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 18th, 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 5th, 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 17th, 2015 and approved on February 20th, 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 12th, 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 24th, 2017. The report also requested monitoring wells installation. NMOCD approved this report and granted 'Soil Closure' on August 24th, 2017.

On December 11-12th, 2018, ROC installed two monitor wells. MW3 was installed downgradient 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,

Katie Davis

Environmental Manager

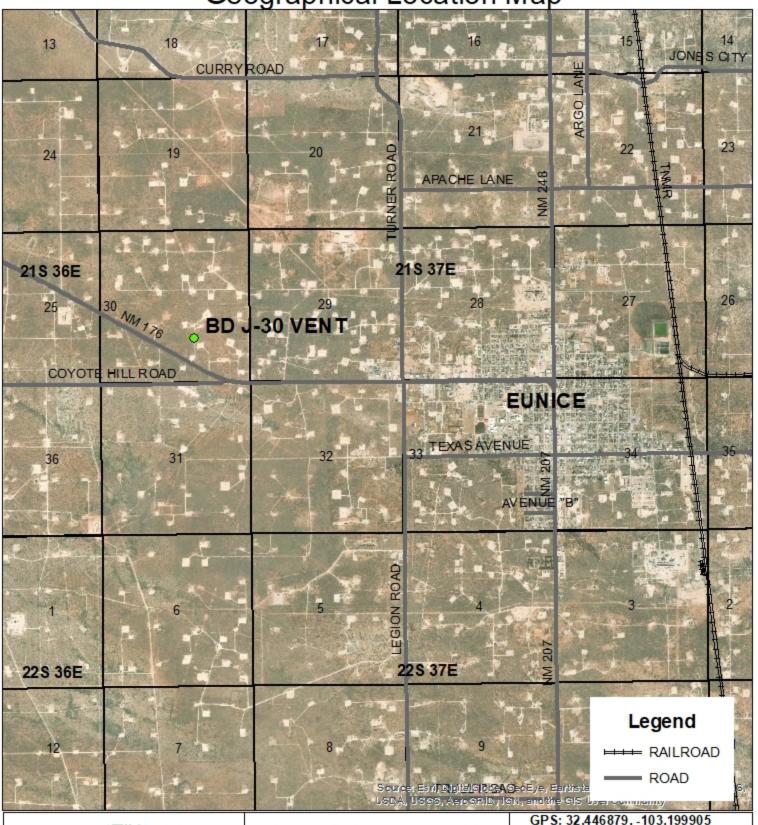
Katy Davis

RICE Operating Company (ROC)

Cc – Edward J. Hansen (ROC)

appendix

Geographical Location Map

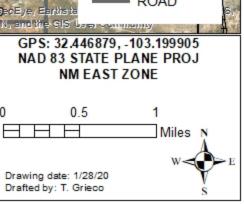




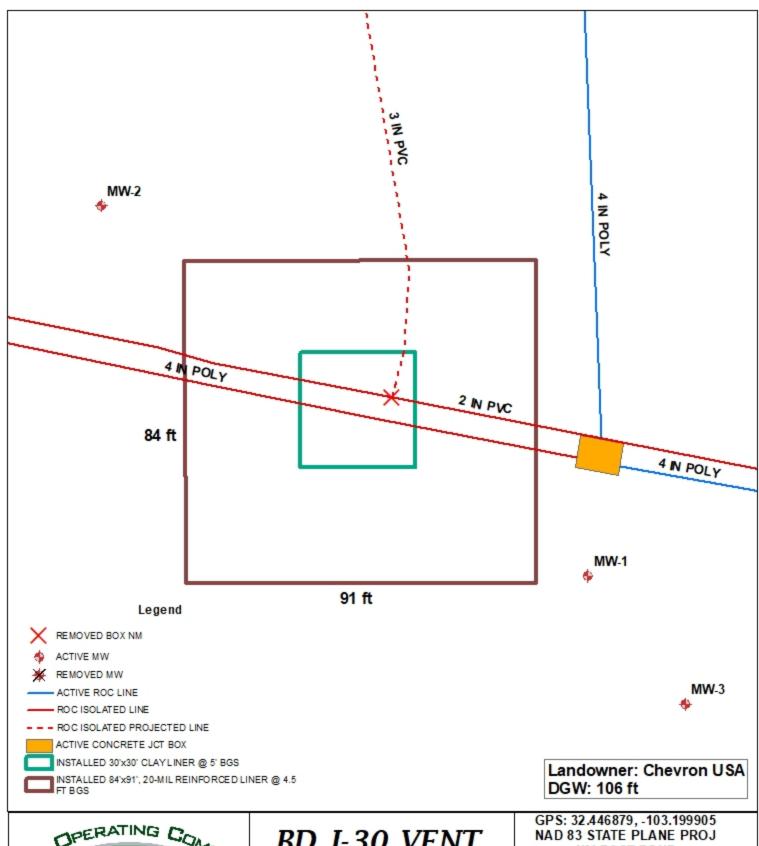
BD J-30 VENT

1R426-217

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



Site Map



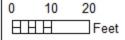


BD J-30 VENT

1R426-217

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

NM EAST ZONE



Drawing date: 2/3/20 Drafted by: T. Grieco



Logger:	Nick Kopiasz	4 N POLY 2 N PVC 4 N POLY	Ī
Driller:	Harrison & Cooper, Inc.	MW-1	
Drilling Method:	Air rotary	•	Ī
Start Date:	12/11/2018	MW-3	
End Date:	12/11/2018	0 10 20 Feet	l

TASMAN GEOSCIENCES

Project Name: Well ID:

BD J-30 vent MW-1

Project Consultant: Tasman

Comments: Located approximately 75 ft southeast of the former junction box vent. Soil samples were collected from drill cuttings at specified intervals.

TD = 141 ft

DRAFTED BY: N.Kopiasz

Location:

Unit J, Section 30, T21S, R37E

	10 - 14	1 10		GW = 100 IL	<u> </u>	iig 103. 19974	, ,	IVADOS) State. Mivi
Depth (feet)	Chloride field tests	LAB	PID	Description		Lithology		Well	Construction
ss				SM-reddish brown, silty sand					Concrete
				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	_			,	
20 ft				Civi tari, graveny siit, canone	_				Bentonite
25 ft				SM-reddish tan, silty sand					
				SM-tan, silty sand					
30 ft					-				
				SM-SAA					
35 ft									

GW = 106 ft

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
40 ft				SM-light tan, silty sand		
				SM-light tan, silty sand, occasional caliche		
45 ft				SM-SAA		
50 ft				SM-SAA		
55 ft				SM-SAA		Bentonite
60 ft				GM-reddish tan, gravelly silt, caliche		Seal / Seal
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						Sand Pack

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				GM-tan, gravelly silt, caliche and		
				sandstone		
90 ft						
				GM-SAA		
95 ft						
				Not Sampled (NS)		
100 ft						
				NS		
105 ft						
				NS		
110 ft						Sand
				NS		
115 ft						
11011						
				NS		
120 ft						
				NO		
				NS		
125 ft						
				NS		
130 ft						
						10' Sump
				NS		10.8
135 ft)

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well C	onstruction
				NS			Sand
140 ft							J)

Logger: Driller:	Nick Kopiasz Harrison & Cooper, Inc.	4 M POLY 2 M PVC 4 M POLY		SMAN
Drilling Method:	Air Rotary	MW-1	Project Name:	Well ID:
Start Date:	12/12/2018	MW-3	BD J-30 vent	MW-3
End Date:	12/12/2018	0 10 20 Feet	Project Consultant: Ta	asman
Comments: L	ocated approximately	y 125 ft southeast of the former	Location:	

Comments: 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

GW - 106 ft

Unit J, Section 30, T21S, R37E

Lat: 32.446657 County: Lea

	TD = 110) ft		GW = 106 ft	Long: -103.199660 (NAD83) State: NM				State: NM	
Depth (feet)	Chloride field tests	LAB	PID	Description		Lithology		Well	Coı	nstruction
SS				SM-reddish brown, silty sand						Concrete
5 ft				SW-light brown, well graded sand, caliche						
				SM-off-white, sandy silt, occasional caliche						
10 ft				SM-Same As Above (SAA)	-			2 in. PVC		
15 ft				SM-light tan, sandy silt						Bentonite
20 ft				SM-off-white, sandy silt						Seal
25 ft				SM-SAA	-					
30 ft										
				SM-SAA						
35 ft										1

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				g,,		
				Not Sampled (NS)		
50 ft						
				NS		
				ING		
55 ft						
				NS		Bentonite
60 ft						Seal
				NS		
65 ft						
				NS		
70 ft						
7011						
				NS		
75 ft						
				NS		
80 ft						
				Ne		1
				NS		Sand Pack
85 ft						

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

Logger:	Nick Kopiasz	MW-2		
Driller:	Harrison & Cooper, Inc.	-		
Drilling Method:	6" Air rotary	= 216.37E	MW-1	Project Name:
Start Date:	4/26/2019	0 25 50	MW-3	BD J-30 V
End Date:	4/26/2019	■■■ Feet		Project Consult

GW = 106 ft

Project Name: Well ID:

BD J-30 Vent MW-2

Project Consultant: Tasman

Comments: Located approximately 70 ft northwest of the former junction box vent. Soil samples were collected from drill cuttings at specified intervals.

TD = 117 ft

DRAFTED BY: N.Kopiasz

Location:

Unit J, Section 30, T21S, R37E

TASMAN GEOSCIENCES

 Lat: 32.447018
 County: Lea

 Long: -103.200148 (NAD83)
 State: NM

	10 - 11			GVV = 100 IL	Long 103.200140 (NAD63) State. NW				
Depth (feet)	Chloride field tests	LAB	PID	Description		Lithology	Well	Con	struction
SS				SM-reddish brown, silty sand					Concrete
				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			2 in. PVC		
15 ft				SM-tan, silty fine sand, some chunks of caliche					Bentonite
20 ft				SM-Same As Above (SAA)					Seal
25 ft				SM-SAA					
30 ft									
35 ft				GM-light tan, gravelly silty sand, caliche cobbles					

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
40 ft				SM-tan, silty fine sand, some chunks of caliche		
				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		Bentonite
65 ft				GM-SAA		
70 ft				GIVI-SAA		
75 ft				GM-SAA		
80 ft				GM-SAA		
				SM-reddish tan, silty fine sand, some sandstone chunks		
85 ft						<u> </u>

Depth (feet)	Chloride field tests	LAB	PID	Description		Lithology	Well C	onstruction
90 ft				SM-SAA				Bentonite Seal
				SM-SAA				
95 ft				SM-SAA				
100 ft				Not Sampled (NS)				
105 ft				NS	-			Sand Pack
110 ft				INO				
445 6				NS				
115 ft				NS				
120 ft								17



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



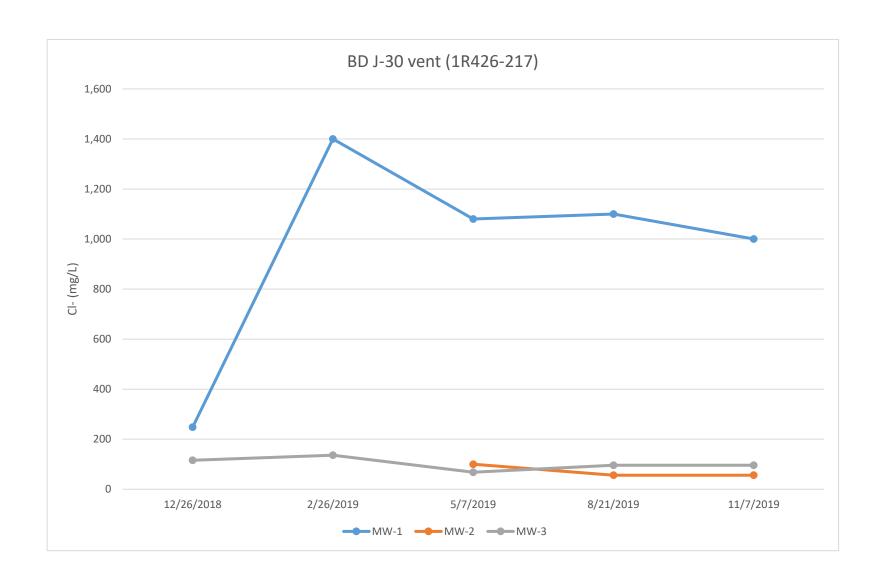


ROC - BD J-30 vent (1R426-217) Unit Letter J, Section 30, T21S, R37E

MW	Depth to	Total	Well	Volume	Sample	Cl	TDS	Benzene	Toluene	Ethyl	Total	Sulfato	Comments
IVIVV	Water	Depth	Volume	Purged	Date	Ū	103	benzene	Toluelle	Benzene	Xylenes	Sullate	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	Total	Well	Volume	Sample	Cl	TDS	Benzene	Toluene	Ethyl	Total	Sulfata	Comments
10100	Water	Depth	Volume	Purged	Date	J	103	Delizelle	Toluctio	Benzene	Xylenes	Juliate	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

N // N / /	Depth to	Total	Well	Volume	Sample	Cl	TDS	Ponzono	Taluana	Ethyl	Total	Culfato	Commonts
MW	Water	Depth	Volume	Purged	Date	Ci	צעו	Benzene	Toluene	Benzene	Xylenes	Sullate	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





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/ga/lab accred certif.html.

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

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

Celey D. Keine

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



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

A | D.

Project Location: T21S-R37E-SEC30 J-LEA CTY., NM

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

Benzene*	BTEX 8021B		mg/l	L	Analyze	d By: ms					
Toluene* Co.001 O.001 O.3/05/2019 ND O.019 97.0 O.0200 O.862	Analyte		Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
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, SM4500CI-B mg/L Analyzed By: AC Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Quality 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 Quality Sulfate 375.4 mg/L Analyzed By: AC Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Quality Sulfate* 52.4 10.0 02/28/2019 ND 22.9 114 20.0 0.263 TDS 160.1 mg/L Analyzed By: AC	Benzene*		<0.001	0.001	03/05/2019	ND	0.021	106	0.0200	0.538	
Total Xylenes* < 0.003	Toluene*		<0.001	0.001	03/05/2019	ND	0.019	97.0	0.0200	0.862	
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 By: AC Chloride* 1400 4.00 02/28/2019 ND 100 100 100 3.92 Sulfate 375.4 mg/L Analyzed By: AC Analyzed By: AC True Value QC RPD Qualif Sulfate* 52.4 10.0 02/28/2019 ND 22.9 114 20.0 0.263 TDS 160.1 mg/L Analyzed By: AC Analyzed By: AC Method Blank BS % Recovery True Value QC RPD Qualif	Ethylbenzene*		<0.001	0.001	03/05/2019	ND	0.020	102	0.0200	1.06	
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 Qualification Result Reporting Limit Analyzed By: AC Sulfate 375.4 mg/L Analyzed By: AC Analyte Result Reporting Limit Analyzed Method Blank BS Recovery True Value QC RPD Qualification Reporting Limit Analyzed By: AC TDS 160.1 mg/L Analyzed By: AC Analyte Result Reporting Limit Analyzed By: AC	Total Xylenes*		<0.003	0.003	03/05/2019	ND	0.064	106	0.0600	1.06	
Chloride, SM4500Cl-B mg/L Analyzed By: AC Analyte Result Reporting Limit Analyzed Method Blank BS Recovery "True Value QC RPD Qualification of the Value QC RPD Qualification of the Value QC RPD	Total BTEX		<0.006	0.006	03/05/2019	ND					
Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Chloride* 1400	Surrogate: 4-Bromofluoroben:	zene (PID	98.4 %	6 81.3-12	8						
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 By: AC BS % Recovery True Value QC RPD Qualification Qualification Sulfate* 52.4 10.0 02/28/2019 ND 22.9 114 20.0 0.263 TDS 160.1 mg/L Analyzed By: AC Analyzed By: AC Recovery True Value QC RPD Qualification	Chloride, SM4500Cl-B		mg/	L	Analyze	d By: AC					
Sulfate 375.4 mg/L Analyzed By: AC Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification 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 Qualification	Analyte		Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification 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 Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualification Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD QUALIFICATION Analyte Result Reporting Limit Analyte RPD RPD QUALIFICATION Analyte RPD	Chloride*		1400	4.00	02/28/2019	ND	100	100	100	3.92	
Sulfate* 52.4 10.0 02/28/2019 ND 22.9 114 20.0 0.263 TDS 160.1 mg/L Analyzed By: AC Analyzed By: AC Feed of the property of the proper	Sulfate 375.4		mg/	L	Analyze	d By: AC					
Analyte Result Reporting Limit Analyzed By: AC Analyzed By: AC Analyzed By: AC Analyzed By: AC	Analyte		Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualif	Sulfate*		52.4	10.0	02/28/2019	ND	22.9	114	20.0	0.263	
	TDS 160.1		mg/	L	Analyze	d By: AC					
TDS* 1900 5.00 03/04/2019 ND 514 97.5 527 0.847	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 whistoever 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 related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



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 Sample Received By: Project Number: NONE GIVEN Jodi Henson

Project Location: T21S-R37E-SEC30 J-LEA CTY., NM

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

BTEX 8021B	mg/	L	Analyze	d 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	% 81.3-12	8						
Chloride, SM4500CI-B	mg/	L	Analyze	d 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	Analyze	d 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	Analyze	d 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	

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Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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11900 THY	(G)rab or (C)omp	# CONTAINERS	WATER	SOIL	AIR	SLUDGE	HCL (2 40ml VOA)	HNO ₃	NaHSO ₄	H ₂ SO ₄	ICE (1-1Liter HDPE)	NONE	DATE (2019)	TIME	MTBE	BTEX	됩	PAH 8270C	<u>ا ا</u>	티	TCLP Semi Volatiles	TCLP Pesticides	RCI	CIN	S	PCB's 8082/608	estic	BOD, TSS, pH	Moisture Content	nior	Sulfates	otal	Chlorides	E
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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/ga/lab accred certif.html.

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

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

Celey D. Keine

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



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

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Project Location: T21S-R37E-SEC30 J-LEA CTY., NM

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

BTEX 8021B	mg/	'L	Analyze	d 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	% 81.3-12	8						
Chloride, SM4500CI-B	mg/	'L	Analyze	d 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	Analyze	d 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	Analyze	d 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	

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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 Sample Received By: Project Number: NONE GIVEN Jodi Henson

Project Location: T21S-R37E-SEC30 J-LEA CTY., NM

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

BTEX 8021B	mg/	L	Analyze	d 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 9	% 81.3-12	8						
Chloride, SM4500Cl-B	mg/	L	Analyze	d 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	Analyze	d 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	Analyze	d 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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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 Sample Received By: Project Number: NONE GIVEN Jodi Henson

Project Location: T21S-R37E-SEC30 J-LEA CTY., NM

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

RTFY 8021R

Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<0.001	0.001	05/09/2019	ND	0.022	111	0.0200	0.838	
<0.001	0.001	05/09/2019	ND	0.023	115	0.0200	1.16	
<0.001	0.001	05/09/2019	ND	0.024	120	0.0200	1.86	
<0.003	0.003	05/09/2019	ND	0.074	123	0.0600	0.994	
<0.006	0.006	05/09/2019	ND					
104 %	6 81.3-12	8						
mg/l	<u> </u>	Analyze	d By: AC					
mg/l Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
		•		BS 100	% Recovery	True Value QC	RPD 0.00	Qualifier
Result	Reporting Limit	Analyzed 05/20/2019	Method Blank		,	·		Qualifier
Result	Reporting Limit	Analyzed 05/20/2019	Method Blank		,	·		Qualifier Qualifier
Result 68.0 mg/I	Reporting Limit 4.00	Analyzed 05/20/2019 Analyze	Method Blank ND d By: AC	100	100	100	0.00	
Result 68.0 mg/I	Reporting Limit 4.00 L Reporting Limit 25.0	Analyzed 05/20/2019 Analyzed Analyzed 05/15/2019	Method Blank ND d By: AC Method Blank	100 BS	100 % Recovery	100 True Value QC	0.00	
Result 68.0 mg/I Result 83.4	Reporting Limit 4.00 L Reporting Limit 25.0	Analyzed 05/20/2019 Analyzed Analyzed 05/15/2019	Method Blank ND d By: AC Method Blank ND	100 BS	100 % Recovery	100 True Value QC	0.00	
<	0.001 0.001 0.001 0.003 0.006	0.001	0.001 0.001 05/09/2019 0.001 0.001 05/09/2019 0.001 0.001 05/09/2019 0.003 0.003 05/09/2019 0.006 0.006 05/09/2019 104% 81.3-128	0.001 0.001 05/09/2019 ND 0.001 0.001 05/09/2019 ND 0.001 0.001 05/09/2019 ND 0.003 0.003 05/09/2019 ND 0.006 0.006 05/09/2019 ND	0.001 0.001 05/09/2019 ND 0.022 0.001 0.001 05/09/2019 ND 0.023 0.001 0.001 05/09/2019 ND 0.024 0.003 0.003 05/09/2019 ND 0.074 0.006 0.006 05/09/2019 ND	0.001 0.001 05/09/2019 ND 0.022 111 0.001 0.001 05/09/2019 ND 0.023 115 0.001 0.001 05/09/2019 ND 0.024 120 0.003 0.003 05/09/2019 ND 0.074 123 0.006 0.006 05/09/2019 ND	0.001	0.001

Analyzed By: MC

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Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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	(G)rab or (C)omp	# CONTAINERS	WATER	SOIL	18	SLUDGE	HCL (2 40ml VOA)	HNO3	NaHSO₄	28	ICE (1-1Liter HDPE) NONE	DATE (2019)	TIME	置	BTEX 8021B/602	Ĭ	PAH 8270C	tal	بام	TCLP Semi Volatiles	TCLP Pesticides	_	GC/MS Vol. 8260B/624	NS I	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH Moisture Content	tion	ons	Sulfates Total Dissolved Solida	Chlorides	A A
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3 Monitor Well #3	G	3	x		Н	+	_	\vdash	\vdash	$\overline{}$	1	5/7	10:05	-	X	H	-	+	+	Н	Ш		_	4	4	_				X)	(x	
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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/ga/lab accred certif.html.

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

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

Celey D. Keine

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



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	Analyze	d 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	% 81.3-12	8						
Chloride, SM4500CI-B	mg/	'L	Analyze	d 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	Analyze	d 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	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier

Cardinal Laboratories *=Accredited Analyte

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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 Sample Received By: Project Number: NONE GIVEN Tamara Oldaker

Project Location: T21S-R37E-SEC30 J-LEA CTY., NM

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

BTEX 8021B

DIEX 8021B	ilig/	<u> </u>	Allalyze	u by: IIIS					
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 %	% 81.3-12	8						
Chloride, SM4500CI-B	mg/	L	Analyze	d 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	Analyze	d 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	Analyze	d 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	

Analyzed By: ms

Cardinal Laboratories *=Accredited Analyte

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08/21/2019

Cool & Intact

Tamara Oldaker

Water

Sampling Date:



Analytical Results For:

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

Received: 08/23/2019

Reported: 08/28/2019 Sampling Type: Project Name: BD J-30 VENT Sampling Condition: Project Number: Sample Received By: NONE GIVEN

Project Location: T21S-R37E-SEC30 J-LEA CTY., NM

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

BTEX 8021B	mg/	L	Analyze	d By: ms					
Analyte	Result Reporting Limit			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 %	6 81.3-12	8						
Chloride, SM4500CI-B	mg/	L	Analyze	d 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	Analyze	d 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	Analyze	d By: AC					
Analyte	Result Reporting Limit					0/ 5			
•	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier

Cardinal Laboratories *=Accredited Analyte

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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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101 East Marland - Ho	obbs, NM 88240	n o	al Laboratories, Inc.								CHAIN-OF-CUSTODY AND ANALYSIS REQUEST																								
Tel (575) 393 Fax (575) 393	3-2326 3-2476 Calul	IIa.		ia	U		aı	U.		C	9			L'o	LAB Order ID#																				
Company Name:		*	BILL T			pany:	_					PO#									L	NA	M Y	SIS	R	FOI	UES	ST							
Project Manager:	ting Company		RICE	: O	STOC		Con	npa	ny	(Str	eet (City, Z	(in)														od N								
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•	BD J-30 Vent															apua	-	e High	200																
Project Location:			Sampler Signature: Rezanne Johnson (575)631-9310													Exte		S of a	á										6	2			S.		
T21S R37E	Sec30 J~ Lea County New Mex	tico														002		خ اخ	3					3/62						3			오		
1-		4	METHOD SAMPLING													TPH 418.1/TX1005 / TX1005 Extended (C35)		Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	Da D				624	8270C/625		98			Cations (Ca, Mg, Na, K)	3	lids		Turn Around Time ~ 24 Hours		
H902920		dm	# CONTAINERS			П		द				E)				20	05	1005		As	2	TCLP Semi Volatiles	S		GC/MS Vol. 8260B/624	ol.		Pesticides 8081A/608		ᇣ	2 2 Z	<u>-</u>	Total Dissolved Solids		ime
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ONLY		(G)rab or (C)omp	8	WATER	SOIL	AIR	SLUDGE	HCL (2 40ml VOA)	HNO ₃	NaHSO ₄	H ₂ SO ₄	ICE (1-1Liter HDPE)	NONE	DATE (2019)	TIME	MTBE 8021B/602	втех	光	PAH 8270C		TCLP Volatiles	님	TCLP Pesticides	RCI	C/MS	GC/MS Semi. Vol.	PCB's 8082/608	estici	BOD, TSS, pH	Moisture Content	ation	Sulfates	otal I	Chlorides	E
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Delivered By: ((Circle One)	Sample Condition CHECKED BY:									rozanne11@windstream.net																								
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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/ga/lab accred certif.html.

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

Celey D. Keine

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



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	Analyze	d 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 %	6 74-98							
Chloride, SM4500Cl-B	mg/	L	Analyze	d 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	Analyze	d 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	Analyze	d By: AC					
103 100.1									
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier

Cardinal Laboratories *=Accredited Analyte

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

Received: 11/11/2019 Reported: 11/19/2019

Project Name: BD J-30 VENT Project Number: NONE GIVEN

Project Location: T21S-R37E-SEC30 J-LEA CTY., NM Sampling Date: 11/07/2019 Sampling Type: Water

Sampling Condition: Cool & Intact Sample Received By: Tamara Oldaker

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

BTEX 8021B	mg/	L	Analyze	d By: MS					
Analyte	Result Reporting			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	Analyze	d 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	Analyze	d 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	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
		5.00	11/14/2019						

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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 Sample Received By: Project Number: NONE GIVEN Tamara Oldaker

Project Location: T21S-R37E-SEC30 J-LEA CTY., NM

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

BTEX 8021B	mg/	L	Analyze	d 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	Analyze	d 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	Analyze	d 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	Analyze	d 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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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

ecovery.

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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