202 GW -

MONITORING REPORTS

DATE:



Safety & Environmental

Solutions, Inc.

Pro-Kem, Inc.

Lovington Yard Monitor Well Report Lea County, New Mexico

January 12, 1999



JUL 2 6 1999

ENVIRONMENTAL BUREAU OIL CONSERVATION DIVISION

Safety & Environmental Solutions, Inc. 703 E. Clinton Suite 103 Hobbs, New Mexico 88240 (505) 397-0510

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I. Background

The subject property is located in south Lovington, Lea County, New Mexico adjacent to NM Highway 18 in Section 15, T16S, R36E. Safety & Environmental Solutions, Inc. (SESI) performed sampling and data collection on the three (3) ground water monitor wells previously installed in November1997 at the site (See Vicinity Map). The casing size in all wells is 2".

II. Work Performed

On January 8, 1999, SESI environmental technician W. Dee Whatley arrived at the site. Ground water samples were taken from each well after a hand bailer was used to develop the wells. Three to five casing volumes of water were removed from each well until pH and temperature of the water were stabilized. The samples were obtained and placed in appropriate containers, preserved and transported under chain of custody to Cardinal Laboratories of Hobbs, New Mexico for analysis for the contaminants Carbon Tetrachloride, TPH, BTEX and Chlorides. (See Analytical Data)

In addition to the sampling, SESI also measured the depth to the top of the water table and the total depth of each well. The depth to the top of ground water was measured using a Solinst water level indicator. The total depth of each well was measured in order to compute the proper casing volumes. A summary of this data follows:

ID	Date	Depth to Water	Total Well Depth	Free Product Thickness
MW – 1	1/8/99	58.75'	73.36'	0.00
MW – 2	1/8/99	58.49'	70.51'	0.00
MW - 3	1/8/99	59.20'	71.44'	0.00

III. Analytical Results

The analysis of the groundwater samples performed by Cardinal Laboratories are summarized as follows:

Contaminant	WQCC	MW	MW	MW
	Standard	#1	#2	#3
Carbon Tet.	0.002 ppm	.342ppm	.017ppm	.111ppm
Chlorides	250.0 ppm	56ppm	94ppm	116ppm
Benzene	0.01 ppm	<.002ppm	<.002ppm	<.002ppm
Toluene	0.75 ppm	<.002ppm	<.002ppm	<.002ppm
Ethyl Benzene	0.75 ppm	<.002ppm	<.002ppm	<.002ppm
Total Xylenes	0.62 ppm	<.006ppm	<.006ppm	<.006ppm
TPH	N/A	<1.0ppm	1.47ppm	<1.0ppm

2

IV. Figures and Appendices

Figures: Vicinity Map

Appendices: Analytical Results Lovington Yard Monitor Well Report January 12, 1999

Pro-Kem, Inc. Lea County, New Mexico

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Figure 1 Vicinity Map



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Lovington Yard Monitor Well Report January 12, 1999

Pro-Kem, Inc. Lea County, New Mexico

Appendix A Analytical Results

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PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

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ANALYTICAL RESULTS FOR SAFETY & ENVIRONMENTAL SOLUTIONS, INC. ATTN: DEE WHATLEY 703 E. CLINTON, SUITE 103 HOBBS, NM 88240 FAX TO:

Receiving Date: 01/08/99 Reporting Date: 01/11/99 Project Number: NOT GIVEN Project Name: PROKEM MONITOR WELLS Project Location: LOVINGTON PROKEM YARD Lab Number: H3987-1 Sample ID: MW #1 Analysis Date: 01/08/99 Sampling Date: 01/08/99 Sample Type: GROUNDWATER Sample Condition: COOL & INTACT Sample Received By: AH Analyzed By: BC

	Sample Result	Method			True Value
TCLP VOLATILES (ppm)	H3987-1	Blank	QC	%Recov.	QC
Bonzono	<0.002	<0.000	0.004		0.100
Delizene	<0.002	<0.002	0.084		0.100
Carbon Tetrachloride	0.342	<0.002	0.084	84	0.100
Toluene	<0.002	<0.002	0.085	85	0.100
Ethylbenzene	<0.002	<0.002	0.084	84	0.100
m,p-Xylene	< 0.004	< 0.004	0.168	84	0.200
o-Xylene	<0.002	<0.002	0.089	89	0.100
Dibromofluoromethane	112				
Toluene-d8	108				
Bromofluorobenzene	107				

METHODS: EPA SW 846-8260

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1194 Date

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.



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ANALYTICAL RESULTS FOR SAFETY & ENVIRONMENTAL SOLUTIONS, INC. ATTN: DEE WHATLEY 703 E. CLINTON, SUITE 103 HOBBS, NM 88240 FAX TO:

Receiving Date: 01/08/99 Reporting Date: 01/11/99 Project Number: NOT GIVEN Project Name: PROKEM MONITOR WELLS Project Location: LOVINGTON PROKEM YARD Lab Number: H3987-2 Sample ID: MW #2

Analysis Date: 01/08/99 Sampling Date: 01/08/99 Sample Type: GROUNDWATER Sample Condition: COOL & INTACT Sample Received By: AH Analyzed By: BC

	Sample Result	Method			True Value
TCLP VOLATILES (ppm)	H3987-2	Blank	QC	%Recov.	QC
Benzene	<0.002	<0.002	0.084	84	0.100
Carbon Tetrachloride	0.017	< 0.002	0.084	84	0.100
Toluene	< 0.002	<0.002	0.085	85	0.100
Ethylbenzene	< 0.002	<0.002	0.084	84	0.100
m,p-Xylene	< 0.004	<0.004	0.168	84	0.200
o-Xylene	<0.002	<0.002	0.089	89	0.100
Dibromofluoromethane					
Toluene-d8	96				
Bromofluorobenzene	95				

METHODS: EPA SW 846-8260

A. Cook Burgess J. A. Cooke

/11/44

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Receiving Date: 01/08/99 Reporting Date: 01/11/99 Project Number: NOT GIVEN Project Name: PROKEM MONITOR WELLS Project Location: LOVINGTON PROKEM YARD Lab Number: H3987-3 Sample ID: MW #3 Analysis Date: 01/08/99 Sampling Date: 01/08/99 Sample Type: GROUNDWATER Sample Condition: COOL & INTACT Sample Received By: AH Analyzed By: BC

	Sample Result	Method			True Value
TCLP VOLATILES (ppm)	H3987-3	Blank	QC	%Recov.	QC
Benzene	0.002	<0.002	0.084	84	0.100
Carbon Tetrachloride	0.111	<0.002	0.084	84	0.100
Toluene	< 0.002	< 0.002	0.085	85	0.100
Ethylbenzene	< 0.002	<0.002	0.084	84	0.100
m,p-Xylene	< 0.004	< 0.004	0.168	84	0.200
o-Xylene	<0.002	<0.002	0.089	89	0.100
Dibromofluoromethane	108	<u></u>			
Toluene-d8	108				
Bromofluorobenzene	103				

METHODS: EPA SW 846-8260

Ph. D.

Date

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Receiving Date: 01/08/99 Reporting Date: 01/11/99 Project Number: NOT GIVEN Project Name: PROKEM MONITOR WELLS Project Location: LOVINGTON PROKEM YARD Sampling Date: 01/08/99 Sample Type: GROUNDWATER Sample Condition: COOL & INTACT Sample Received By: AH Analyzed By: AH/BC

LAB NUMBER SAMPLE ID	TPH (ppm)	Cl (ppm)
ANALYSIS DATE:	01/08/99	01/08/99
H3987-1 MW #1	<1.0	56
H3987-2 MW #2	1.47	94
H3987-3 MW #3	<1.0	116
Quality Control	254	1257
True Value QC	240	1319
% Recovery	106	95
Relative Percent Difference	2.4	3.5
METHODS: EPA 600/4-79-02	418.1	325.3

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Date

H3987-1.XLS

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ARD	NINAL LABORATORIES, INC.		CHAIN-OF-CUS	TODY AND ANALYSIS REQUEST	
	2111 Beechwood, Abilene, TX 79603 101 (915) 673-7001 Fax (915) 673-7020 (505	East Marland, Hobbs, NM 88240) 393-2326 Fax (505) 393-2476		Page of	[
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Project Manager:	Dre Whythe	BIII TO PO#:			
Address:		Company:			
City:	State: Zip:	Attn:			
Phone #:		Address:			
Fax #:		City:			
Project #:	Project Owner:	State: Zip:			
Project Name: $ earrow$	sekan Monitai Walls	Phone #:	<u> </u>		
Project Location:	Louistan Proken Yard	Fax #:	7		
FOR LAB USE ONLY	MATRIX	PRES. SAMPLING	5.		
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