



Infrastructure, buildings, environment, communications

Dr. Tomas Oberding
New Mexico Oil Conservation Division
1220 So. Saint Francis Drive
Santa Fe, New Mexico 87505

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Midland Texas 79701
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www.arcadis-us.com

Subject:
2014 ANNUAL GROUNDWATER REPORT
NMOCD Case # 1R423-08
Justis D-1 vent
T25S, R37E, Section 1, Unit D, Lea County, New Mexico

Dr. Oberding,

Date:
March 18, 2014

On behalf of Rice Operating Company (ROC), ARCADIS respectfully submits this 2014 Annual Groundwater Report for the Justis D-1 Vent site located in the Justis Salt Water Disposal (SWD) System.

Contact:
Sharon Hall

One monitoring well was installed on June 15, 2009, following the approval of the Investigation and Characterization Plan on May 21, 2008. During a site visit to the property, ROC personnel observed apparent up gradient monitor wells along an adjacent pipeline. ROC will review the data and submit a report with recommendations

Phone:
432 687-5400

Email:
shall@arcadis-us.com

MW-1 was sampled quarterly in 2014 per NMOCD guidelines. The attached table summarizes the analytical results from the groundwater samples collected from the monitor well at the site. Quarterly groundwater sampling will continue in 2015.

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 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 at (432) 687-5400 or Katie Jones at (575) 393-9174.

Best Regards,

ARCADIS U.S, Inc.

A handwritten signature in blue ink that reads "Sharon E. Hall".

Sharon E. Hall
Associate Vice President

Copies: Katie Jones- ROC

Attachments:

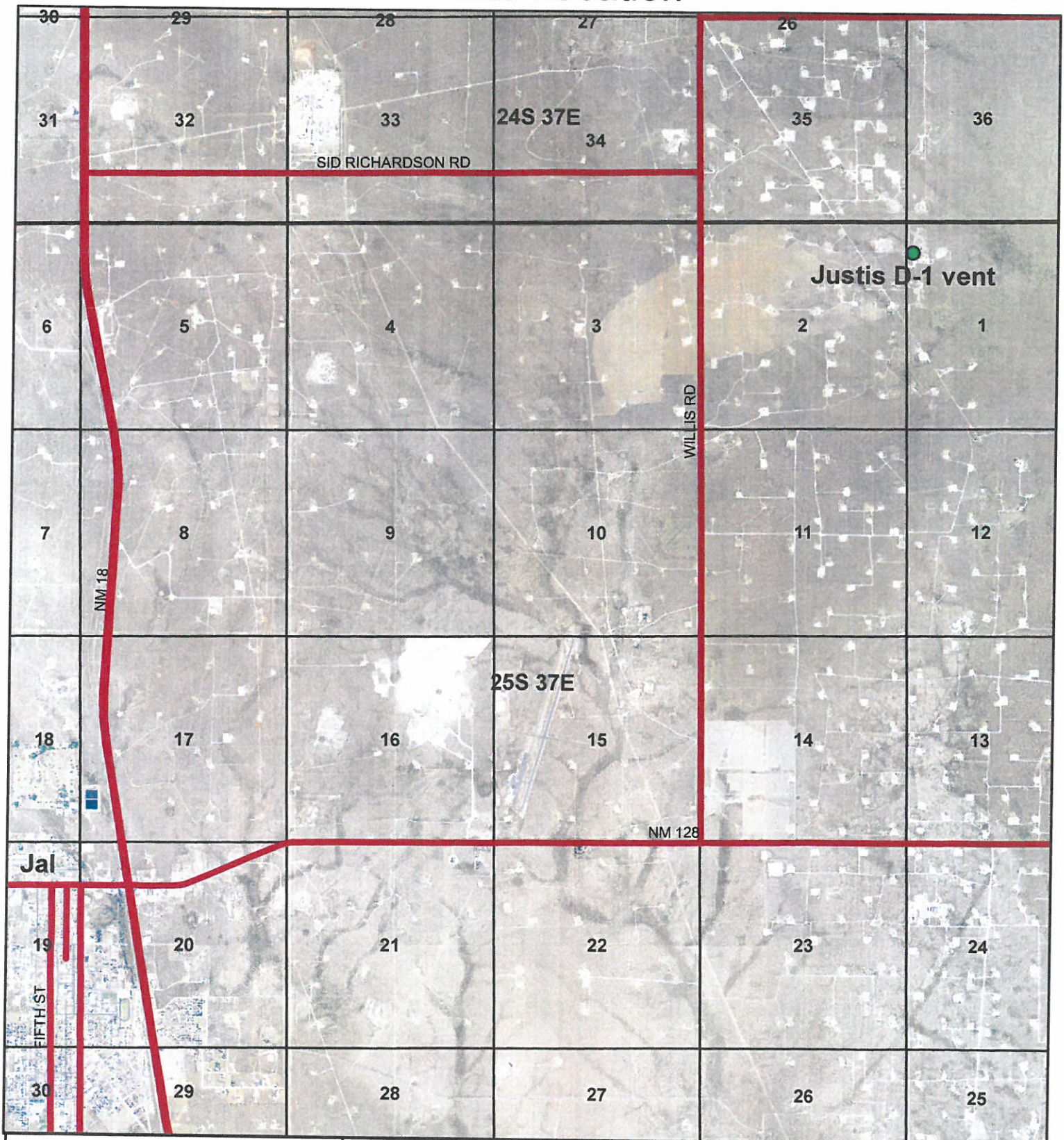
Site Location Map

Monitor Well Location Figure

Monitor Well Summary Table

December Monitor Well Lab Results

Site Location



RECS
RICE ENVIRONMENTAL
CONSULTING & SAFETY

Justis D-1 vent

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

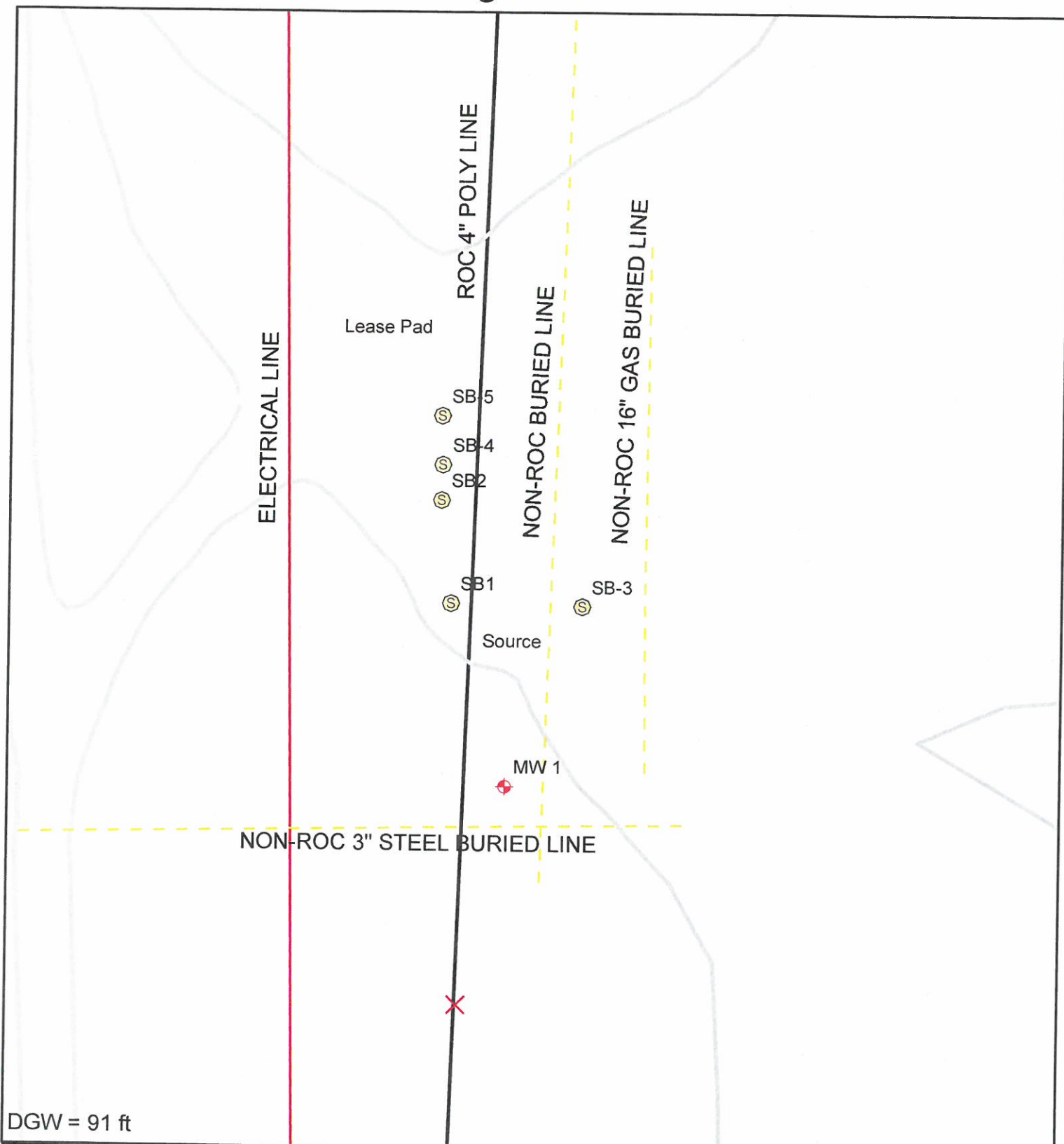
NMOCD CASE #: 1R423-08



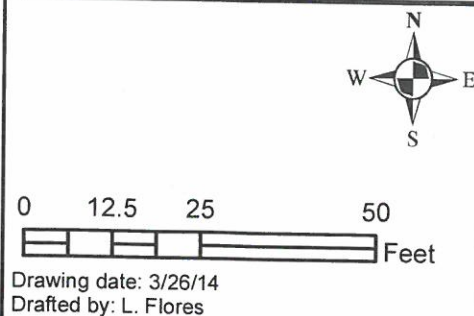
0 0.5 1
Miles

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

Monitoring Well Location



Justis
D-1 vent
LEGALS: UL/D sec. 1
T-25-S R-37-E
LEA COUNTY, NM
NMOCD CASE #: 1R423-08



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
1	91.84	99.4	1.2	6	3/18/2014	1280	2470	<0.001	<0.001	<0.001	<0.003	107	Clear No odor
1	91.86	99.4	1.2	6	6/20/2014	1400	3290	<0.001	<0.001	<0.001	<0.003	160	Clear No odor
1	91.99	99.4	1.2	6	8/29/2014	1260	2690	<0.001	<0.001	<0.001	<0.003	99.6	Clear No odor
1	92.08	99.4	1.2	6	12/16/2014	1240	2520	<0.001	<0.001	<0.001	<0.003	79	Clear No odor

December 23, 2014

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 12/17/14 16:46.

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/ga/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
Hack Conder
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received: 12/17/2014
Reported: 12/23/2014
Project Name: JUSTIS D-1 VENT
Project Number: NOT GIVEN
Project Location: T25S-R37E-SEC1 D - LEA CTY., NM

Sampling Date: 12/16/2014
Sampling Type: Water
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: MONITOR WELL #1 (H403853-01)
BTEX 8260B

mg/L

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	12/19/2014	ND	0.021	103	0.0200	3.33	
Toluene*	<0.001	0.001	12/19/2014	ND	0.021	106	0.0200	3.19	
Ethylbenzene*	<0.001	0.001	12/19/2014	ND	0.021	105	0.0200	3.57	
Total Xylenes*	<0.003	0.003	12/19/2014	ND	0.063	105	0.0600	5.70	
Total BTEX	<0.006	0.006	12/19/2014	ND					

Surrogate: Dibromofluoromethane 104 % 88.3-113

Surrogate: Toluene-d8 98.9 % 90.3-115

Surrogate: 4-Bromofluorobenzene 101 % 87.2-114

Chloride, SM4500Cl-B

mg/L

Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	1240	4.00	12/19/2014	ND	100	100	100	3.92	

Sulfate 375.4

mg/L

Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	79.0	25.0	12/22/2014	ND	16.4	82.0	20.0	5.86	

TDS 160.1

mg/L

Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	2520	5.00	12/18/2014	ND	458	86.9	527	2.18	

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
(575) 393-2325 Tel
(575) 393-2476 Fax

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

ANALYSIS REQUEST (Circle or Specify Method No.)

Company Name:

RICE Operating Company

BILL TO Company:

RICE Operating Company

PO#

Address: (Street, City, Zip)

Project Manager:

122 W Taylor Street ~ Hobbs, New Mexico 88240

Address: (Street, City, Zip)

122 W Taylor Street ~ Hobbs, New Mexico 88240

Phone#:

(575) 393-9174

Fax#:

(575) 397-1471

Phone #:

(575) 393-9174

Fax #:

(575) 397-1471

Project #:

Project Name: Justis D-1 Vent

Project Location:

T25S-R37E-Sect 1 D ~ Lea County - New Mexico

Sampler Signature:

Rozanne Johnson (575) 631-9310
rozanne@valmet.com

LAB #

FIELD CODE

LAB USE ONLY

H403653

Monitor Well #1

G

3

X

WATER

SOIL

AIR

SLUDGE

HCL (2 40ml VOA)

HNO₃

NaHSO₄

H₂SO₄

ICE (1-1 Liter HDPE)

NONE

DATE (2014)

TIME

12/16 13:05

MTBE 8021B/602

BTEX 8021B/602

TPH 418.1/TX1005 / TX1005 Extended (C35)

PAH 8270C

Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7

TCLP Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Volatiles

TCLP Semi Volatiles

TCLP Pesticides

RCI

GC/MS Vol. 8260B/624

GC/MS Semi. Vol. 8270C/625

PCB's 8082/608

Pesticides 8081A/608

BOD, TSS, pH

Moisture Content

Cations (Ca, Mg, Na, K)

Anions (Cl, SO₄, CO₃, HCO₃)

Sulfates

Total Dissolved Solids

Chlorides

Turn Around Time ~ 24 Hours

Relinquished by:

Date: Time:

Received by:

Date: Time:

Relinquished by:

Date: Time:

Received By: (Laboratory Staff)

Date: Time:

Delivered By: (Circle One)

Settle Condition

Cool

Intact

CHECKED BY:

Email Results to: hconder@iceswd.com
weinheimer@rice-ecs.com
klones@iceswd.com
rozanne11@windstream.net

Sampler - UPS - Bus - Other

Yes

No

Yes

No

(Initials)