1R - 425-93

APPROVALS

YEAR(S):

2013

Hansen, Edward J., EMNRD

From: Hansen, Edward J., EMNRD
Sent: Wednesday, September 25, 2013 5:26 PM
To: Hack Conder (hconder@riceswd.com)
Cc: Lowe, Leonard, EMNRD; Leking, Geoffrey R, EMNRD; Laura Pena (lpena@riceswd.com); Katie Jones <kjones@riceswd.com> (kjones@riceswd.com); Scott Curtis (scurtis@riceswd.com)
Subject: Remediation Plan (1R425-93) Termination - ROC Vacuum J-32 EOL Site

RE: CAP Report and Termination Request
for the Rice Operating Company's
Vacuum J-32 EOL Site
Unit Letter J, Section 32, T17S, R35E, NMPM, Lea County, New Mexico
Remediation Plan (1R425-93) Termination

Dear Mr. Conder:

The New Mexico Oil Conservation Division (OCD) has received Rice Operating Company's report and request to close the above-referenced site, dated September 10, 2013 (received September 17, 2013). The report is acceptable to the OCD.

The above-referenced report, submitted in accordance with 19.15.29 NMAC (Rule 29; formally, Rule 116), indicates that Rice Operating Company has met the requirements of 19.15.29 NMAC; therefore, the OCD approves the report and hereby notifies you that the remediation plan (1R425-93) is terminated in accordance with 19.15.29 NMAC.

Please be advised that OCD approval of this report does not relieve the owner/operator of responsibility should operations pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the owner/operator of responsibility for compliance with any OCD, federal, state, or local laws and/or regulations.

If you have any questions regarding this matter, please contact me at 505-476-3489.

Edward J. Hansen
Hydrologist
Environmental Bureau

L. Peter Galusky, Jr. Ph.D., P.G.
Texerra LLC

20055 Laredo Ln Monument, CO 80132
E-mail: lpg@texerra.com, Tel: 719-339-6791

September 10th, 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) Report & Remediation Termination Request**
Rice Operating Company – Vacuum SWD System
Vacuum J-32 EOL: UL J, Sec. 32, T17S, R35E
NMOCD Case Number: 1R425-93

Sent via Certified U.S. Mail w/ Return Receipt No. 7011 0110 0002 5197 1440

Mr. Hansen:

RICE Operating Company (ROC) has completed remedial work outlined in the NMOCD Approved Corrective Action Plan (CAP) of August 2nd, 2013 for their Vacuum J-32 EOL project.

Background

In 2010, ROC initiated work on the former J-32 EOL junction box as part of the Vacuum SWD system abandonment. The former junction box and surrounding soil was removed from an excavation of approximately 30 ft long by 30 ft wide by 12 ft deep. Soils were tested using field and laboratory methods for residual hydrocarbons and chlorides from a 4-wall composite sample, a bottom composite sample and in vertical delineation samples taken 15 ft west of the former junction box at two-foot intervals to the bottom depth. Residual soil hydrocarbons were negligible (< 50 mg/kg) in all samples. Residual chlorides were high (> 1,000 mg/kg) from the 4-wall and bottom composite samples and moderately high (between 500 and 1,100 mg/kg) throughout the vertical delineate sample.

The excavated soil was mixed (testing 29.4 mg/kg TPH and 1,380 mg/kg chloride) and returned to the excavation. A synthetic impermeable liner was installed at 4 ft bgs. Clean imported soil was installed above the liner and the surface was returned to the natural contour and seeded. NMOCD was notified of this work on February 21, 2011 through a Junction Box Disclosure Report.

This former junction box is located within a production lease pad and is encompassed by active production activities. Historical aerial photographs document widespread oilfield activity and facilities across this location, as well as, across the broader surrounding area. Stepping out from the former junction box location toward the production well northeast of the site, residual soil chlorides in the surface layer from SB-4 (3,859 mg/kg) are higher than in any of the samples taken beneath the former junction box from SB-1. These data strongly suggest that the residual soil chlorides beneath

the former junction box were likely contributed in part from off-site sources. Nevertheless, chloride concentrations decreased with depth to concentrations near or below 250 mg/kg in each of the bores, excluding SB-1.

The Multimed model was run (with results presented in the CAP) in order to determine if chloride concentrations at depth in SB-1 pose a threat to the groundwater quality. Based on the installed liner, the model predicted a maximum elevation in groundwater chlorides to be 78 mg/l, 92 yrs into the future. We thus believe that the likelihood of future groundwater impacts from these residual, capped (by the installed impermeable liner) soil chlorides is low.

Remedial Actions Completed

- During 2010: A synthetic impermeable liner was installed at 4 ft bgs during the removal of the junction box (as noted above)
- During 2013: Imported clean caliche to bring the area underlain by the synthetic liner to lease pad grade. A composite sample of the imported soil (caliche) was sent to a commercial laboratory for analysis of chloride, resulting in a concentration of 208 mg/kg. The sample was also analyzed in the field for hydrocarbons, resulting in a PID reading of 0.9 ppm. The caliche was compacted and sloped to provide an additional barrier to downward water flow.

As we have thus protected groundwater from residual chlorides and restored the site to its natural state we respectively request that NMOCD grant remediation termination or similar regulator closure status to this project.

ROC is the service provider (agent) for the Vacuum 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/usage basis. Environmental projects of this nature require System Party AFE approval prior to work commencing at the site. In general, project funding is not forthcoming until NMOCD approves the work plan. Therefore, your timely review of this submission is greatly appreciated.

Thank you for your consideration of this report. Please call Hack Conder at (575) 393-2967 or myself if you have any questions or wish to discuss this project.

Sincerely,

L. Peter Galusky, Jr. Ph.D., P.G.

Copy: Rice Operating Company
Attachments: Site Location Map, Soil Bore Installation (map and soil bore results summary), Photographs of soils and site restoration work in 2013, Lab Result, and PID Sheet

RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

Vacuum J-32 EOL

Unit J, Section 32, T17S, R35E
LEA COUNTY, NM

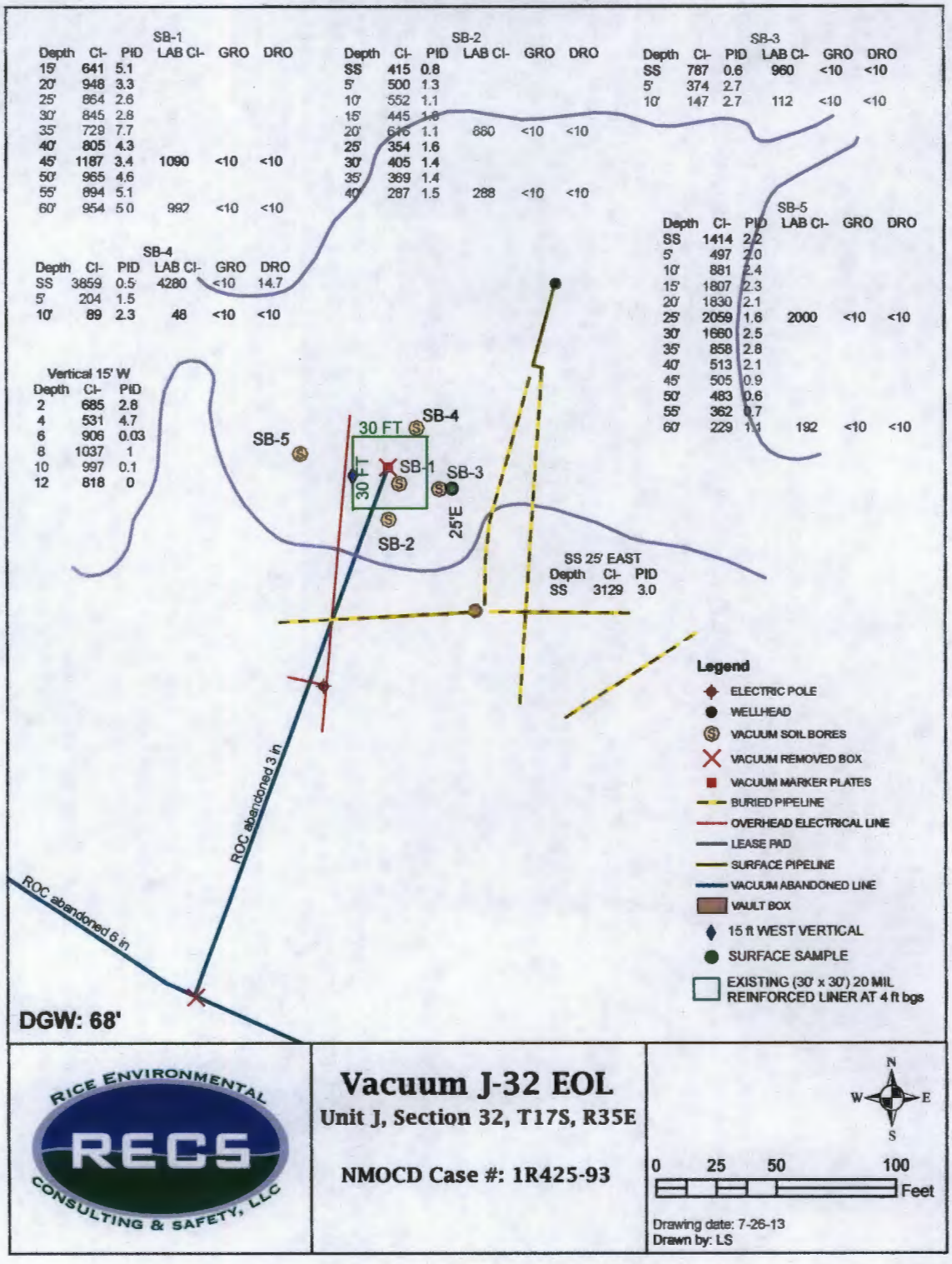
NMOCD Case #: 1R425-93

N
W E
S

0 0.15 0.3 0.6
Miles

Drawing date: 7-25-12
Drafted by: L. Weinheimer

Soil Bore Installation



RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

Vacuum J-32 EOL

Unit J, Section 32, T17S, R35E

NMOCD Case #: 1R425-93

N W E S

0 25 50 100 Feet

Drawing date: 7-26-13
Drawn by: LS

Vacuum J-32 EOL (1R425-93)
Unit Letter J, Section 32, T17S, R35E

site prior, facing east 8/29/2013

importing caliche, facing west 8/29/2013

contouring the site, facing east 8/29/2013

site complete, facing east 8/29/2013

CARDINAL Laboratories

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

September 04, 2013

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION J-32

Enclosed are the results of analyses for samples received by the laboratory on 08/30/13 10:20.

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:	08/30/2013	Sampling Date:	08/29/2013
Reported:	09/04/2013	Sampling Type:	Soil
Project Name:	VACUUM JUNCTION J-32	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: IMPORTED SOIL (H302094-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	09/03/2013	ND	400	100	400	3.92	

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, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Rice		**BILL TO**	**ANALYSIS REQUEST**
Project Manager:		**P.O. #:**	
Address:		**Company:**	
City:	**State:** NM **Zip:** 88240	**Attn:**	
Phone #:	**Fax #:**	**Address:**	
Project #:	**Project Owner:**	**City:**	
Project Name:		**State:** **Zip:**	
Project Location: Vacuum jct. J-32		**Phone #:**	
Sampler Name: KARANJA LEWIS		**Fax #:**	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides
H302094															
1	Imported soil	G	1			✓					✓		8-29-13		✓

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 the client for the 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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: KARANJA LEWIS	**Date:** 8-30-13 **Time:** 10:20	**Received By:** Jodi Henson	**Phone Result:** ☐ Yes ☐ No **Add'l Phone #:**	
Relinquished By:	**Date:** **Time:**	**Received By:**	**Fax Result:** ☐ Yes ☐ No **Add'l Fax #:**	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	**Sample Condition** Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	**CHECKED BY:** (Initials)	**REMARKS:** Email results to hconder@riceswd.com lweinheimer@rice-ecs.com knorman@rice-ecs.com klewis@rice-ecs.com lpena@riceswd.com	

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

#54

RICE ENVIRONMENTAL CONSULTING & SAFETY

419 West Cain Hobbs, NM 88240
PHONE: (575) 393-2967 FAX: (575) 397-1471
PID METER CALIBRATION & FIELD REPORT FORM

CK. MODEL NO.			
	MODEL: PGM 7300	SERIAL NO: 590-000508
	MODEL: PGM 7300	SERIAL NO: 590-000504
	MODEL: PGM 7320	SERIAL NO: 592-903318
x	MODEL: PGM 7300	SERIAL NO: 490-902431

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT NO : IAM 248-100-6	EXPIRATION DATE: 7/1/15
METER READING ACCURACY: 100.0 ppm	

ACCURACY : +/- 2%

COMPANY
Rice Operating Company

SITE	UNIT	SECTION	TOWN SHIP	RANGE
Vacuum J-32 EOL	J	32	17S	35E

SAMPLE ID	PID	SAMPLE ID	PID
imported caliche	0.9		

I verify that I have calibrated the above instrument in accordance to the manufacture operation manual.

SIGNATURE: [signature]

DATE: 8-29-13