1R - 428-76

WORKPLANS

Date:

8-7-13

Hansen, Edward J., EMNRD

From: Katie Jones <kjones@riceswd.com>
Sent: Wednesday, August 28, 2013 9:55 AM
To: Hansen, Edward J., EMNRD
Cc: Hack Conder; Laura Pena; Lara Weinheimer
Subject: ROC - Hobbs M-4 vent (1R428-76) CAP Addendum

Mr. Hansen,

ROC proposes the following as an Addendum to the Hobbs M-4 vent (1R428-76) Corrective Action Plan (CAP), submitted to the NMOCD on August 7, 2013. Page 2, Section Corrective Action Plan: text in blue lettering, below, will be added to the paragraph. Red lettering marked with a strike-through will be deleted.

"**Corrective Action Plan**

RECS recommends that ROC install a 20-mil reinforced poly liner measuring 32 ft x 63 ft at a depth of approximately 4-5 ft bgs (Figure 2). The liner will provide a barrier that will inhibit the downward migration of chlorides to groundwater. The soils placed above the liner will have a laboratory chloride reading no greater than 500 mg/kg and a field PID reading below 100 ppm. Excavated soil will be evaluated for use as backfill and any soils requiring disposal will be properly disposed of at a NMOCD approved facility. Upon completion of backfilling, the site will be seeded with a native vegetative mix and soil amendments will be added as necessary. Vegetation provides an infiltration barrier for the site, since plants capture water through their roots thereby reducing the amount of water traveling through the vadose zone to groundwater.

Monitoring of the near-source well (MW-1) has shown chloride concentrations consistently near or below 250 mg/L. The two most recent quarterly samples resulted in a concentration of 172 mg/L and 188 mg/L, respectively. Based on these recent samples, ROC proposes to continue monitoring MW-1 for two additional quarters to determine if concentrations will remain below WQCC standards. After the two quarters are obtained, ROC will submit a report with recommendations. ~~In order to determine if there is an up-gradient groundwater source for contamination at the site, RECS recommends that ROC install a monitor well (MW-2) approximately 100 ft up-gradient of the site (Figure 2). The monitor well will be sampled quarterly in conjunction with MW-1. Once the monitor wells at the site have been analyzed for chloride and TPH readings, ROC will either submit a groundwater remedy to NMOCD to address groundwater quality at the site or submit a 'remediation termination' request for site closure.~~"

If you need any further information, please let me or Hack know.

Thank you.

Katie Jones
Environmental Project Manager
RICE *Operating Company*

Rice Environmental Consulting & Safety
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

CERTIFIED MAIL
RETURN RECEIPT NO. 7007 2560 0000 4569 8234

August 7th, 2013

Mr. Edward Hansen
New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

RE: **Corrective Action Plan (CAP)**
Rice Operating Company – Hobbs SWD System
Hobbs M-4 vent (1R428-76): UL/M sec. 4 T19S R38E

Mr. Hansen:

RICE Operating Company (ROC) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site in the abandoned Hobbs Salt Water Disposal (SWD) system. ROC is the service provider (agent) for the abandoned Hobbs 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 in Hobbs, New Mexico at UL/M sec. 4 T19S R38E as shown on the Site Location Map (Figure 1). Groundwater monitoring shows groundwater to be located at a depth of 31 feet.

An Investigation and Characterization Plan (ICP) was submitted to NMOCD on April 13th, 2007 and approved on August 6th, 2007. As part of the ICP, ROC initiated work on the Hobbs M-4 junction box, which contained a vent. A trench was installed at the site to the depth of 12 ft bgs on September 5th, 2007. The samples were field tested for chlorides and hydrocarbons. Chloride values throughout the trench were relatively low; although, the hydrocarbon levels were elevated. To further delineate the site, two soil bores were installed on February 19th and 21st, 2008. As the bores were advanced, samples were taken every 5 ft and field tested for chlorides and hydrocarbons. Representative samples from the soil bores were taken to a commercial laboratory for analysis. In SB-1, the laboratory chloride analysis showed values of 1,760 mg/kg at 15 ft bgs and 14.3 mg/kg at 25 ft bgs. In SB-2, laboratory chloride analysis showed values of 47.4 mg/kg at 15 ft bgs, 1,520 mg/kg at 20 ft bgs and 558 mg/kg at 25 ft bgs. BTEX and Naphthalene in both soil bores at all depths were low (Figure 2).

On February 19th, 2008, MW-1 was installed approximately 63 ft down-gradient of the site. As the well was being installed, samples were taken every 5 ft and field tested for chlorides and hydrocarbons. The field samples for both chlorides and hydrocarbons were low (Figure 2). Groundwater monitoring at the site has occurred quarterly since the monitor well was installed. Since that time, the chlorides and Total Dissolved Solids (TDS) have decreased to the point where the constituents are now below the WQCC standards of 250 mg/L for chlorides and 1,000 mg/L for TDS. During the last sampling event on June 24th, 2013, the chloride value in MW-1 was 188 mg/L and the TDS value was 735 mg/L (Appendix A). One elevated sampling event occurred on December 10th, 2012, with a chloride value of 316 mg/L and a TDS value of 1,210 mg/L (Figure 3). This elevated sampling event prompted the desire to take further actions to remediate the vadose zone and delineate groundwater through a Corrective Action Plan.

Corrective Action Plan

RECS recommends that ROC install a 20-mil reinforced poly liner measuring 32 ft x 63 ft at a depth of approximately 4-5 ft bgs (Figure 2). The liner will provide a barrier that will inhibit the downward migration of chlorides to groundwater. The soils placed above the liner will have a laboratory chloride reading no greater than 500 mg/kg and a field PID reading below 100 ppm. Excavated soil will be evaluated for use as backfill and any soils requiring disposal will be properly disposed of at a NMOCD approved facility. Upon completion of backfilling, the site will be seeded with a native vegetative mix and soil amendments will be added as necessary. Vegetation provides an infiltration barrier for the site, since plants capture water through their roots thereby reducing the amount of water traveling through the vadose zone to groundwater.

In order to determine if there is an up-gradient groundwater source for contamination at the site, RECS recommends that ROC install a monitor well (MW-2) approximately 100 ft up-gradient of the site (Figure 2). The monitor well will be sampled quarterly in conjunction with MW-1. Once the monitor wells at the site have been analyzed for chloride and TPH readings, ROC will either submit a groundwater remedy to NMOCD to address groundwater quality at the site or submit a 'remediation termination' request for site closure.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,

Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

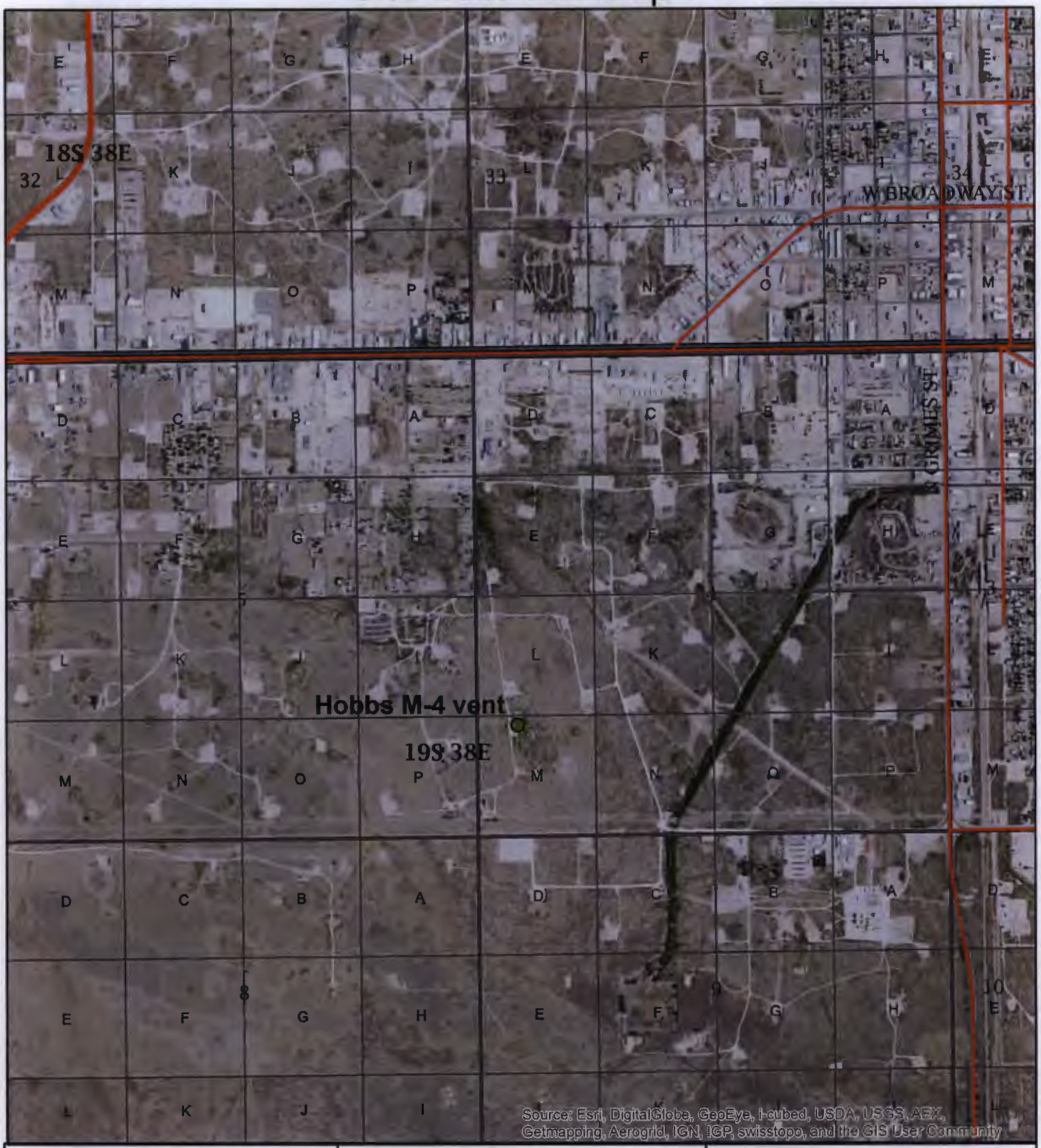
Attachments:

Figure 1 – Site Location Map
Figure 2 – Soil Data, Proposed MW-2 and Proposed Liner
Figure 3 – MW Sampling Data
Appendix A – Monitor Well Sampling Lab

Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948, Hobbs, NM 88241
Phone 575.393.2967

Site Location Map



RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

Hobbs M-4 vent

LEGALS: UL/M sec. 4
T-19-S R-38-E

NMOCD CASE#: 1R428-76

Figure 1

N W E S

0 487.5 975 1,950
Feet

Drawing date: 12/3/12
Drafted by: L. Weinheimer

Soil Data, Proposed MW-2 and Proposed Liner

RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC — RECS

Hobbs M-4 vent

LEGALS: UL/M sec. 4
T-19-S R-38-E

NMOCD CASE#: 1R428-76

Figure 2

N W E S

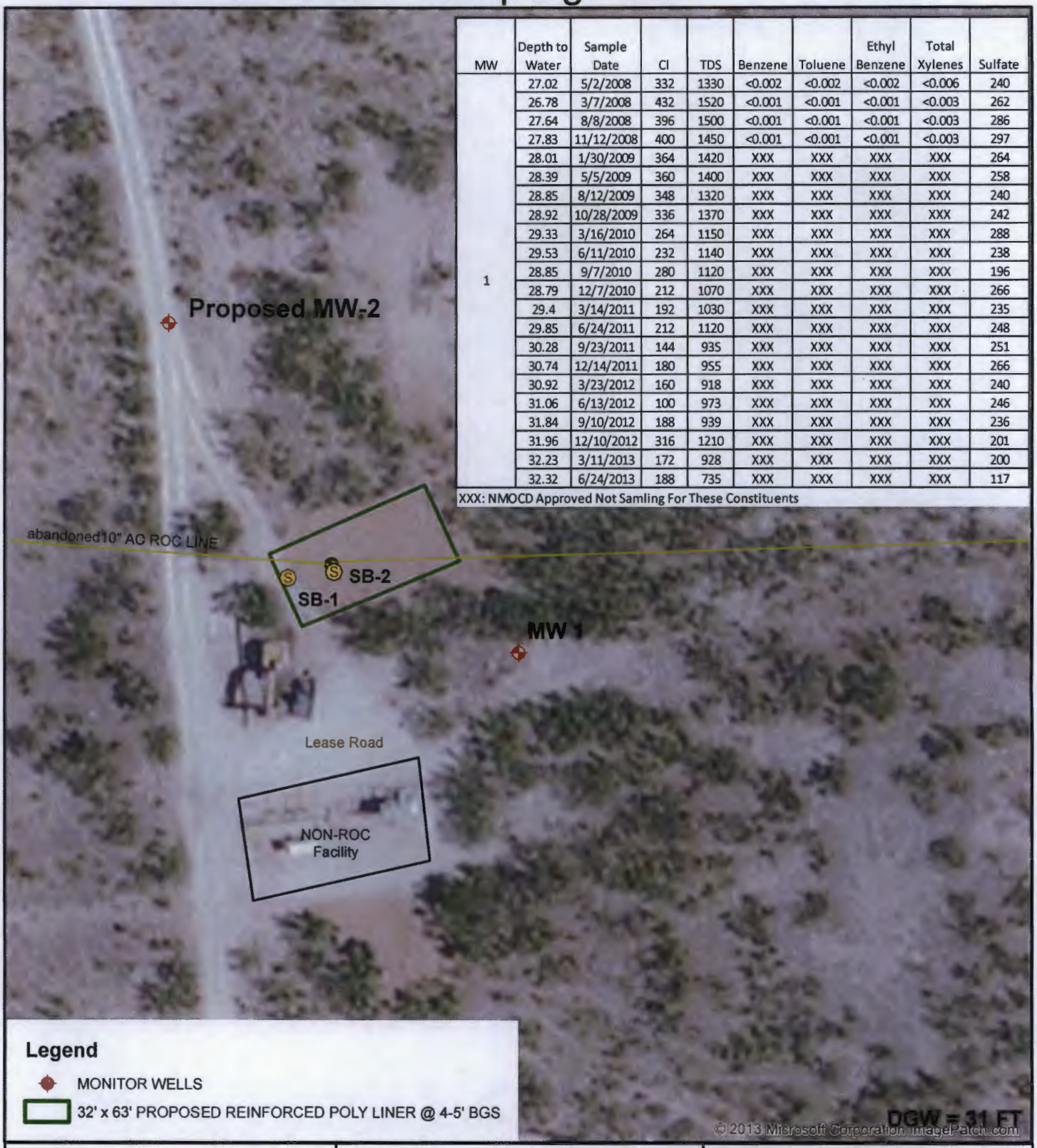
0 15 30 60 Feet

Drawing date: 8/2/13
Drafted by: L. Weinheimer

MW Sampling Data

MW	Depth to Water	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
1	27.02	5/2/2008	332	1330	<0.002	<0.002	<0.002	<0.006	240
	26.78	3/7/2008	432	1520	<0.001	<0.001	<0.001	<0.003	262
	27.64	8/8/2008	396	1500	<0.001	<0.001	<0.001	<0.003	286
	27.83	11/12/2008	400	1450	<0.001	<0.001	<0.001	<0.003	297
	28.01	1/30/2009	364	1420	XXX	XXX	XXX	XXX	264
	28.39	5/5/2009	360	1400	XXX	XXX	XXX	XXX	258
	28.85	8/12/2009	348	1320	XXX	XXX	XXX	XXX	240
	28.92	10/28/2009	336	1370	XXX	XXX	XXX	XXX	242
	29.33	3/16/2010	264	1150	XXX	XXX	XXX	XXX	288
	29.53	6/11/2010	232	1140	XXX	XXX	XXX	XXX	238
	28.85	9/7/2010	280	1120	XXX	XXX	XXX	XXX	196
	28.79	12/7/2010	212	1070	XXX	XXX	XXX	XXX	266
	29.4	3/14/2011	192	1030	XXX	XXX	XXX	XXX	235
	29.85	6/24/2011	212	1120	XXX	XXX	XXX	XXX	248
	30.28	9/23/2011	144	935	XXX	XXX	XXX	XXX	251
	30.74	12/14/2011	180	955	XXX	XXX	XXX	XXX	266
	30.92	3/23/2012	160	918	XXX	XXX	XXX	XXX	240
	31.06	6/13/2012	100	973	XXX	XXX	XXX	XXX	246
	31.84	9/10/2012	188	939	XXX	XXX	XXX	XXX	236
	31.96	12/10/2012	316	1210	XXX	XXX	XXX	XXX	201
	32.23	3/11/2013	172	928	XXX	XXX	XXX	XXX	200
	32.32	6/24/2013	188	735	XXX	XXX	XXX	XXX	117

XXX: NMOCD Approved Not Samling For These Constituents



RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC — RECS

Hobbs M-4 vent

LEGALS: UL/M sec. 4
T-19-S R-38-E

NMOCD CASE#: 1R428-76

Figure 3

N W E S

0 15 30 60 Feet

Drawing date: 8/2/13
Drafted by: L. Weinheimer

Appendix A

Monitor Well Sampling Lab

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

CARDINAL Laboratories

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

July 05, 2013

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: HOBBS M-4 VENT

Enclosed are the results of analyses for samples received by the laboratory on 06/26/13 13:56.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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 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)

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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	06/26/2013	Sampling Date:	06/24/2013
Reported:	07/05/2013	Sampling Type:	Water
Project Name:	HOBBS M-4 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T19S-R38E-SEC4 M-LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H301509-01)

Chloride, SM4S00Cl-B mg/L **Analyzed By: DW**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**188**	4.00	06/28/2013	ND	108	108	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*	**117**	25.0	07/01/2013	ND	22.5	113	20.0	3.85	

TDS 160.1 mg/L **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**735**	5.00	06/28/2013	ND	246	102	240	0.530	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Celey D. Keene

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

LAB Order ID # _____

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company — PO#
Project Manager: Hack Conder	Address: (Street, City, Zip) 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: Hobbs M-4 Vent
Project Location: T19S-R38E-Sec4 M ~ Lea County - New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310 rozanne@valornet.com

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2013)	TIME	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
H 301509-1	Monitor Well #1	G	1	X								1		6/24	8:05																		X	X	X	

Relinquished by: Rozanne Johnson — Date: 6/26/2013 — Time: 13:55
Received by: — Date: — Time:

Relinquished by: — Date: — Time:
Received By: (Laboratory Staff) Jodi Henson — Date: 6/26/2013 — Time: 13:56

Delivered By: (Circle One) Sampler - UPS - Bus - Other:

Sample Condition: Cool: Yes [X] No [ ] — Intact: Yes [X] No [ ]

CHECKED BY: (Initials) JH

#54

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

REMARKS:

Email Results: hconder@riceswd.com, lweinheimer@rice-ecs.com, kjones@riceswd.com, rozanne@valornet.com