1R - 393

REPORTS

DATE:

2004

Saga Petroleum LLC
Apollo SWD
Site Investigation
Section 1, Township 17S, Range 36E
Lea County, New Mexico

January 21, 2004

Prepared for:

Saga Petroleum LLC
415 W. Wall, Suite 1900
Midland, Texas 79701

By:

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

TABLE OF CONTENTS

I. Background

Safety & Environmental Solutions, Inc. (SESI) was contracted by Saga Petroleum LLC to perform a site investigation of the Apollo Salt Water Disposal Facility located in Lea County, New Mexico. The subject area is located in Section 1, Township 17S, Range 36E in Lea County, New Mexico. (See Figure 1) The initial investigation will include the installation of at least 3 boreholes inside the diked area after removal of the tanks. (See Photo # 1) This facility is situated approximately 450 feet north of a City of Lovington water well. (See Photos # 2 and # 3)

II. Surface and Ground Water

According to the database provided by the New Mexico State Engineer's Office groundwater of record in Section 1, Township 17S, Range 36 E, in Lea County, New Mexico is approximately 83 feet in depth. This measurement was taken May 5, 1992. During conversations with representatives from the City of Lovington, the water level may be as high as 75'.

III. Soils

The soils in the area are predominantly sand and sandy loam.

IV. Work Performed

Drilling of Boreholes

On December 29, 2003 and December 30, 2003, SESI drilled 3 boreholes at the Apollo SWD Site. See Figure 2 for location of boreholes. Borehole # 1 was drilled to a depth of 35 feet. Grab samples were retrieved at 15', 17-18', 24-25', 30', and 35'. Borehole #2 was drilled to a depth of 30 feet. Grab samples were retrieved at 10', 15', 19-20', 24-25', and 30'. Borehole # 3 was drilled to a depth of 60 feet. Grab samples were retrieved at 5', 10', 15', 20', 25', 25', 30', 35', 39-40', 45', 45', 55', and 60'. The samples were properly preserved and transported under chain of Custody to Cardinal Laboratories of Hobbs, New Mexico for analysis. All samples were analyzed for Chlorides (EPA methods 4500-Cl^-B) the samples were analyzed for TPH (EPA method 418.1) to a depth were the TPH levels were <100 PPM, and the top and bottom hole samples were analyzed for BTEX (EPA Method SW-846 8260). The results of the analysis are as follows:

ID	Cl^-	TPH	Benzene	Toluene	Ethyl Benzene	Total Xylenes
BH-1 15'	3391	<10	<0.005	<0.005	<0.005	<0.015
BH-1 17-18'	1504	113				
BH-1 24-25'	1344	<10				
BH-1 30'	592	<10				
BH-1 35'	272	<10	<0.005	<0.005	<0.005	<0.015
BH-2 10'	1248	13700	0.022	<0.005	0.048	0.845
BH-2 15'	912	196				
BH-2 19-20'	928	94.6				
BH-2 24-25'	464	78.9				
BH-2 30'	208	99.5	<0.005	<0.005	<0.005	<0.015

ID	Cl^-	TPH	Benzene	Toluene	Ethyl Benzene	Total Xylenes
BH-3 5'	1072	668	<0.005	<0.005	<0.005	<0.015
BH-3 10'	496	60.6	<0.005	<0.005	<0.005	<0.015
BH-3 15'	720	79.2				
BH-3 20'	464					
BH-3 25'	544					
BH-3 30'	496					
BH-3 35'	640					
BH-3 39-40'	1664					
BH-3 45'	1615					
BH-3 55'	1711					
BH-3 60'	1951	46.3	<0.005	<0.005	<0.005	<0.015

V. Conclusions and Recommendations

The results of the analysis of samples from Boreholes #1, #2, and #3 indicate that the vertical extent of TPH contamination does not exceed 15' in depth. However, chloride contamination was detected above 250 ppm at depths of up to 60'.

Due to the extent of contamination at the present site, it is recommended that a new location be constructed to the west of the present location. The new location may be situated just to the north of the existing electrical panel in the area where the horizontal separators were located. In any event, the relocation should be on clean soil and constructed with a 40 mil plastic liner under the storage tanks, pumps and piping. The entire location should be properly bermed.

Once the facility has been relocated, all soils with TPH levels above 1000 ppm should be removed and transported to an approved NMOCD disposal facility. A 40 mil plastic liner will be placed in the bottom of the excavation to protect any chloride contamination left in place from surface water and any future spills. The excavation would be backfilled and returned to normal grade.

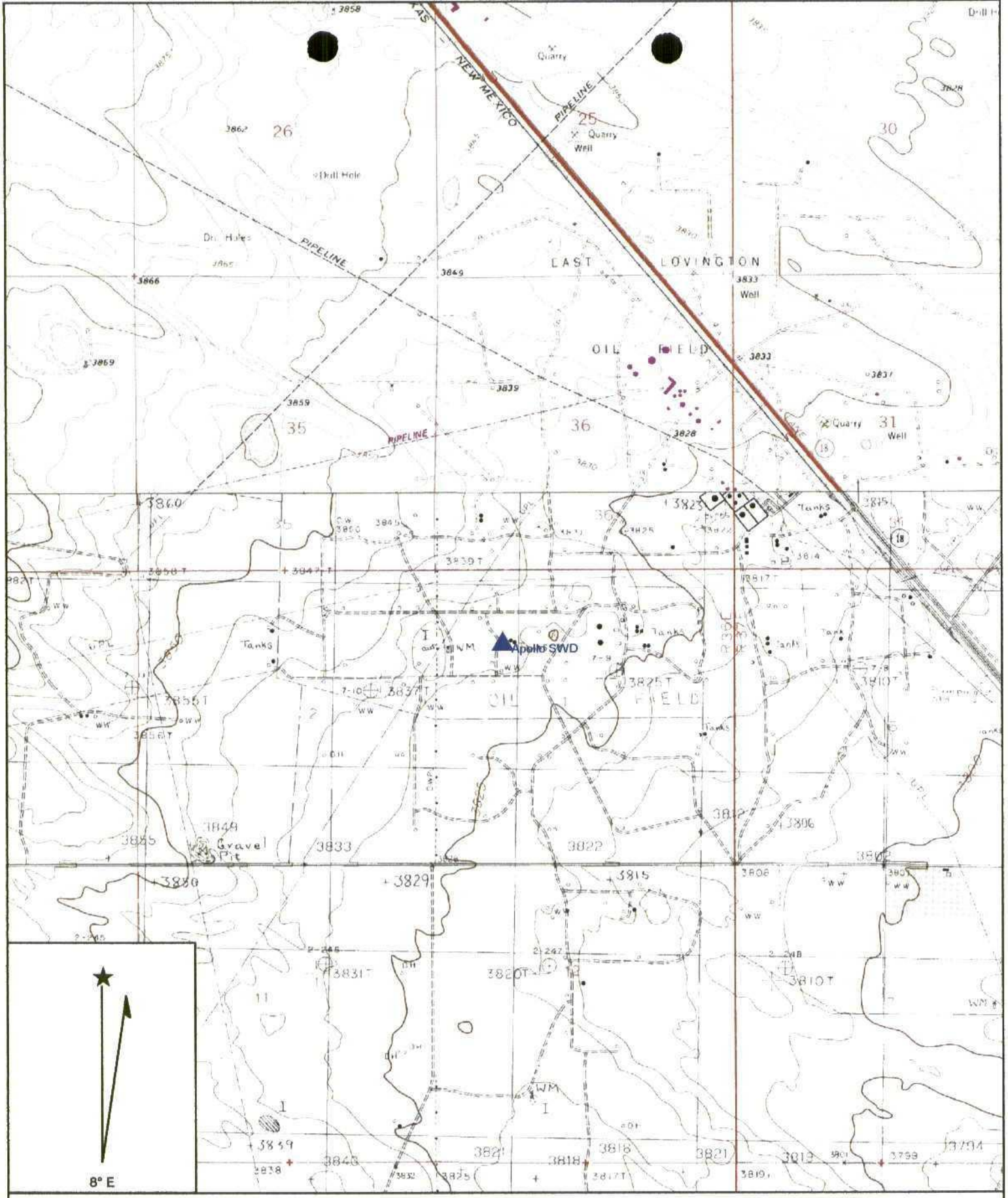
A groundwater monitoring well will be installed approximately 16 feet to the south of borehole # 3 immediately outside the berm. (See Photo # 4) This well will be used to determine the extent on contamination of the groundwater, if any, under the site. If the analysis of the groundwater from this well indicates chloride content above 250 ppm, an additional groundwater monitoring well will be installed to the south of the existing facility approximately half way between the City of Lovington water well and the Apollo site. This well would be used to monitor any movement of possible groundwater contamination from the Apollo facility toward the City of Lovington water well.

Additional recommendations regarding this site are being reserved until the installation and sampling of the groundwater monitoring well is complete.

VI. Figures & Appendices

Figure 1 - Vicinity Map
Figure 2 - Site Plan
Figure 3 - Log of Boring
Appendix A - Analytical Results
Appendix B - Site Photos

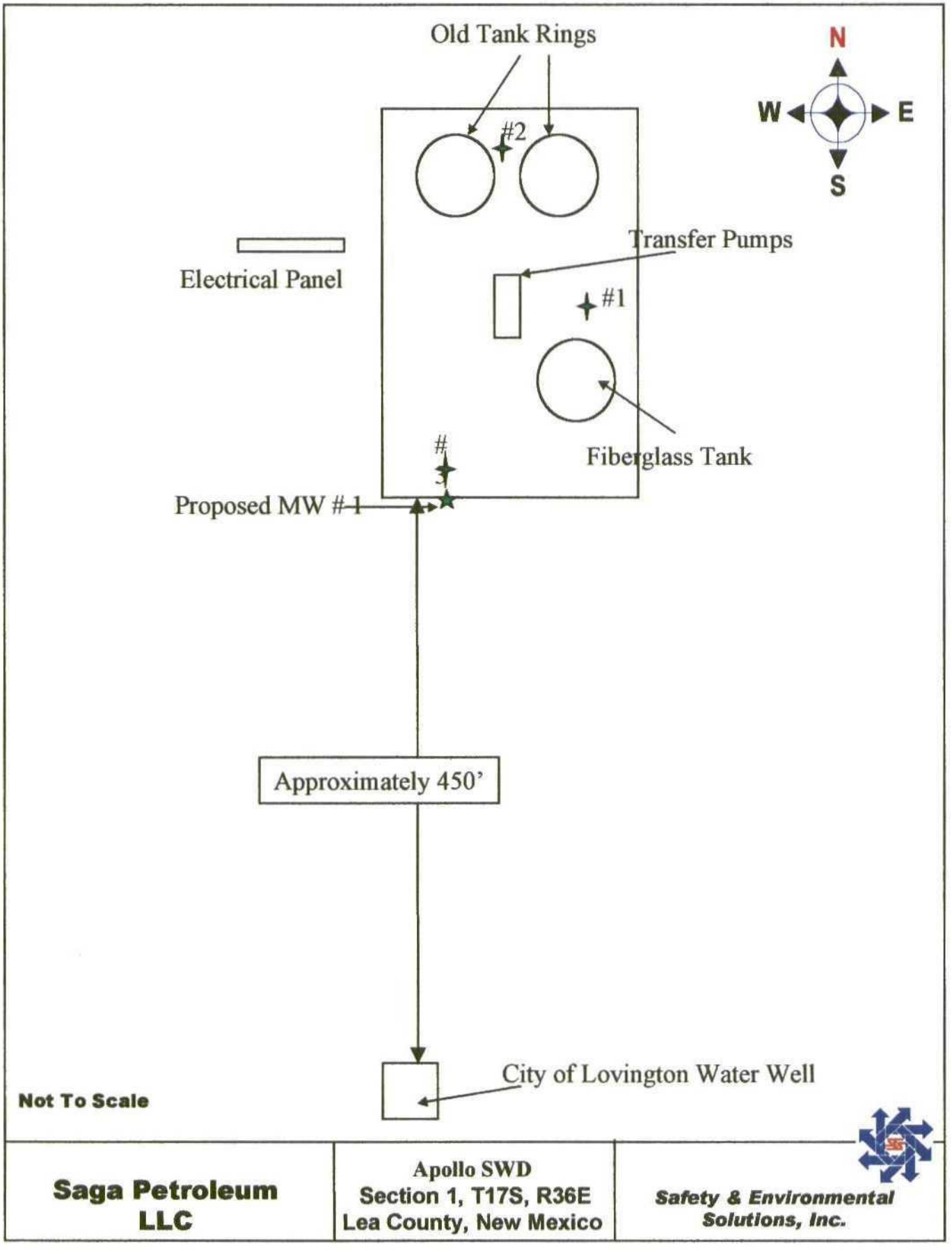
Figure 1
Vicinity Map



Name: LOVINGTON SE
Date: 1/26/2004
Scale: 1 inch equals 2222 feet

Location: 032° 52' 11.5" N 103° 18' 43.8" W
Caption: Saga Petroleum
Sec. 1, T17S, R36E
Lea County, New Mexico

Figure 2
Site Plan



Saga Petroleum LLC	**Apollo SWD** **Section 1, T17S, R36E** **Lea County, New Mexico**	***Safety & Environmental Solutions, Inc.***

Figure 3
Log of Boring

Safety & Environmental Solutions, Inc.

LOG OF BORING BH-1

Saga Petroluem LLC
Apollo SWD
S1, T17S, R36E
Lea County, New Mexico

Date Started	: 12/29/03	Sampling Method	: Cuttings, core barrel
Date Completed	: 12/30/03	Drilled By	: Eco Drilling
Hole Diameter	: 8 1/4 in.	Logged By	: David Boyer
Drilling Method	: Hollow Stem Auger	Company Rep.	: Bruce Woodard
Drilling Equipment	: CME-75		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	Lab No.	Samples	TPH (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	Chlorides (mg/Kg)
0	CA/SP		SAND, Brownish Black w/Caliche								
5	SP		Grayish dirt								
10											
15				H-8304-1	~~1~~	<10	<0.005	<0.005	<0.005	<0.015	3391
	SP/SS		2.7' Recovery, 0-1 Sand light brown,very fine grained, No H/C Staining or Odor 1.8-2.7' sandstone w/sand, partially consolidated, well cemented	H-8323-1	~~2~~	113					1504
20	SP		3.3' Recovery, Sand, very fine grained, light brown, No H/C Staining or Odor								
25				H-8323-2	~~3~~	<10					1344
30	SM		7.0 Recovery Sand light brown, very fine grained, minor silt no H/C Staining or Odor	H-8323-3	~~4~~	<10					592
35				H-8323-4	~~5~~	<10	<0.005	<0.005	<0.005	<0.015	592

Notes:
Plugged back to surface with bentonite upon completion

Safety & Environmental Solutions, Inc.

LOG OF BORING BH-2

Saga Petroluem LLC
Apollo SWD
S1, T17S, R36E
Lea County, New Mexico

Date Started	: 12/30/03	Sampling Method	: Cuttings, core barrel
Date Completed	: 12/30/03	Drilled By	: Eco Drilling
Hole Diameter	: 8 1/4 in.	Logged By	: David Boyer
Drilling Method	: Hollow Stem Auger	Company Rep.	: Bruce Woodard
Drilling Equipment	: CME-75		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	Lab No.	Samples	TPH (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	Chlorides (mg/Kg)
0	CA/SP		2.8 Recovery 0-2.1 Sand, fine grained, oil saturated at base 2.1-2.8 caliche hard, white/gray (Hit Caliche @ 3')								
5	CA/SP		3.2 Recovery 0-1.0 Slough (grey, H/C Staining & Odor 1.0-3.2 Caliche and very fine grained, Sand light brown, Strong H/C Odor, Caliche less at 10'								
10	CA/SP		4.3' Recovery 0-4.3 Sand light brown, very fine grained, w/some Caliche/ Sandstone fragments to 1.5" H/C odor at 10', very slight at 15'	H-8323-5	~~1~~	13700	0.022	<0.005	0.048	0.845	1248
15	SP/SS		4.8' Recovery 0-4.8 Sand, light brown, very fine grained, , occ. Sandstone rock to 2" poorly consolidated, well cemented slight H/C odor at tip	H-8323-6	~~2~~	196					912
20	SP		4.8' Recovery 0-4.8 SAND, light brown,very fine grained, slight H/C Odor at tip	H-8323-7	~~3~~	94.6					928
25	SW/SS		2.6 Recovery 0-2.6 Sand light brown, very fine grained, uniform, thin Sandstone zone at 26' no H/C odor	H-8323-8	~~4~~	78.9					464
30				H-8323-9	~~5~~	99.5	<0.005	<0.005	<0.005	<0.015	208

Notes:
Plugged back to surface with bentonite upon completion

Safety & Environmental Solutions, Inc.

LOG OF BORING BH-3

Saga Petroluem LLC
Apollo SWD
S1, T17S, R36E
Lea County, New Mexico

Date Started	: 12/30/03	Sampling Method	: CME-75
Date Completed	: 12/30/03	Drilled By	: Eco Drilling
Hole Diameter	: 8 1/4 in.	Logged By	: David Boyer
Drilling Method	: Hollow Stem Auger	Company Rep.	: Bruce Woodard
Drilling Equipment	: Giddings HDG-RPST		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	Lab No.	Samples	TPH (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	Chlorides (mg/Kg)
0	CA/SP		2.4 Recovery 0-1.4 fill material (interior of berm) 1.4-2.4 Sand light brown, very fine grained, Caliche white, hard, slight H/C odor	H-8323-10	1	668	<0.005	<0.005	<0.005	<0.015	1072
5	CA/SP		4.4 Recovery, Sand lt brown, very fine grained, frag. of caliche gravels rounded to 1" Sandstone zone @ 9-9.5' No H/C Stain or Odor	H-8323-11	2	60.6	<0.005	<0.005	<0.005	<0.015	496
10	SP/SS		4.0 Recovery 0-2.0 Sand lt. brown, some chalk color, very fine grained, w/ frag of Sandstone lt. brown								
15	SW/SS		2.0-4.0 Sand, light brown, very fine grained, no H/C stain or odor	H-8323-12	3	79.2					720
20	SW/SS		4.6 Recovery 0-2.0 Sand, lt. brown, very fine grained, uniform, slightly damp, slight H/C odor 2.0-4.6 Sand, lt brown, very fine grained, w/ frag poorly cemented Sandstone no H/C odor	H-8323-13	4						464
25	SP/SS		3.2 Recovery 0-3.2 Sand, lt. brown, very fine grained, uniform, occ. small Sandstone pieces no H/C stainor odor	H-8323-14	5						544
30	SP/SS		3.5 Recovery sand, lt. brown, fine grained, slightly damp, Sandstone Rock well consoladated, well cemented,(Rock from 27-28') No H/C Stainor Odor	H-8323-15	6						496
35	SP/SS		4.2 Recovery 0-3.2' Sand same as above 3.2-4.2 Sand & Sandstone well cemented medium consolidation (Sandstone 38-40')	H-8323-16	7						640
40	SM/SS		4' Recovery SILTY SAND, lt. brown, very fine grained, partially cemented SANDSTONE friable w/fingers No H/C Stain or Odor	H-8323-17	8						1664
45				H-8323-18	9						1615
50	SP		4.3 Recovery Sand, lt. brown, very fine grained, well compacted, minimal cementing, "sugar sand" No H/C Stain or Odor	H-8323-19	10						1711
55				H-8323-20	11	46.3	<0.005	<0.005	<0.005	<0.015	1951
60											

Notes:
Plugged back to surface with bentonite upon completion

Appendix A
Analytical Results

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON, #103
HOBBS, NM 88240
FAX TO: (505) 393-4388

Receiving Date: 12/29/03
Reporting Date: 01/05/04
Project Number: SAG03001
Project Name: APOLLO WATER STATION
Project Location: LOVINGTON, NM

Sampling Date: 12/29/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		01/02/04	01/02/04	01/02/04	01/02/04
H8304-1	B.H. #1 15'	<0.005	<0.005	<0.005	<0.015
Quality Control		0.098	0.101	0.100	0.311
True Value QC		0.100	0.100	0.100	0.300
% Recovery		98.4	101	99.5	104.0
Relative Percent Difference		5.9	2.9	4.8	2.1

METHOD: EPA SW-846 8260

Burgess J. A. Cooke
Chemist

1/5/04
Date

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON
HOBBS, NM 88240
FAX TO: (505) 393-4388

Receiving Date: 12/29/03
Reporting Date: 12/31/03
Project Number: SAG03001
Project Name: APOLLO WATER STATION
Project Location: LOVINGTON, NM

Sampling Date: 12/29/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH/HM

LAB NUMBER	SAMPLE ID	TPH (ppm)	Cl (ppm)
ANALYSIS DATE:		12/30/03	12/30/03
H8304-1	B.H. #1 15'	<10	3391
Quality Control		243	940
True Value QC		240	1000
% Recovery		101	94.0
Relative Percent Difference		4.6	1.4

METHODS: EPA 600/4-79-02	418.1	SM 4500 ClˉB

Amy Hill
Chemist

12/31/03
Date

H8304

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

Company Name: SESI	**BILL TO**
Project Manager: Rob Allen	P.O. #:
Address: 703 E Clinton	Company: SAME
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: 505-397-0510 Fax #: 505-393-4388	Address:
Project #: SAG03001 Project Owner:	City:
Project Name: Apollo Water Station	State: Zip:
Project Location: Lovington N.M.	Phone #:
Sampler Name: Sergio	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH	Chlorides	BTEX									
H8304-1	B.H. #1 15'		1			✓					✓		29 Dec	4:00p	✓	✓	✓									

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.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Date:	Received By:	
	Time:		
Relinquished By:	Date: 12/29/03	Received By: (Lab Staff)	
	Time: 5:00		
Delivered By: (Circle One)		Sample Condition Cool Intact ☐Yes ☐Yes ☐No ☐No	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:			

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: 631-7444

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

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON, #103
HOBBS, NM 88240
FAX TO: (505) 393-4388

Receiving Date: 01/05/04
Reporting Date: 01/06/04
Project Number: SAG-03-001
Project Name: APOLLO WATER STATION
Project Location: LOVINGTOM, NM

Sampling Date: 12/30/03 & 12/31/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

LAB NUMBER	SAMPLE ID	TPH (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		01/05/04	01/06/04	01/06/04	01/06/04	01/06/04
H8323-4	BH-1 35'	<10	<0.005	<0.005	<0.005	<0.015
H8323-5	BH-2 10'	13700	0.022	<0.005	0.048	0.845
H8323-9	BH-2 30'	99.5	<0.005	<0.005	<0.005	<0.015
H8323-10	BH-3 5'	668	<0.005	<0.005	<0.005	<0.015
H8323-11	BH-3 10'	60.6	<0.005	<0.005	<0.005	<0.015
H8323-20	BH-3 60'	46.3	<0.005	<0.005	<0.005	<0.015
Quality Control		234	0.098	0.092	0.092	0.278
True Value QC		240	0.100	0.100	0.100	0.300
% Recovery		97.3	98.4	92.0	91.6	92.6
Relative Percent Difference		8.4	3.3	7.5	4.9	6.3

METHODS: TRPHC-EPA 600/4-79-020 418.1; BTEX -EPA SW-846 8260

Burgess J. A. Cooke

Burgess J. A. Cooke, Ph. D.

1/6/04
Date

H8323BT.XLS

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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ATTN: BOB ALLEN
703 E. CLINTON #103
HOBBS, NM 88240
FAX TO: (505) 393-4388

Receiving Date: 01/05/04
Reporting Date: 01/06/04
Project Number: SAG-03-001
Project Name: APOLLO WATER STATION
Project Location: LOVINGTON, NM

Analysis Date: 01/06/04
Sampling Date: 12/30/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H8323-1	BH-1 17-18'	1504
H8323-2	BH-1 24-25'	1344
H8323-3	BH-1 30'	592
H8323-4	BH-1 35'	272
H8323-5	BH-2 10'	1248
H8323-6	BH-2 15'	912
H8323-7	BH-2 19-20'	928
H8323-8	BH-2 24-25'	464
H8323-9	BH-2 30'	208
H8323-10	BH-3 5'	1072
Quality Control		1010
True Value QC		1000
% Recovery		101
Relative Percent Difference		7.0

METHOD: Standard Methods	4500-Cl^-B

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

Amy Hill
Chemist

11/6/04
Date

h8323A

CARDINAL LABORATORIES

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON #103
HOBBS, NM 88240
FAX TO: (505) 393-4388

Receiving Date: 01/05/04
Reporting Date: 01/06/04
Project Number: SAG-03-001
Project Name: APOLLO WATER STATION
Project Location: LOVINGTON, NM

Analysis Date: 01/06/04
Sampling Date: 12/30-12/31/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H8323-11	BH-3 10'	496
H8323-12	BH-3 15'	720
H8323-13	BH-3 20'	464
H8323-14	BH-3 25'	544
H8323-15	BH-3 30'	496
H8323-16	BH-3 35'	640
H8323-17	BH-3 39-40'	1664
H8323-18	BH-3 45'	1615
H8323-19	BH-3 55'	1711
H8323-20	BH-3 60'	1951
Quality Control		1010
True Value QC		1000
% Recovery		101
Relative Percent Difference		7.0

METHOD: Standard Methods	4500-Cl^-B

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

Amy Hill
Chemist

1/6/04
Date

h8323B

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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ATTN: BOB ALLEN
703 E. CLINTON, #103
HOBBS, NM 88240
FAX TO: (505) 393-4388

Receiving Date: 01/05/04
Reporting Date: 01/12/04
Project Number: SAG-03-001
Project Name: APOLLO WATER STATION
Project Location: LOVINGTON, NM

Analysis Date: 01/05/04 & 01/08/04
Sampling Date: 12/30/03 & 12/31/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

ADDITIONAL ANALYSES

LAB NUMBER	SAMPLE ID	TPH (mg/Kg)
H8323-1	BH-1 17-18'	113
H8323-2	BH-1 24-25'	<10
H8323-4	BH-1 35'	<10
H8323-5	BH-2 10'	13700
H8323-6	BH-2 15'	196
H8323-7	BH-2 19-20'	94.6
H8323-8	BH-2 24-25'	78.9
H8323-9	BH-2 30'	99.5
H8323-10	BH-3 5'	668
H8323-11	BH-3 10'	60.6
H8323-12	BH-3 15'	79.2
H8323-20	BH-3 60'	46.3
Quality Control		234
True Value QC		240
% Recovery		97.3
Relative Percent Difference		8.4

METHOD: EPA 418.1

Chemist

1/13/04
Date

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 2

Company Name:	SESI	BILL TO	PO #:
Project Manager:	Bob Allen	Company:	SAME
Address:	703 E. CLINTON, #103	Attn:	Kristi
City:	HOBBS State: NM Zip: 88240	Address:	
Phone #:	(505) 397-0510	City:	
Fax #:	(505) 393-4388	State:	Zip:
Project #:	SAG-03-00 Project Owner: WISAGA	Phone #:	
Project Name:	Apollo Water Station	Fax #:	
Project Location:	Lovington		

FOR LAB USE ONLY				MATRIX						PRES.			SAMPLING		ANALYSIS REQUEST											
LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID:	ICE / COOL	OTHER:	DATE	TIME	BTEX	TPH (418.1)	Chloride	SEE REMARKS								
W1323-1	BH-1, 17-18'	G	1			X					X		12/30	0815			X	X								
-2	BH-1, 24-25'													0840				X								
-3	BH-1, 30'													0855				X								
-4	BH-1, 35'													0935	X	X										
-5	BH-2, 10'													1115	X	X										
-6	BH-2, 15'													1125				X								
-7	BH-2, 19-20'													1135				X								
-8	BH-2, 24-25'													1155				X								
-9	BH-2, 30'													1225	X	X										
-10	BH-3, 5'	G	1			X					X			1535	X	X	X									

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.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Date: 1-2-04	Received By:	Phone Result ☐ Yes ☒ No Additional Fax #:
	Time: 0735		Fax Result: ☒ Yes ☐ No
Relinquished By:	Date: 1-5-04	Received By: (Lab Staff)	REMARKS: Do TPH (418.1) only if previous TPH was ≥ 100 ppm
	Time: 10:45		
Delivered By: (Circle One)	Sample Condition Cool: ☒ Yes ☐ No Intact: ☐ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other:			

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2 of 2

Page 1 of 1

Company Name:	SESI	BILL TO	PO #:
Project Manager:	Bob Allen	Company:	SAME
Address:	703 E. CLINTON, #103	Attn:	KRISTI
City:	HOBBS State: NM Zip: 88240	Address:	
Phone #:	(505) 397-0510	City:	
Fax #:	(505) 393-4388	State:	Zip:
Project #:	96-03-001 Project Owner: SAME	Phone #:	
Project Name:	~~Apple~~ MB Apollo Water Station	Fax #:	
Project Location:	Lovington		

ANALYSIS REQUEST

FOR LAB USE ONLY LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID:	ICE / COOL	OTHER:	SAMPLING DATE	TIME	BTEX	TPH (418.1)	Chlorides	See Remarks
H8323-11	BH-3, 10	G	1			X					X		12/30	1600	X	X	X	
-12	BH-3 15												12/30	1610			X	X
-13	BH-3 20												12/30	1650				X
-14	BH-3 25												12/~~30~~31	0750				X
-15	BH-3 30												12/31	0835				X
-16	BH-3 35													0905				X
-17	BH-3 39-40													0940				X
-18	BH-3 45													1015				X
-19	BH-3 55													1125				X
-20	BH-3 60	G	1			X					X		12/31	1150	X	X	X	

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Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Date: 1-2-04	Received By:	Phone Result ☐ Yes ☒ No Additional Fax #:
	Time: 0935		Fax Result: ☒ Yes ☐ No
Relinquished By:	Date: 1/3/04	Received By: (Lab Staff)	REMARKS: Do TPH (418.1) only if previous TPH was ≥ 100 ppm
	Time: 1015		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition: Cool ☒ Yes ☐ No; Intact ☒ Yes ☐ No	CHECKED BY: (Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

Appendix B
Site Photos

Site Prior to Tank Removal

Looking South from site to City of Lovington Well

Looking North from City of Lovington Well to Site

Approximate Location of Monitor Well #1 Immediately Outside of Berm