

1R - 426-153

**Annual GW Mon.
REPORTS**

DATE:

2010



Infrastructure, buildings, environment, communications

RECEIVED OCD

2011 MAR 21 A 6:30

ARCADIS U.S., Inc.
1004 N. Big Spring Street
Suite 300
Midland Texas 79701
Tel 432.687.5400
Fax 432.687.5401
www.arcadis-us.com

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

Certified Mail Receipt No. 7002 2410 0001 5813 0356

Subject:
2010 ANNUAL GROUNDWATER REPORT
NMOCD Case # 1R426-153
Blinebry-Drinkard (BD) Jct. N-32 Vent
T21S, R37E, Section 32, Unit N, Lea County, New Mexico

Date:
March 15, 2011

Mr. Hansen,

Contact:
Sharon Hall

On behalf of Rice Operating Company (ROC), ARCADIS respectfully submits this 2010 Annual Groundwater Report for the BD Jct. N-32 Vent site located in the Blinebry-Drinkard (BD) Salt Water Disposal (SWD) System.

Phone:
432 687-5400

One monitoring well was drilled at the site on October 6 and 7, 2008 following approval of the Investigation and Characterization Plan approved by NMOCD on May 28, 2008. A groundwater sample collected from the monitoring well on November 13, 2008.

Email:
shall@arcadis-us.com

An ICP Report was submitted to NMOCD on April 22, 2009. The report recommended that one upgradient and one downgradient monitoring well be drilled at the site to assess groundwater quality. NMOCD approved the drilling of the two monitoring wells on June 24, 2009. The monitoring wells were drilled on July 9, 2009 and sampled on July 24, 2009.

A Monitor Well Report/Sampling Summary was submitted to NMOCD on September 22, 2009. The report recommended drilling one upgradient and one downgradient monitoring well to further delineate elevated chlorides near the site. NMOCD approved drilling the wells on September 30, 2009. The wells were drilled on September 21 and 22, 2009.

All wells were sampled quarterly per NMOCD guidelines. The attached tables summarize the analytical results from groundwater samples collected from the monitor wells at the site.

Part of a bigger picture

ARCADIS

Edward Hansen
March 15, 2011

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

Sharon E. Hall
Associate Vice President

Copies: Hack Conder- ROC

Attachments:
Monitor Well Summary Tables
Monitor Well Location Figure
Monitor Well Lab Result

ROC BD N-32 vent

MW	Depth to Water (feet)	Total Depth (feet)	Well Volume (gallons)	Volume Purged (gallons)	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
1	97.17	102.6	3.5	15	11/13/2008	2500	4970	<0.001	<0.001	<0.001	<0.003	187
1	97.18	102.68	3.6	15	1/21/2009	1540	3010	<0.001	<0.001	<0.001	<0.003	130
1	97.13	102.58	3.5	15	4/22/2009	1020	2210	<0.001	<0.001	<0.001	<0.003	119
1	97.1	102.58	3.6	15	7/24/2009	930	2090	<0.001	<0.001	<0.001	<0.003	112
1	97.05	102.58	3.6	15	10/2/2009	1230	2440	<0.001	<0.001	<0.001	<0.003	120
1	96.99	102.63	3.7	15	1/25/2010	2120	4680	<0.001	<0.001	<0.001	<0.003	127
1	96.98	102.63	3.7	15	4/23/2010	2800	4870	<0.001	<0.001	<0.001	<0.003	184
1	96.91	102.63	3.7	15	7/23/2010	3350	6170	<0.001	<0.001	<0.001	<0.003	168
1	96.90	102.63	3.7	15	10/21/2010	3250	5630	<0.001	<0.001	<0.001	<0.003	132

Sample results in milligrams per liter

ROC BD N-32 vent

MW	Depth to Water (feet)	Total Depth (feet)	Well Volume (gallons)	Volume Purged (gallons)	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
2	99.78	105.96	1	4	7/24/2009	800	1920	<0.001	<0.001	<0.001	<0.003	190
2	98.73	105.96	1.2	4	10/2/2009	770	1970	<0.001	<0.001	<0.001	<0.003	186
2	98.69	105.85	1.1	4	1/25/2010	820	1940	<0.001	<0.001	<0.001	<0.003	214
2	98.68	105.85	1.1	4	4/23/2010	780	1760	<0.001	<0.001	<0.001	<0.003	243
2	98.61	105.85	1.2	4	7/23/2010	840	2120	<0.001	<0.001	<0.001	<0.003	238
2	98.55	105.85	1.2	4	10/21/2010	790	2170	<0.001	<0.001	<0.001	<0.003	214

Sample results in milligrams per liter

ROC BD N-32 vent

MW	Depth to Water (feet)	Total Depth (feet)	Well Volume (gallons)	Volume Purged (gallons)	Sample Date	CI	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
3	99.74	138.48	25.2	150	7/24/2009	2340	5220	<0.001	<0.001	<0.001	<0.003	106
3	99.74	138.48	25.2	200	10/2/2009	6400	12,400	<0.001	<0.001	<0.001	<0.003	127
3	99.65	138.58	25.3	150	1/25/2010	2020	3900	<0.001	<0.001	<0.001	<0.003	116
3	99.67	138.58	25.3	150	4/23/2010	2500	4640	<0.001	<0.001	<0.001	<0.003	193
3	99.58	138.58	25.4	80	7/23/2010	1800	3300	<0.001	<0.001	<0.001	<0.003	86.0
3	99.50	138.58	25.4	80	10/21/2010	940	2110	<0.001	<0.001	<0.001	<0.003	74.9

Sample results in milligrams per liter

ROC BD N-32 vent

MW	Depth to Water (feet)	Total Depth (feet)	Well Volume (gallons)	Volume Purged (gallons)	Sample Date	CI	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
4	98.90	138.80	25.9	200	10/2/2009	420	1170	<0.001	<0.001	<0.001	<0.003	115
4	98.84	138.80	26.0	150	1/25/2010	216	807	<0.001	<0.001	<0.001	<0.003	126
4	98.86	138.80	26.0	150	4/23/2010	72	492	<0.001	<0.001	<0.001	<0.003	93.2
4	98.80	138.80	26.0	80	7/23/2010	148	607	<0.001	<0.001	<0.001	<0.003	82.0
4	98.64	138.80	26.1	80	10/21/2010	72	489	<0.001	<0.001	<0.001	<0.003	90.3

Sample results in milligrams per liter

ROC BD N-32 vent

MW	Depth to Water (feet)	Total Depth (feet)	Well Volume (gallons)	Volume Purged (gallons)	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
5	98.09	110.2	1.9	6	10/2/2009	164	706	<0.001	<0.001	<0.001	<0.003	83.7
5	98.05	110.14	1.9	6	1/25/2010	132	623	<0.001	<0.001	<0.001	<0.003	104
5	98.08	110.14	1.9	6	4/23/2010	128	580	<0.001	<0.001	<0.001	<0.003	91.7
5	98.01	110.14	1.9	6	7/23/2010	120	615	<0.001	<0.001	<0.001	<0.003	94.6
5	97.91	110.14	2.0	6	10/21/2010	116	561	<0.001	<0.001	<0.001	<0.003	99.5

Sample results in milligrams per liter

Monitor Well Sampling Data

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl mg/L	TDS mg/L	Benzene mg/L	Toluene mg/L	Ethyl Benzene mg/L	Total Xylenes mg/L	Sulfate mg/L	Comments
1	96.99	102.6	3.7	15	1/25/2010	2120	4680	<0.001	<0.001	<0.001	<0.003	127	Clear No odor
1	96.98	102.6	3.7	15	4/23/2010	2800	4870	<0.001	<0.001	<0.001	<0.003	184	Clear No odor
1	96.91	102.6	3.7	15	7/23/2010	3350	6170	<0.001	<0.001	<0.001	<0.003	168	Clear No odor
1	96.9	102.6	3.7	15	10/21/2010	3250	5530	<0.001	<0.001	<0.001	<0.003	132	Clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl mg/L	TDS mg/L	Benzene mg/L	Toluene mg/L	Ethyl Benzene mg/L	Total Xylenes mg/L	Sulfate mg/L	Comments
2	98.69	105.9	1.1	4	1/25/2010	820	1940	<0.001	<0.001	<0.001	<0.003	214	Clear No odor
2	98.68	105.9	1.1	4	4/23/2010	780	1760	<0.001	<0.001	<0.001	<0.003	243	Clear No odor
2	98.61	105.9	1.2	4	7/23/2010	840	2120	<0.001	<0.001	<0.001	<0.003	238	Clear No odor
2	98.55	105.9	1.2	4	10/21/2010	790	2170	<0.001	<0.001	<0.001	<0.003	214	Clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl mg/L	TDS mg/L	Benzene mg/L	Toluene mg/L	Ethyl Benzene mg/L	Total Xylenes mg/L	Sulfate mg/L	Comments
3	99.65	138.6	25.3	150	1/25/2010	2020	3900	<0.001	<0.001	<0.001	<0.003	116	Clear No odor
3	99.67	138.6	25.3	150	4/23/2010	2500	4640	<0.001	<0.001	<0.001	<0.003	193	Clear No odor
3	99.58	138.6	25.4	80	7/23/2010	1800	3300	<0.001	<0.001	<0.001	<0.003	86	Clear No odor
3	99.5	138.6	25.4	80	10/21/2010	940	2110	<0.001	<0.001	<0.001	<0.003	74.9	Clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl mg/L	TDS mg/L	Benzene mg/L	Toluene mg/L	Ethyl Benzene mg/L	Total Xylenes mg/L	Sulfate mg/L	Comments
4	98.84	138.8	26	150	1/25/2010	216	807	<0.001	<0.001	<0.001	<0.003	126	Clear No odor
4	98.86	138.8	26	150	4/23/2010	72	492	<0.001	<0.001	<0.001	<0.003	93.2	Clear No odor
4	98.8	138.8	26	80	7/23/2010	148	607	<0.001	<0.001	<0.001	<0.003	82	Clear No odor
4	98.64	138.8	26.1	80	10/21/2010	72	489	<0.001	<0.001	<0.001	<0.003	90.3	Clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl mg/L	TDS mg/L	Benzene mg/L	Toluene mg/L	Ethyl Benzene mg/L	Total Xylenes mg/L	Sulfate mg/L	Comments
5	98.05	110.1	1.9	6	1/25/2010	132	623	<0.001	<0.001	<0.001	<0.003	104	Clear No odor
5	98.08	110.1	1.9	6	4/23/2010	128	580	<0.001	<0.001	<0.001	<0.003	91.7	Clear No odor
5	98.01	110.1	1.9	6	7/23/2010	120	615	<0.001	<0.001	<0.001	<0.003	94.6	Clear No odor
5	97.91	110.1	2	6	10/21/2010	116	561	<0.001	<0.001	<0.001	<0.003	99.5	Clear No odor

MW 4

MW 3

SB-2 SB-4 JCT N-32
SB-3 SB-1 SB-5 MW 1

MW 2

MW 5

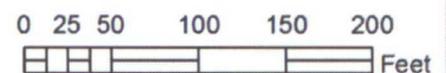
Drawing date: 8/16/2010
Drafted by: Lara Weinheimer



BD N-32 vent

Legals: UL/N sec. 32
T21S R37E

NMOCD Case #: 1R426-153



November 01, 2010

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

RE: BD N-32-VENT

Enclosed are the results of analyses for samples received by the laboratory on 10/22/10 12:50.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

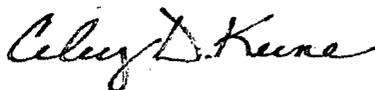
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (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:	10/22/2010	Sampling Date:	10/21/2010
Reported:	11/01/2010	Sampling Type:	Water
Project Name:	BD N-32-VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S R37E SEC32 N - LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H021129-01)

BTEX 8021B		mg/L		Analyzed By: cms				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	10/27/2010	ND	0.027	109	0.0250			
Toluene*	<0.001	0.001	10/27/2010	ND	0.027	110	0.0250			
Ethylbenzene*	<0.001	0.001	10/27/2010	ND	0.028	113	0.0250			
Total Xylenes*	<0.003	0.003	10/27/2010	ND	0.083	111	0.0750			

Surrogate: 4-Bromofluorobenzene (PIL) 121 % 80-120

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3250	4.00	10/26/2010	ND	100	100	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate	132	10.0	10/26/2010	ND	36.8	92.0	40.0	0.319		

TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	5530	5.00	10/25/2010	ND				1.46		

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

Received:	10/22/2010	Sampling Date:	10/21/2010
Reported:	11/01/2010	Sampling Type:	Water
Project Name:	BD N-32-VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S R37E SEC32 N - LEA CTY., NM		

Sample ID: MONITOR WELL #2 (H021129-02)

BTEX 8021B		mg/L		Analyzed By: cms				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	10/27/2010	ND	0.027	109	0.0250			
Toluene*	<0.001	0.001	10/27/2010	ND	0.027	110	0.0250			
Ethylbenzene*	<0.001	0.001	10/27/2010	ND	0.028	113	0.0250			
Total Xylenes*	<0.003	0.003	10/27/2010	ND	0.083	111	0.0750			

Surrogate: 4-Bromofluorobenzene (PIL) 135 % 80-120

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	790	4.00	10/26/2010	ND	100	100	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate	214	10.0	10/26/2010	ND	36.8	92.0	40.0	0.319		

TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	2170	5.00	10/25/2010	ND				1.46		

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

Received:	10/22/2010	Sampling Date:	10/21/2010
Reported:	11/01/2010	Sampling Type:	Water
Project Name:	BD N-32-VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S R37E SEC32 N - LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H021129-03)

BTEX 8021B		mg/L		Analyzed By: cms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	10/29/2010	ND	0.027	109	0.0250		
Toluene*	<0.001	0.001	10/29/2010	ND	0.027	110	0.0250		
Ethylbenzene*	<0.001	0.001	10/29/2010	ND	0.028	113	0.0250		
Total Xylenes*	<0.003	0.003	10/29/2010	ND	0.083	111	0.0750		

Surrogate: 4-Bromofluorobenzene (PIL) 96.4 % 80-120

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	940	4.00	10/26/2010	ND	100	100	100	0.00	

Sulfate 375.4		mg/L		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate	74.9	10.0	10/26/2010	ND	36.8	92.0	40.0	0.319	

TDS 160.1		mg/L		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS	2110	5.00	10/25/2010	ND				1.46	

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

Received: 10/22/2010
 Reported: 11/01/2010
 Project Name: BD N-32-VENT
 Project Number: NONE GIVEN
 Project Location: T21S R37E SEC32 N - LEA CTY., NM

Sampling Date: 10/21/2010
 Sampling Type: Water
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: MONITOR WELL #4 (H021129-04)

BTEX 8021B		mg/L		Analyzed By: cms				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	10/27/2010	ND	0.027	109	0.0250			
Toluene*	<0.001	0.001	10/27/2010	ND	0.027	110	0.0250			
Ethylbenzene*	<0.001	0.001	10/27/2010	ND	0.028	113	0.0250			
Total Xylenes*	<0.003	0.003	10/27/2010	ND	0.083	111	0.0750			

Surrogate: 4-Bromofluorobenzene (PIL) 127 % 80-120

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	72.0	4.00	10/26/2010	ND	100	100	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate	90.3	10.0	10/26/2010	ND	36.8	92.0	40.0	0.319		

TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	489	5.00	10/25/2010	ND				1.46		



Analytical Results For:

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

Received: 10/22/2010
Reported: 11/01/2010
Project Name: BD N-32-VENT
Project Number: NONE GIVEN
Project Location: T21S R37E SEC32 N - LEA CTY., NM

Sampling Date: 10/21/2010
Sampling Type: Water
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: MONITOR WELL #5 (H021129-05)

BTEX 8021B		mg/L		Analyzed By: cms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	10/27/2010	ND	0.027	109	0.0250			
Toluene*	<0.001	0.001	10/27/2010	ND	0.027	110	0.0250			
Ethylbenzene*	<0.001	0.001	10/27/2010	ND	0.028	113	0.0250			
Total Xylenes*	<0.003	0.003	10/27/2010	ND	0.083	111	0.0750			

Surrogate: 4-Bromofluorobenzene (PIL) 109 % 80-120

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	116	4.00	10/26/2010	ND	100	100	100	0.00		

Sulfate 375.4		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate	99.5	10.0	10/26/2010	ND	36.8	92.0	40.0	0.319		

TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS	561	5.00	10/25/2010	ND				1.46		

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

Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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

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

