

1RP-423-8

**2013 Annual
Groundwater Report
Justis D-1**

**DATE:
March 27, 2014**

From: [Hall, Sharon](#)
To: [Lowe, Leonard, EMNRD](#)
Cc: [VonGonten, Glenn, EMNRD](#); [Hack Conder, Katie Jones](#)
Subject: ROC Annual Groundwater Report for Justis D-1 Vent site (NMOCD case#1R423-08)
Date: Thursday, March 27, 2014 1:16:06 PM
Attachments: [Justis D-1 Vent 2013 Annual report.pdf](#)

Mr. Lowe,

Attached is the 2013 Annual Groundwater Report for Justis D-1 Vent site (NMOCD case#1R423-08). Annual Reports are submitted yearly to update the NMOCD about groundwater quality and groundwater recovery, if applicable, for a particular site. This report does not require NMOCD approval; therefore, a flow chart is not included.

If you have any questions please contact Hack.

Regards,

Sharon

Sharon Hall | Associate Vice President | Sharon.Hall@arcadis-us.com
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ARCADIS, Imagine the result
Please consider the environment before printing this email.

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Infrastructure, buildings, environment, communications

Mr. Leonard Lowe
New Mexico Oil Conservation Division
1220 So. Saint Francis Drive
Santa Fe, New Mexico 87505

Subject:
2013 ANNUAL GROUNDWATER REPORT
NMOCD Case # 1R423-08
Justis D-1 vent
T25S, R37E, Section 1, Unit D, Lea County, New Mexico

Mr. Lowe,

On behalf of Rice Operating Company (ROC), ARCADIS respectfully submits this 2013 Annual Groundwater Report for the Justis D-1 Vent site located in the Justis Salt Water Disposal (SWD) System.

An Investigation and Characterization Work Plan (ICP) was submitted to the New Mexico Oil Conservation Division (NMOCD) on April 30, 2008 and approved on May 21, 2008. As part of the approved ICP, ROC was onsite to install one monitor well and three soil borings on June 15, 2009. During a site visit to the property, ROC personnel observed apparent up gradient monitor wells along an adjacent pipeline.

In order to delineate chloride impacted soils at the site, ROC was onsite on October 16, 2012 to install two additional soil borings (SB-4 and SB-5) to a depth of 80 feet below ground surface (bgs). Samples were collected from cuttings from both borings at 5 foot intervals and screened for hydrocarbons with a Photoionization Detector (PID) and for chlorides with field test kits. A confirmation sample was collected from both borings (SB-4 at 20 and 80 feet bgs and SB-5 at 25 and 80 feet bgs) and submitted to Cardinal Labs in Hobbs, New Mexico for analysis for chlorides using EPA method SM4500Cl-B and total petroleum hydrocarbons (TPH) using EPA Method 8015M. Both the chloride field test results and the laboratory analysis indicate the soils are impacted from the surface to a depth of 80 feet with elevated chlorides. Both PID and laboratory analysis confirm that TPH is below regulatory standards. Monitor well MW-1 was sampled quarterly per NMOCD guidelines. The attached table summarizes the analytical results from groundwater samples collected from the monitor well at the site.

Quarterly groundwater sampling will continue in 2014.

ROC is the service provider (agent) for the Justis Salt Water Disposal System and has no ownership of any portion of the pipelines, wells or facilities. The Justis

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Date:
March 27, 2014

Contact:
Sharon Hall

Phone:
432 687-5400

Email:
shall@arcadis-us.com

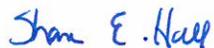
Part of a bigger picture

System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Thank you for your consideration concerning this summary of groundwater monitoring information. If you have any questions please do not hesitate to contact me or Hack Conder.

Best Regards,

ARCADIS U.S, Inc.



Sharon E. Hall
Associate Vice President

Copies: Hack Conder- ROC

Glenn Von Gonten-NMOCD

Attachments:

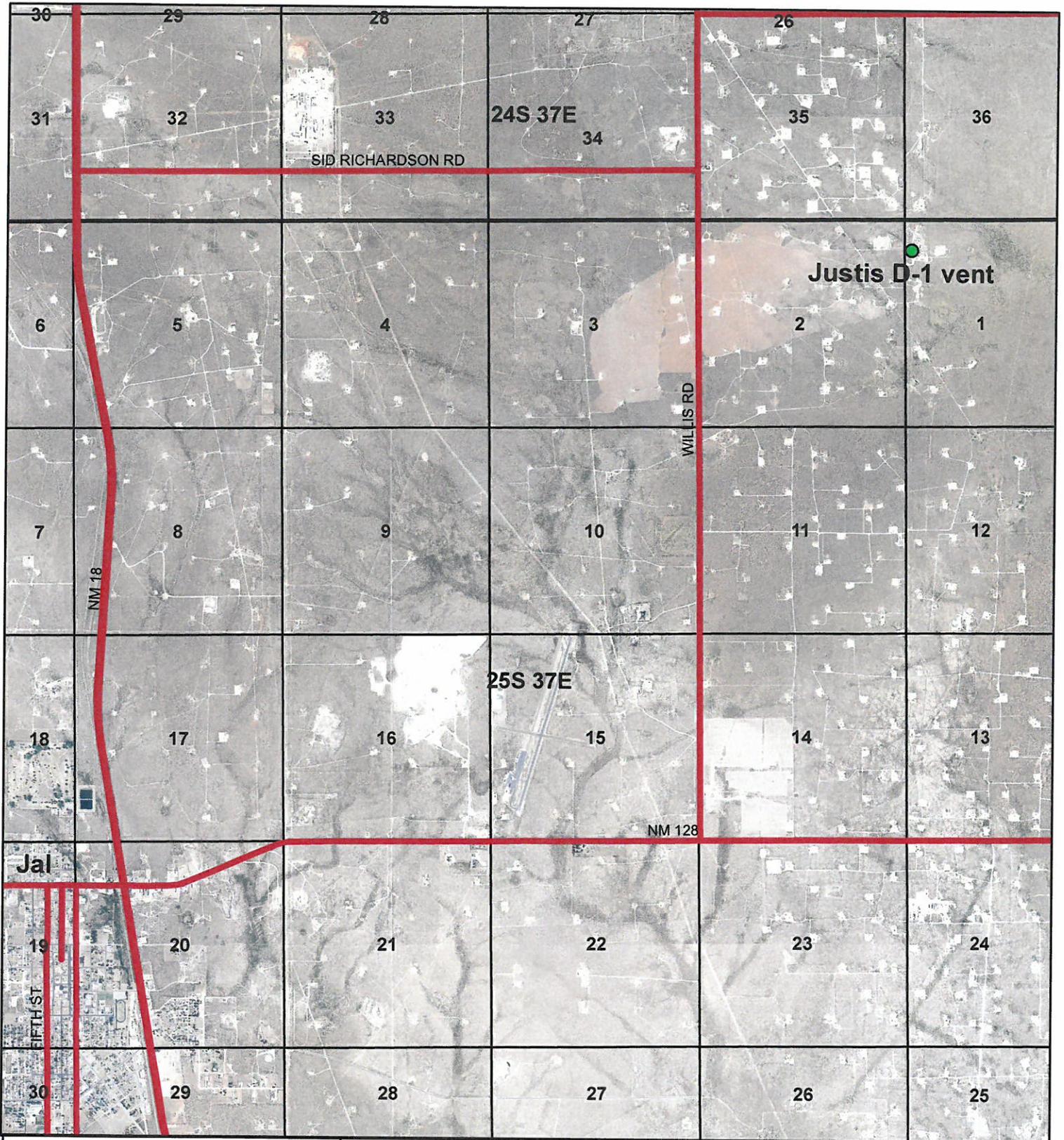
Site Location Map

Monitor Well Location Figure

Monitor Well Summary Table

November 2013 Monitor Well Lab Results

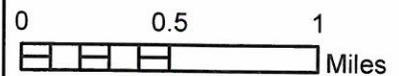
Site Location



Justis D-1 vent

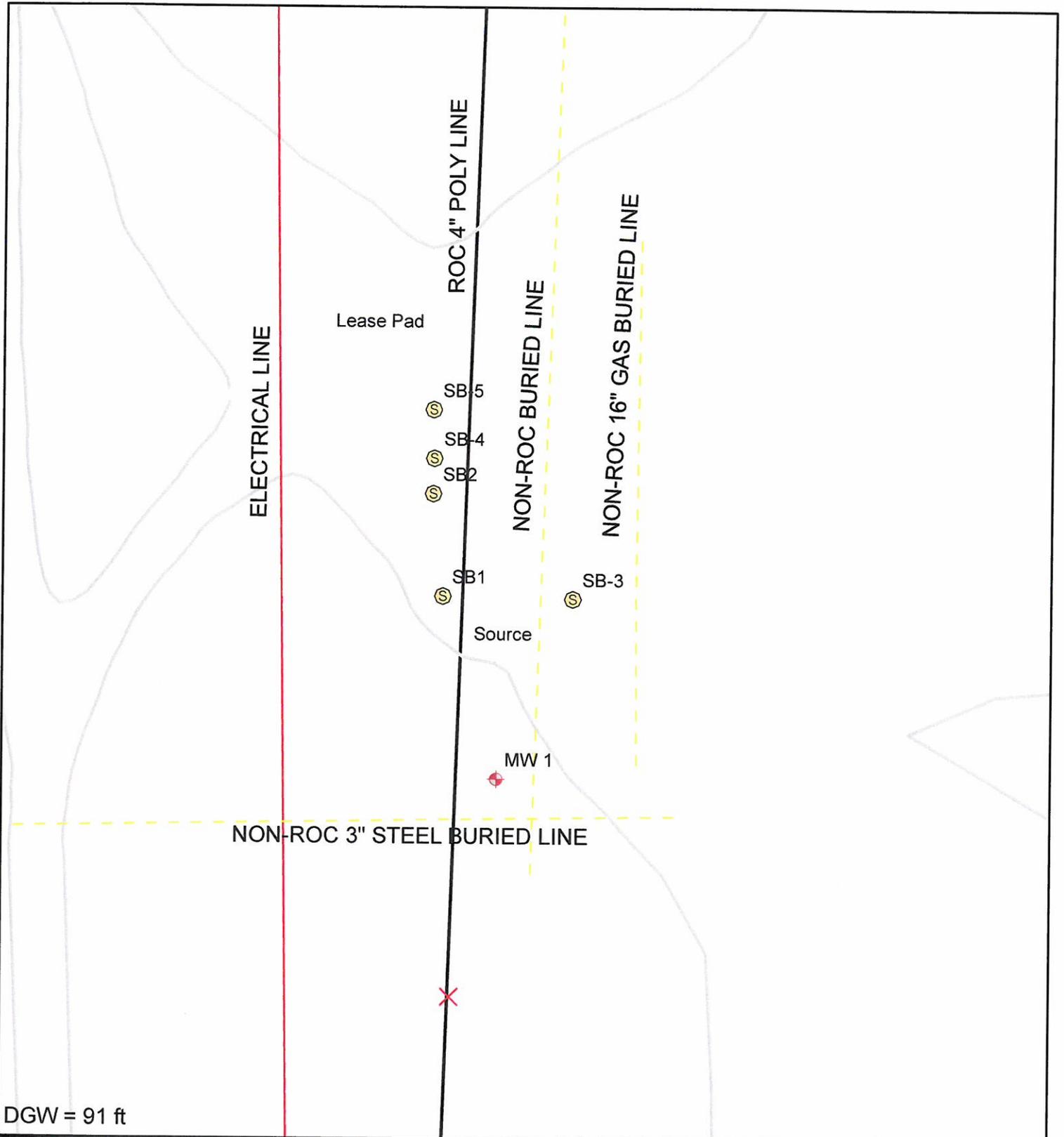
LEGALS: UL/D sec. 1
T-25-S R-37-E
LEA COUNTY, NM

NMOCD CASE #: 1R423-08



Drawing date: 3/26/14
Drafted by: L. Flores

Monitoring Well Location



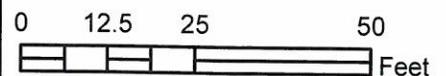
DGW = 91 ft



Justis D-1 vent

LEGALS: UL/D sec. 1
T-25-S R-37-E
LEA COUNTY, NM

NMOCD CASE #: 1R423-08



Drawing date: 3/26/14
Drafted by: L. Flores

**ROC - Justis D-1 vent (1R423-08)
Unit Letter D, Section 1, T25S, R37E**

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	91.43	99.39	1.3	5	9/8/2009	500	1280	<0.001	<0.001	<0.001	<0.003	124	Clear No odor
1	91.41	99.39	1.3	5	7/9/2009	2460	4560	<0.001	<0.001	<0.001	<0.003	173	Clear No odor
1	91.42	99.39	1.3	5	11/17/2009	580	1290	<0.001	<0.001	<0.001	<0.003	82.4	Clear No odor
1	91.38	99.4	1.3	5	3/8/2010	1170	2770	<0.001	<0.001	<0.001	<0.003	149	Clear No odor
1	91.39	99.4	1.3	5	6/2/2010	580	1530	<0.001	<0.001	<0.001	<0.003	151	Clear No odor
1	91.44	99.4	1.3	5	8/26/2010	850	2150	<0.001	<0.001	<0.001	<0.003	143	Clear No odor
1	91.48	99.4	1.3	5	12/1/2010	790	1750	<0.001	<0.001	<0.001	<0.003	200	Clear No odor
1	91.4	99.4	1.3	6	3/24/2011	800	1930	<0.001	<0.001	<0.001	<0.001	138	Clear No odor
1	91.39	99.4	1.3	6	6/10/2011	780	2020	<0.001	<0.001	<0.001	<0.003	149	Clear No odor
1	91.42	99.4	1.3	6	9/14/2011	1060	2120	<0.001	<0.001	<0.001	<0.003	168	Clear No odor
1	91.41	99.4	1.3	6	12/8/2011	1380	2710	<0.001	<0.001	<0.001	<0.003	123	Clear No odor
1	91.38	99.4	1.3	6	3/8/2012	880	2090	<0.001	<0.001	<0.001	<0.003	269	Clear No odor
1	91.44	99.4	1.3	6	6/5/2012	1060	2530	<0.001	<0.001	<0.001	<0.003	354	Clear No odor
1	91.36	99.4	1.3	6	9/21/2012	850	2360	<0.001	<0.001	<0.001	<0.003	192	Clear No odor
1	91.54	99.4	1.3	6	11/27/2012	1100	2230	<0.001	<0.001	<0.001	<0.003	108	Clear No odor
1	91.61	99.4	1.2	6	2/27/2013	1200	2140	<0.001	<0.001	<0.001	<0.003	119	Clear No odor
1	91.65	99.4	1.2	6	6/14/2013	1040	2170	<0.001	<0.001	<0.001	<0.003	170	Clear No Odor
1	91.72	99.4	1.2	6	9/12/2013	1260	2900	<0.001	<0.001	<0.001	<0.003	79.1	Clear No Odor
1	91.78	99.4	1.2	6	11/21/2013	1100	2690	<0.001	<0.001	<0.001	<0.003	95.3	Clear No odor



December 05, 2013

Hack Conder
Rice Operating Company
112 W. Taylor
Hobbs, NM 88240

RE: JUSTIS D-1 VENT

Enclosed are the results of analyses for samples received by the laboratory on 11/21/13 14:13.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene
Lab Director/Quality Manager

Analytical Results For:

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

Received:	11/21/2013	Sampling Date:	11/21/2013
Reported:	12/05/2013	Sampling Type:	Water
Project Name:	JUSTIS D-1 VENT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Celey D. Keene
Project Location:	T25S-R37E-SEC1 D - LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H302859-01)

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	11/24/2013	ND	0.056	113	0.0500	0.721		
Toluene*	<0.001	0.001	11/24/2013	ND	0.056	111	0.0500	0.0556		
Ethylbenzene*	<0.001	0.001	11/24/2013	ND	0.055	111	0.0500	0.123		
Total Xylenes*	<0.003	0.003	11/24/2013	ND	0.163	108	0.150	0.0111		
Total BTEX	<0.006	0.006	11/24/2013	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 89.5-126

Chloride, SM4500Cl-B		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	1100	4.00	11/25/2013	ND	104	104	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	95.3	25.0	12/05/2013	ND	20.3	102	20.0	4.58		

TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	2690	5.00	12/02/2013	ND	248	103	240	1.34		

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

101 East Marland - Hobbs, New Mexico
88240
Tel (575) 393-2326
Fax (575) 393-2476

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: **RICE Operating Company** BILL TO Company: **RICE Operating Company** PO#
 Project Manager: **Hack Conder** Address: **122 W Taylor Street, ~ Hobbs, New Mexico 88240** (Street, City, Zip)

Address: **122 W Taylor Street ~ Hobbs, New Mexico 88240** (Street, City, Zip)
 Phone #: **(575) 393-9174** Fax #: **(575) 397-1471**

Project #: **(575) 393-9174** Project Name: **Justis D-1 Vent**
 Project Location: **T25S-R37E-Sec1 D ~ Lea County - New Mexico**

Sample Signature: *Rozanne Johnson* Rozanne Johnson (575) 631-8310
 rozanne@valotmet.com

LAB # (LAB USE ONLY)	FIELD CODE	MATRIX	PRESERVATIVE METHOD				SAMPLING TIME
			HCL (2 40ml VOA)	HNO ₃	NaHSO ₄	H ₂ SO ₄	
1302854	Monitor Well #1	(G)rab or (C)omp					11-21 12:45
		# CONTAINERS	3				
		WATER	X				
		SOIL					
		AIR					
		SLUDGE					
		DATE (2013)					

Received by: *Rozanne Johnson* Date: **11-21-2013** Time: **14:12**

Received by: *Rozanne Johnson* Date: **11-21-2013** Time: **14:13**

Sample Condition: Intact Damaged
 (Initials) *CRJ*

Delivered By: (Circle One) UPS Bus Other

REMARKS: Email Results to: **hconder@riceswd.com**
lweinheimer@rice-ecs.com
kiones@riceswd.com
rozanne11@windstream.net

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

ANALYSIS REQUEST
 (Circle or Specify Method No.)

LAB Order ID #

Turn Around Time ~ 24 Hours