

1R - 425-82

REPORTS

DATE:

9-11-12

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

Texerra LLC

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

September 11th, 2012

Mr. Edward Hansen

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

RECEIVED

SEP 17 2012

RE: **Corrective Action Plan (CAP) Report & Termination Request**
Rice Operating Company – Vacuum SWD System
Vacuum Jct. F-31: UL/F, Sec. 31, T17S, R35E
NMOCD Case Number: 1R425-82

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Sent via U.S. Mail w/ Certified Receipt No. 7011 0110 0002 5197 1310

Mr. Hansen:

This report summarizes work completed per the NMOCD approved Corrective Action Plan (CAP) of April 16th, 2012 for the above-referenced project. The site is located approximately 0.5 miles southeast of Buckeye, New Mexico in UL/F, Sec. 31, T17S, R35E as shown on the attached Site Location Map. The depth to groundwater at this site is estimated to be approximately 85 ft below ground surface (bgs).

In 2009, ROC initiated work on the former Vacuum F-31 junction as part of the system abandonment. The site was delineated using a backhoe to form an excavation with dimensions 10x15x12-ft deep and soil samples were screened at regular intervals for both hydrocarbons and chlorides. Laboratory analysis for diesel range organics (DRO) exceeded 1,500 mg/kg in the bottom and four-wall composite samples. Laboratory analysis for gasoline range organics (GRO) measured 206 and 116 mg/kg in the bottom and four-wall composite samples, respectively. Residual soil chlorides measured 1,010 mg/kg and 1,620 mg/kg using field titration methods from bottom and four-wall composite samples, respectively. Laboratory analysis of benzene and toluene from the bottom and four-wall composite samples each measured less than 0.05 mg/kg. However, ethyl-benzene and total xylenes were at low but detectable levels in the bottom composite sample and measured 1.28 and 3.14 mg/kg, respectively. The four-wall composite measured 0.111 and 1.14 mg/kg for ethyl-benzene and total xylenes, respectively. Blended backfill was returned to the site, which was then re-graded to natural contours. NMOCD was notified of potential groundwater impact on March 5th, 2010.

As part of the Investigation Characterization Plan (ICP) approved by OCD on June 9th, 2011, five soil bores (SB-1 through SB-5) were advanced through the former junction box site on February 28th and 29th, 2012. ROC personnel field-tested the soil for chlorides and each sample was field screened for hydrocarbons using a photo-ionization detector (PID).

Vacuum Jct. F-31

Representative samples from the bore were taken to a commercial laboratory for confirmation of chloride and hydrocarbon field numbers. SB-1 chloride concentrations decreased from 4,560 mg/kg at 20 ft below ground surface (bgs) to 224 mg/kg at 35 ft bgs. SB-2 chloride concentrations were low throughout with 80 mg/kg at 15 ft bgs to 112 mg/kg at 30 ft. SB-3 chloride concentrations increased from 384 mg/kg at 20 ft bgs to 3,760 mg/kg at 45 ft bgs but exhibited a significant decline to 176 mg/kg at 65 ft bgs. SB-4 exhibited the same trend, 272 mg/kg at 35 ft bgs to 1,740 mg/kg at 45 ft bgs to 112 mg/kg at 65 ft bgs. SB-5 decreased from 4,240 mg/kg at 10 ft bgs to 64 mg/kg at 30 ft bgs.

Residual soil petroleum hydrocarbons were significant (PID readings > 100 ppm) in many of the soil borings but were insignificant within 50 ft of the estimated water table surface.

In order to protect groundwater quality from the potential migration of residual soil chlorides, ROC submitted an ICP Report and CAP on April 16th, 2012. The report proposed installing a 20-mil reinforced liner at 3 ft bgs (limited by the presence of hard rock), backfilling with clean soil, and seeding of the surface. NMOCD approved the report on May 31st, 2012.

Between July 20th, 2012 and August 15th, 2012, ROC completed the following actions:

- Excavated the affected area to dimensions of approximately 18 ft by 52 ft to a depth of approximately 5 ft bgs.
- Blow sand was imported from Wallach and placed in the bottom of the excavation creating a 6 inch blow sand layer. An 18 by 52 ft 20-mil, reinforced poly liner was installed and properly seated above the 6 inch pad, and a 6 inch layer of blow sand was placed above the liner.
- The excavated soil was screened to remove large rocks and the soil was properly disposed of at a NMOCD approved facility.
- The large rocks were returned to the excavation and the site was then backfilled and contoured to the surrounding area with imported soil from Wallach.
- The site was then seeded with a blend of native vegetation.

A schematic diagram of the installed liner, photographs of the course of work, and a revegetation form are attached.

As this work has ensured the protection of groundwater quality from potential impacts of residual soil chlorides, ROC respectfully requests remediation termination or other appropriate regulatory closure status.

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 ownership/usage basis.

Vacuum Jct. F-31

We appreciate your consideration of this CAP Report and Termination Request. Please call Hack Conder at (575) 393-9174 or myself if you have any questions or wish to discuss this project.

Sincerely,

A handwritten signature in black ink, appearing to be 'L. Peter Galusky, Jr.', written in a cursive style.

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

Copy: Rice Operating Company

Attachments as noted in text

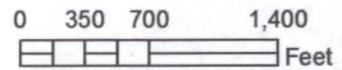
Site Location



Vacuum jct. F-31

LEGALS: UL/F sec. 31
T17S R35E

NMOCD Case #: 1R425-82



Drawing date: 4-20-11
Drafted by: L. Weinheimer

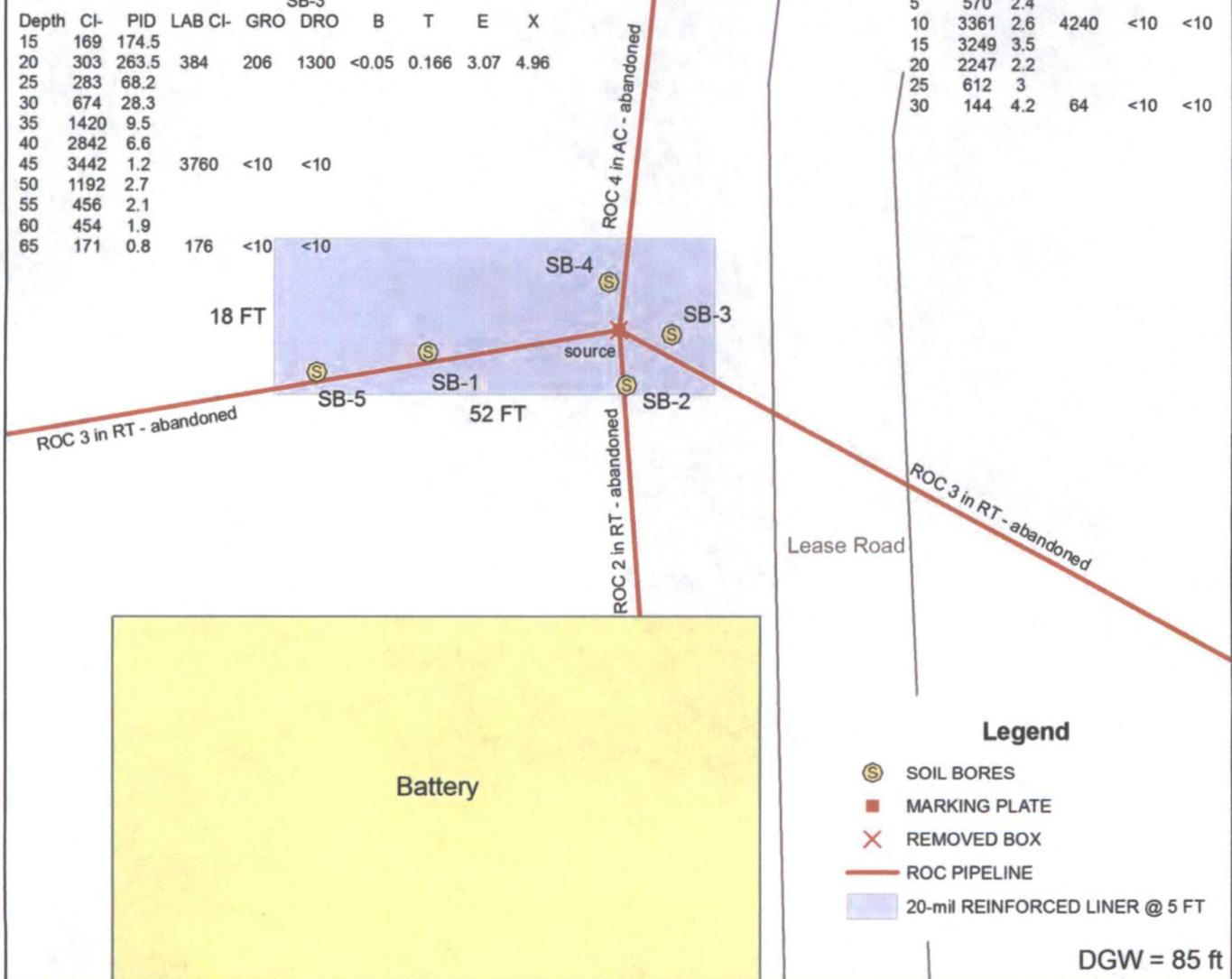
SB-1					
Depth	CI-	PID	LAB CI-	GRO	DRO
15	2673	2.8			
20	3743	2.4	4560	<10	<10
25	2499	2			
30	842	2			
35	198	2.6	224	<10	<10

SB-2									
Depth	CI-	PID	LAB CI-	GRO	DRO	B	T	E	X
15	118	260.3	80	52.2	591	<0.05	<0.05	<0.05	<0.15
20	124	205.3							
25	122	123.1							
30	150	15.9	112	<10	218				

SB-3									
Depth	CI-	PID	LAB CI-	GRO	DRO	B	T	E	X
15	169	174.5							
20	303	263.5	384	206	1300	<0.05	0.166	3.07	4.96
25	283	68.2							
30	674	28.3							
35	1420	9.5							
40	2842	6.6							
45	3442	1.2	3760	<10	<10				
50	1192	2.7							
55	456	2.1							
60	454	1.9							
65	171	0.8	176	<10	<10				

SB-4									
Depth	CI-	PID	LAB CI-	GRO	DRO	B	T	E	X
15	140	310.1							
20	197	416.7							
25	167	154.3							
30	141	273.8							
35	271	755.7	272	527	2520	<0.05	0.385	5.47	13.3
40	470	48.7							
45	1557	22.2	1740	<10	706				
50	1173	20.8							
55	628	7.2							
60	335	6							
65	172	1.8	112	<10	10.8				

SB-5					
Depth	CI-	PID	LAB CI-	GRO	DRO
SS	180	1.8			
5	570	2.4			
10	3361	2.6	4240	<10	<10
15	3249	3.5			
20	2247	2.2			
25	612	3			
30	144	4.2	64	<10	<10



- Legend**
- ⊙ SOIL BORES
 - MARKING PLATE
 - ✕ REMOVED BOX
 - ROC PIPELINE
 - 20-mil REINFORCED LINER @ 5 FT

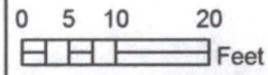
DGW = 85 ft



Vacuum jct. F-31

LEGALS: UL/F sec. 31
T17S R35E

NMOCD Case #: 1R425-82



Drawing date: 3-12-12, 4/3/12
Drafted by: L. Weinheimer, Tony Grieco

Vacuum Jct. F-31 (1R425-82)
Unit Letter F, Section 31, T17S, R35E



Site prior to excavation, facing south 4/24/2012



Excavating site, facing north 7/23/2012



Screening rock, facing north 7/23/2012



Installing liner, facing west 7/31/2012



Installed 18' x 52', 20-mil reinforced plastic liner, facing southwest 7/31/2012



Importing backfill, facing north 7/31/2012



Exporting spoil pile, facing west 7/31/2012



1' sand pad above liner, facing east 7/31/2012



Installed 1' sand pad above liner, facing west 7/31/2012



Returning rock, facing northwest 7/31/2012



Tilling and seeding, facing west 8/15/2012



Site complete, facing southwest 8/15/2012



PO Box 5630
 Hobbs, NM 88241
 Phone: (575) 393-4411
 Fax: (575) 393-0293

REVEGETATION FORM

1. General Information

Site name: VACUUM JCT. F-31						
U/L	Section	Township	Range	County	Latitude	Longitude
F	31	17S	35E	Lea	32°47'32.567"N	103°29'58.91"W
Contact Name: Bruce Baker						
Email: bbaker@rice-ecs.com						
Site size: 61' x 113' 6893 square feet			Map detail of site attached <input type="checkbox"/>			
Additional information:						

2. Soils

**Do not rip caliche subsoils; caliche rocks brought to the surface by ripping shall be removed.*

Salvaged from site <input type="checkbox"/>	Bioremediated <input type="checkbox"/>	Imported <input checked="" type="checkbox"/>	Blended <input type="checkbox"/>	Depth (in): 60 in
Texture: Sandy	Describe soil & subsoil: Sandy soils			
Soil prep methods: Rip <input type="checkbox"/>	Depth(in):	Disc <input checked="" type="checkbox"/>	Depth (in): 6 in	Rollerpack <input type="checkbox"/>
Date completed: 8/15/12				

3. Bioremediation

Fertilizer <input type="checkbox"/>	Hay <input type="checkbox"/>	Other <input type="checkbox"/>
Type:	Describe:	
Lbs/acre:		

4. Seeding

**Attach seed bag tags to this form. Seed bag tags shall contain the site name and S-T-R.*

Custom seed mix <input checked="" type="checkbox"/>	Prescribed mix <input type="checkbox"/>	Seed mix name: 4 lbs side oats	Seeding date: 8/15/12
		4 lbs blue grama	
Broadcast <input checked="" type="checkbox"/>			
Method: Mechanical Spreader			
Soil conditions during seeding: Dry <input checked="" type="checkbox"/> Damp <input type="checkbox"/> Wet <input type="checkbox"/>			
Photos attached <input type="checkbox"/>	Observations: Seed was tilled into soil.		
Number of photos:			

5. Certification

I hereby certify that the information in this form and attachments is true and complete to the best of my knowledge and belief.

Name: Robert Egans	Title: Environmental Tech	Date: 8/15/12
Signature:		