sampling Date:	05/07/2019
Reported:	05/20/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

**Sample ID: MONITOR WELL #3 (H901709-03)**

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	05/09/2019	ND	0.022	111	0.0200	0.838		
Toluene*	<0.001	0.001	05/09/2019	ND	0.023	115	0.0200	1.16		
Ethylbenzene*	<0.001	0.001	05/09/2019	ND	0.024	120	0.0200	1.86		
Total Xylenes*	<0.003	0.003	05/09/2019	ND	0.074	123	0.0600	0.994		
Total BTEX	<0.006	0.006	05/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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*	68.0	4.00	05/20/2019	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*	83.4	25.0	05/15/2019	ND	22.8	114	20.0	2.22		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	531	5.00	05/17/2019	ND	459	87.1	527	1.66		

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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





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

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August 28, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD J-30 VENT

Enclosed are the results of analyses for samples received by the laboratory on 08/23/19 16:05.

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". The signature is written in a cursive, flowing style.

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:	08/23/2019	Sampling Date:	08/21/2019
Reported:	08/28/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

**Sample ID: MONITOR WELL #1 (H902920-01)**

BTEX 8021B		mg/L		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	08/28/2019	ND	0.021	103	0.0200	1.14	
Toluene*	<0.001	0.001	08/28/2019	ND	0.020	100	0.0200	2.16	
Ethylbenzene*	<0.001	0.001	08/28/2019	ND	0.021	103	0.0200	0.500	
Total Xylenes*	<0.003	0.003	08/28/2019	ND	0.062	104	0.0600	0.453	
Total BTEX	<0.006	0.006	08/28/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.6 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	1100	4.00	08/27/2019	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*	53.4	10.0	08/27/2019	ND	21.4	107	20.0	0.937	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	2220	5.00	08/27/2019	ND	528	100	527	0.724	

Cardinal Laboratories

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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:	08/23/2019	Sampling Date:	08/21/2019
Reported:	08/28/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

**Sample ID: MONITOR WELL #2 (H902920-02)**

BTEX 8021B		mg/L		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	08/28/2019	ND	0.021	103	0.0200	1.14		
Toluene*	<0.001	0.001	08/28/2019	ND	0.020	100	0.0200	2.16		
Ethylbenzene*	<0.001	0.001	08/28/2019	ND	0.021	103	0.0200	0.500		
Total Xylenes*	<0.003	0.003	08/28/2019	ND	0.062	104	0.0600	0.453		
Total BTEX	<0.006	0.006	08/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.5 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	56.0	4.00	08/27/2019	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*	74.6	25.0	08/27/2019	ND	21.4	107	20.0	0.937		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	400	5.00	08/27/2019	ND	528	100	527	0.724		

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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:	08/23/2019	Sampling Date:	08/21/2019
Reported:	08/28/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

**Sample ID: MONITOR WELL #3 (H902920-03)**

BTEX 8021B		mg/L		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	08/28/2019	ND	0.021	103	0.0200	1.14		
Toluene*	<0.001	0.001	08/28/2019	ND	0.020	100	0.0200	2.16		
Ethylbenzene*	<0.001	0.001	08/28/2019	ND	0.021	103	0.0200	0.500		
Total Xylenes*	<0.003	0.003	08/28/2019	ND	0.062	104	0.0600	0.453		
Total BTEX	<0.006	0.006	08/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.9 % 81.3-128

Chloride, SM4500Cl-B		mg/L		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	96.0	4.00	08/27/2019	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*	74.2	25.0	08/27/2019	ND	21.4	107	20.0	0.937		

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	08/27/2019	ND	528	100	527	0.724		

Cardinal Laboratories

\*=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

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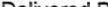







Celey D. Keene, Lab Director/Quality Manager

# Cardinal Laboratories, Inc.

Project #:	Project Name:
	BD J-30 Vent
Project Location:	Sampler Signature: Rozanne Johnson (575)631-9310
T21S R37E Sec30 J~ Lea County New Mexico	

[illegible]

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Rozanne Johnson	8/23/2019	16:05	Jamara D. Baker	8-23-19	16:05
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)	Date:	Time:

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

## ANALYSIS REQUEST

(Circle or Specify Method No.)

[illegible]

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

REMARKS:	
Email Results:	<a href="mailto:kjones@riceswd.com">kjones@riceswd.com</a> <a href="mailto:rozanne11@windstream.net">rozanne11@windstream.net</a>

November 19, 2019

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD J-30 VENT

Enclosed are the results of analyses for samples received by the laboratory on 11/11/19 15:05.

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:	11/11/2019	Sampling Date:	11/07/2019
Reported:	11/19/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

**Sample ID: MONITOR WELL #1 (H903824-01)**

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	11/13/2019	ND	0.020	99.3	0.0200	1.96	
Toluene*	<0.001	0.001	11/13/2019	ND	0.020	99.5	0.0200	3.37	
Ethylbenzene*	<0.001	0.001	11/13/2019	ND	0.021	103	0.0200	3.11	
Total Xylenes*	<0.003	0.003	11/13/2019	ND	0.060	101	0.0600	3.25	
Total BTEX	<0.006	0.006	11/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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*	1000	4.00	11/13/2019	ND	104	104	100	0.00	

Sulfate 375.4		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	46.8	10.0	11/13/2019	ND	19.5	97.4	20.0	1.60	

TDS 160.1		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	2000	5.00	11/14/2019	ND	564	107	527	0.964	

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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:	11/11/2019	Sampling Date:	11/07/2019
Reported:	11/19/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

**Sample ID: MONITOR WELL #2 (H903824-02)**

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	11/13/2019	ND	0.020	99.3	0.0200	1.96		
Toluene*	<0.001	0.001	11/13/2019	ND	0.020	99.5	0.0200	3.37		
Ethylbenzene*	<0.001	0.001	11/13/2019	ND	0.021	103	0.0200	3.11		
Total Xylenes*	<0.003	0.003	11/13/2019	ND	0.060	101	0.0600	3.25		
Total BTEX	<0.006	0.006	11/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 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*	56.0	4.00	11/13/2019	ND	104	104	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	69.6	25.0	11/13/2019	ND	19.5	97.4	20.0	1.60		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	411	5.00	11/14/2019	ND	564	107	527	0.964		

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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:	11/11/2019	Sampling Date:	11/07/2019
Reported:	11/19/2019	Sampling Type:	Water
Project Name:	BD J-30 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S-R37E-SEC30 J-LEA CTY., NM		

**Sample ID: MONITOR WELL #3 (H903824-03)**

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	11/13/2019	ND	0.020	99.3	0.0200	1.96		
Toluene*	<0.001	0.001	11/13/2019	ND	0.020	99.5	0.0200	3.37		
Ethylbenzene*	<0.001	0.001	11/13/2019	ND	0.021	103	0.0200	3.11		
Total Xylenes*	<0.003	0.003	11/13/2019	ND	0.060	101	0.0600	3.25		
Total BTEX	<0.006	0.006	11/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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*	96.0	4.00	11/13/2019	ND	104	104	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	78.0	10.0	11/13/2019	ND	19.5	97.4	20.0	1.60		

TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	547	5.00	11/14/2019	ND	564	107	527	0.964		

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

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

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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: <b>RICE Operating Company</b>		BILL TO Company: <b>RICE Operating Company</b>		PO#	
Project Manager: <b>Katie Jones</b>		Address: (Street, City, Zip) <b>122 W Taylor Street ~ Hobbs, New Mexico 88240</b>			
Address: (Street, City, Zip) <b>122 W Taylor Street ~ Hobbs, New Mexico 88240</b>		Phone#: <b>(575) 393-9174</b>		Fax#: <b>(575)397-1471</b>	
Phone #: <b>(575) 393-9174</b>		Fax #: <b>(575) 397-1471</b>			
Project #:		Project Name: <b>BD J-30 Vent</b>			
Project Location: <b>T21S R37E Sec30 J~ Lea County New Mexico</b>					
<div style="text-align: right;">               Sampler Signature: <b>Rozanne Johnson (575)631-9310</b> </div>					

## ANALYSIS REQUEST

(Circle or Specify Method No.)

[illegible]