

1R - 415

REPORTS

DATE:

12-31-09



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December 31, 2009

Edward J. Hansen
NMOCD
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
VIA EMAIL

RE: Soil Investigation Work Plan at Abo 1-G Release Site, Unit G, Section 1, 17S, 36E
NMOCD case # 1R 0415

Dear Mr. Hansen,

The purpose of this letter is to report the findings of Soil Investigation Work Plan, dated December 8, 2009; the confirmatory boring was completed on December 14, 2009 at the Abo 1-G site near Lovington, New Mexico. Rice Operating Company conducted the work on behalf of Vanguard LLC.

Work Plan Completed

A second Confirmatory Boring was located between SB-1 (drilled in October, 2003) and the Confirmatory Boring #1 (drilled in October, 2006). We completed this boring on December 14, 2009. Based on field titrations, the boring was terminated at 60 feet where three consecutive samples had chloride concentrations less than 250 mg/kg. Samples were collected at 5 foot intervals and the first 30 feet of samples were obtained by use of a split spoon tool all other samples were collected from cuttings. Selected samples were submitted to the laboratory for analysis. A soil bore log and lab analytical data are attached, a comparison of chloride concentration with depth was made with data obtained from the adjacent deep borings at the site (SB-1 and the Confirmatory Boring #1) the results confirm our conclusion. Figure 1 is attached showing the results of all three borings.

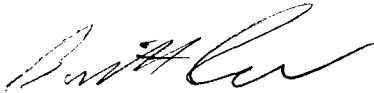
Request for Termination of the Regulatory File

This new soil data shows consistency with existing data which supports the conclusion that the release at Lovington Abo 1G is not the source of ground water impact; Vanguard requests that NMOCD terminate the regulatory file in accordance with the previously-

submitted closure report dated 4-3-08. Upon termination of the file, Vanguard will plug and abandon the monitor well on site.

Thank you for your consideration concerning this request. If you have any questions, do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Britt Pence", with a stylized, cursive script.



Britt Pence
Vice President

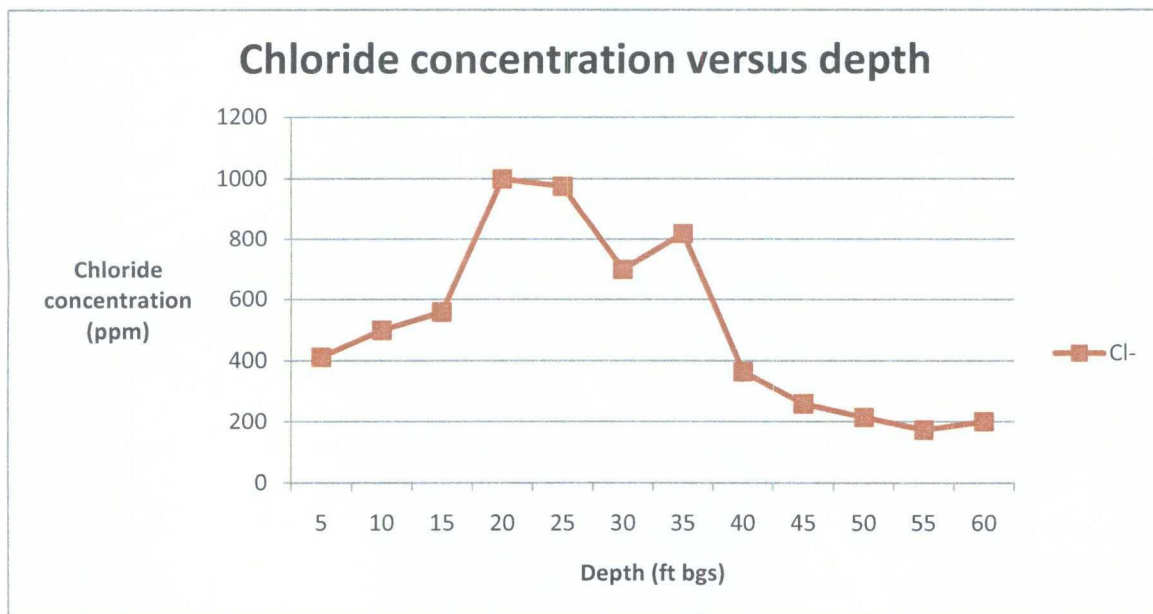
Attachments: SB Log, Lab Analytical Report, Figure 1

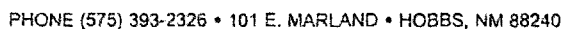
Logger:	Lara Weinheimer		
Driller:	Harrison & Cooper, Inc. Drilling		
OPERATOR:	Vanguard		
Drilling Method:	Air rotary		
Start Date:	12/14/2009		
End Date:	12/14/2009	Project Name: Abo 1G Well ID: Confir. bore #2	
Comments: Split spoon sampling to 30' All others were from cuttings. Located 40.5 ft NNW of MW-1. Drafted by: Lara Weinheimer TD = 60 ft GW = 98 ft			Location: UL/G sec. 1 T17S R36E Lat: 32°52'2.172"N County: Lea Long: 103°18'13.788"W State: NM

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				0 - 5 ft		
				VERY FINE TO FINE SAND; CALICHE PARTICLES		
5	412			light orangey-brown, dry, no odor		
				5 - 10 ft		
				VERY FINE TO FINE SAND		
10	500			light orangey-brown, dry, no odor		
				10 - 25 ft		
				VERY FINE TO FINE SAND WITH SANDSTONE		
				light orangey-brown, dry, no odor		
15	558					
20	999	CI-834				
				Moist		
25	975			25 - 30 ft		
				VERY FINE TO FINE SAND		
30	699			orangey-brown, moist, no odor		
				30 - 60 ft		
				VERY FINE TO FINE SAND WITH CALICHE PARTICLES		
				light brown, dry, no odor		
35	818					
40	364					

bentonite seal

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Slightly moist		
45	259	Cl-160				
50	214	Cl-112				
55	173	Cl-48				
60	200	Cl-48				





Analysis Date: 12/15/09
Sampling Date: 12/14/09
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AB
Analyzed By: HM

Note: Analyses performed on 1:4 w:v aqueous extracts.

Date 12/15/09

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 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.



CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO										ANALYSIS REQUEST									
Company Name: Rice Operating Company										P.O. #:									
Project Manager: Hack Conder										Company:									
Address: 122 West Taylor										Attn:									
City: Hobbs										State: NM Zip: 88240									
Phone #: 393-9174										Fax #: 397-1471									
Project #:										Project Owner:									
Project Name: AL 16										City:									
Project Location: AL 16										State:									
Sampler Name: Lara Weinheimer										Phone #:									
Fax #:										Chlorides									
TPH 8015 M										BTEX									
Texas TPH																			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX	PRESERV	SAMPLING	DATE	TIME											
118873-1	Cardinal Laboratories	1	1	GROUNDWATER	ACID/BASE		12-14-09	8:55	✓										
-2	"	1	1	WASTEWATER	ICE/COOL		12-14-09	9:15	✓										
-3	"	1	1	SOIL	OTHER		12-14-09	9:30	✓										
-4	"	1	1	SLUDGE	OTHER		12-14-09	9:52	✓										
-5	"	1	1	OIL	OTHER		12-14-09	9:57	✓										

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Relinquished By: L. Weinheimer Date: 12-14-09 Time: 5:00
Relinquished By: [Signature] Date: 12-14-09 Time: 5:00

Received By: [Signature] Date: 12-14-09 Time: 5:00
Received By: [Signature] Date: 12-14-09 Time: 5:00

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

Sample Condition: Intact
Cool: Yes No Yes No

Checked By: [Signature] (Initials)

Phone Results: Yes No Add'l Phone #: 505-393-2476
Fax Results: Yes No Add'l Fax #: 505-393-2476

REMARKS: email results

Hconder@riceswd.com; jpurvis@riceswd.com;
Lweinheimer@riceswd.com

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

NEED SAMPLES BACK, PLEASE



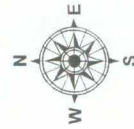
122 W. Taylor
Hobbs, NM 88240
Phone (575) 393-9174
Fax (575) 397-1471

Site Name: Abo 1G

Legals: UL/G sec. 1 T17S R36E

NMOCD Case #: 1R 0415

Operator: Vanguard



- Leak extent
- Vanguard poly line
- Vanguard junction box
- Berm around box

Soil bore locations

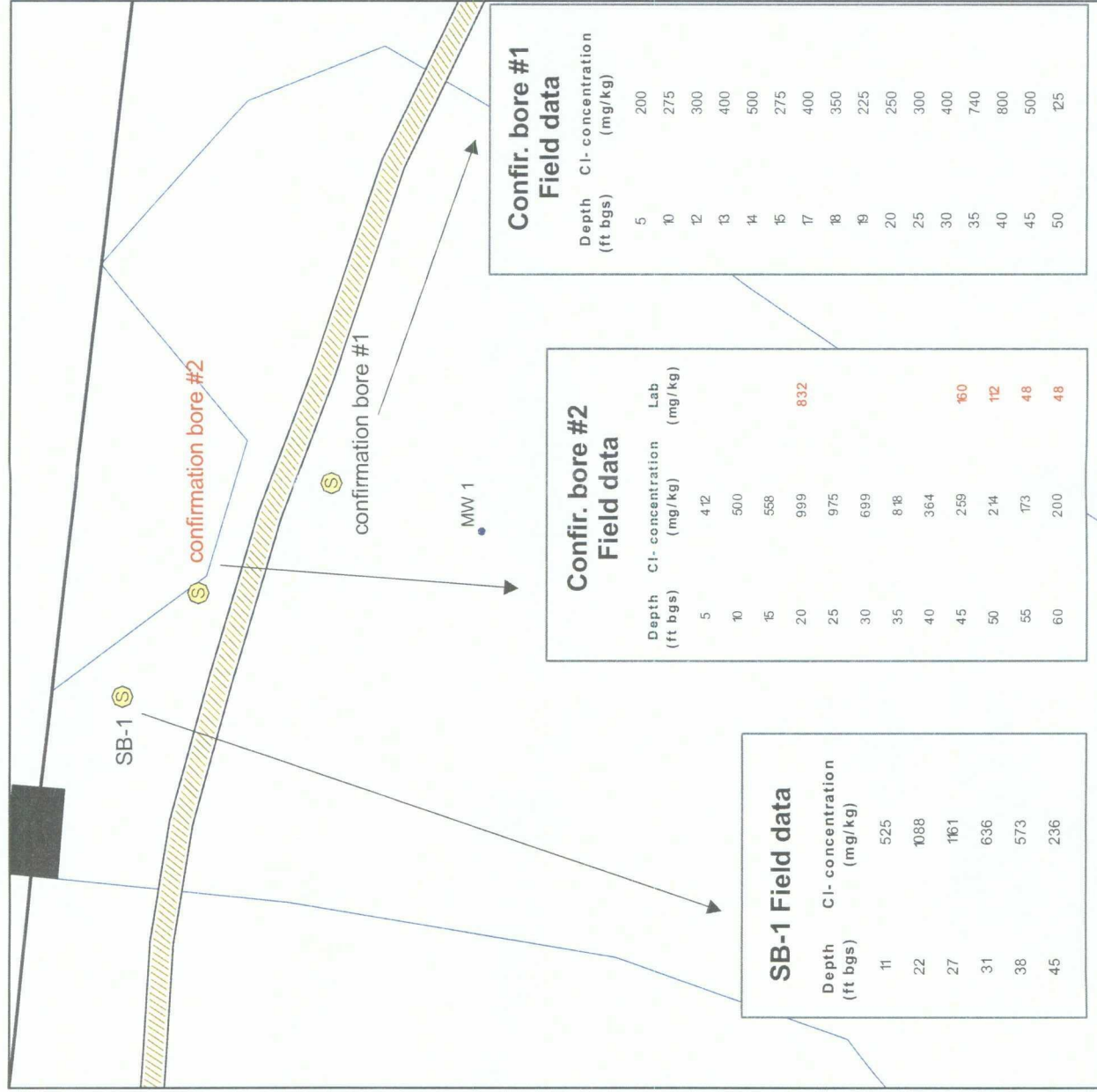


FIGURE 1