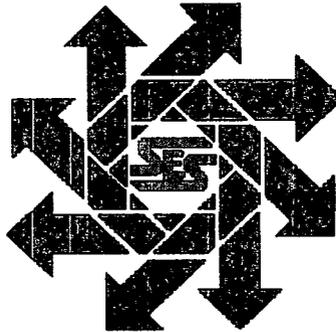


**Mack Energy Corporation
Monsanto 30 State #5
Site Investigation
Section 30, Township 16S, Range 37E
Lea County, New Mexico**

March 9, 2004



Prepared for:

**Mack Energy Corporation
P.O. Box 960
Artesia, New Mexico 88211-0960**

By:

***Safety & Environmental Solutions, Inc.
703 E. Clinton Suite 102
Hobbs, New Mexico 88240
(505) 397-0510***

API# 30025357810000



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop
Cabinet Secretary

Lori Wrotenbery

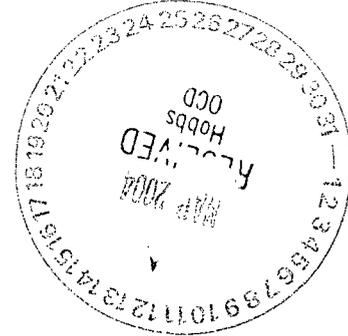
Director

Oil Conservation Division

March 10, 2004

Mack Energy Corporation jsherrill@mackenergycorp.com
PO Box 960
Artesia, NM 88211-0960

Re: Site Investigation: Monsanto 30 State #5
Site Location: Sec 30 T16S R37E Lea County, NM
Proposal Submittal Dated: March 9, 2004



Dear Mr. Sherrill,

The referenced Risk Based Work Plan submitted to New Mexico Oil Conservation Division (OCD) by Safety & Environmental Solutions, Inc. (SES) as agent for Mack Energy Corp. is **hereby approved with the following conditions:**

- Initiate proposed operations as soon as possible
- Provide confirmation landowner is advised of operations as this is a risk-based plan
- Addition monitor wells be drilled as deemed necessary and appropriate by OCD
- GPS pit position, boreholes, monitor wells, and also all Lovington City water wells that could influence natural water gradient

This approval is for temporary closure of the pit to avoid possible additional vertical contaminant drivers to be introduced in the existing pit during the investigation and delineation of the project.

Please be advised that OCD approval of this plan does not relieve Mack Energy Corp. of liability should their operations fail to adequately investigate and remediate contaminants that threaten ground water, surface water, human health or the environment. Additionally, OCD approval does not relieve Mack Energy Corp. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you have any questions call: (505) 393-6161, ext. 111, or email: lwjohnson@state.nm.us

Sincerely,

Larry Johnson – OCD Environmental Engineer

Cc:

Chris Williams - District I Supervisor
Ed Martin – Environmental Dept.
Paul Sheeley – Environmental Engineer
Bob Allen – Safety & Environmental Solutions, Inc. ballen@sesi-nm.com

TABLE OF CONTENTS

I.	BACKGROUND.....	1
II.	SURFACE AND GROUND WATER.....	1
III.	SOILS.....	1
IV.	WORK PERFORMED	1
V.	CONCLUSIONS	2
VI.	FIGURES & APPENDICES	3

I. Background

SESI was contracted to perform a site investigation to determine the vertical and horizontal extent of contamination inside a drilling pit for the Monsanto 30 State # 5. The subject area is located in Section 30, Township 16S, Range 37E in Lea County, New Mexico.

II. Surface and Ground Water

The nearest groundwater water of record with the New Mexico State Engineer's Office is in the same section, township and range. This well was drilled in 1965 and shows the depth of water to be 46 feet. Information from Mr. Pat Wise of the City of Lovington states the static level in their wells in the area to be 75'. However, Borehole #1 was drilled to a depth of 70 feet in the center of the pit, which would be in excess 80 feet below ground surface and no water was encountered.

III. Soils

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

IV. Work Performed

Drilling of Boreholes

On February 6, 2004 SESI drilled Borehole #1 to a depth of 70 feet. Grab samples were retrieved every five (5) feet. The samples were properly packaged and preserved and sent under Chain of custody to Cardinal Laboratories of Hobbs, New Mexico for analysis. All samples were analyzed for Chlorides (EPA Method 4500-Cl⁻B) and the bottom and top samples were analyzed for TPH (EPA Method 418.1) and BTEX (EPA Method SW-846-8260).

On February 9, 2004 SESI drilled Borehole #2 and #3. Borehole # 2 was drilled to a depth of 20 feet and Borehole #3 was drilled to a depth of 70 feet. Grab samples were retrieved every five (5) feet. The samples were properly packaged and preserved and sent under Chain of custody to Cardinal Laboratories for analysis. All samples were analyzed for Chlorides (EPA Method 4500-Cl⁻B) and the bottom and top samples were analyzed for TPH (EPA Method 418.1) and BTEX (EPA Method SW-846-8260).

On February 10, 2004 SESI drilled Borehole # 4 was drilled to a depth of 40 feet. Grab samples were retrieved every ten (10) feet. The samples were properly packaged and preserved and sent under Chain of custody to Cardinal Laboratories for analysis. All samples were analyzed for Chlorides (EPA Method 4500-Cl⁻B).

All boreholes were backfilled to surface the bentonite. (See Figure)

The results of the analysis are as follows:

Date	ID	Cl'	TPH	Benzene	Toluene	Ethyl Benzene	Total Xylenes
2/6/04	BH #1 5'	1744	<10	<0.005	<0.005	<0.005	<0.015
2/6/04	BH #1 10'	4878					
2/6/04	BH #1 15'	8477					
2/6/04	BH #1 20'	7598					
2/6/04	BH #1 25'	2879					
2/6/04	BH #1 30'	4159					
2/6/04	BH #1 35'	5758					
2/6/04	BH #1 40'	5918					
2/6/04	BH #1 45'	4559					
2/6/04	BH #1 50'	2959					
2/6/04	BH #1 55'	1679					
2/6/04	BH #1 60'	1264					
2/6/04	BH #1 65'	560					
2/6/04	BH #1 70'	176	<10	<0.005	<0.005	<0.005	<0.015
2/09/04	BH #2 5'	1390	<10	<0.005	<0.005	<0.005	<0.015
2/09/04	BH #2 10'	288					
2/09/04	BH #2 15'	80					
2/09/04	BH #2 20'	64	<10	<0.005	<0.005	<0.005	<0.015
2/09/04	BH #3 5'	5000	<10	<0.005	<0.005	<0.005	<0.015
2/09/04	BH #3 10'	6000					
2/09/04	BH #3 15'	8600					
2/09/04	BH #3 20'	8600					
2/09/04	BH #3 25'	4800					
2/09/04	BH #3 30'	3600					
2/09/04	BH #3 35'	9200					
2/09/04	BH #3 40'	9200					
2/09/04	BH #3 45'	9200					
2/09/04	BH #3 50'	10400					
2/09/04	BH #3 55'	8800					
2/09/04	BH #3 60'	9600					
2/09/04	BH #3 65'	11200					
2/09/04	BH #3 70'	7200	<10	<0.005	<0.005	<0.005	<0.015
2/10/04	BH #4 10'	144					
2/10/04	BH #4 20'	112					
2/10/04	BH #4 30'	80					
2/10/04	BH #4 40'	96					

V. Conclusions

The results of the borehole samples indicate that the contamination has migrated to a depth of at least 70 feet below the bottom of the excavated pit and in excess of 80 feet below ground surface. The results of borehole # 4, drilled outside the pit to the west indicate no horizontal migration to the west.

It is recommended that a 40 mil plastic liner be installed in the bottom of this pit. The excavation should be squared and domed in the center with soil that will make an acceptable pad for the liner. After the liner is installed another lift of soil should be

placed on the top of the plastic to insure the liner is not compromised during backfill of the pit. The pit should be backfilled with clean material and returned to natural grade.

A groundwater monitor well should be installed in a position that is close to the pit on the down-gradient side.

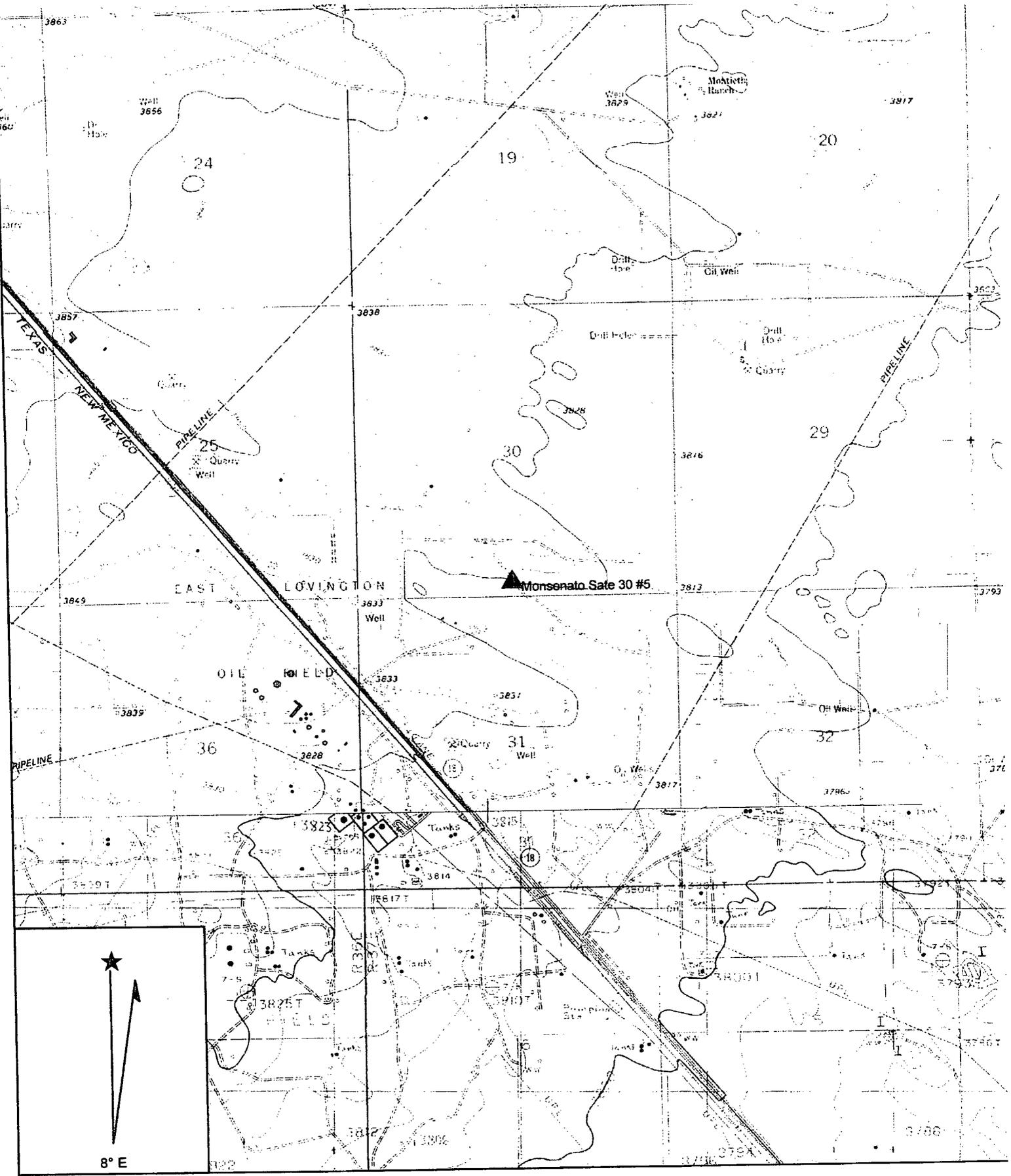
VI. Figures & Appendices

Figure 1 - Vicinity Map

Figure 2 - Site Plan

Appendix A - Analytical Results

Figure 1
Vicinity Map



Monsonato Sale 30 #5

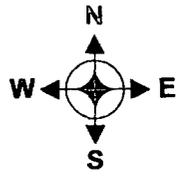


8° E

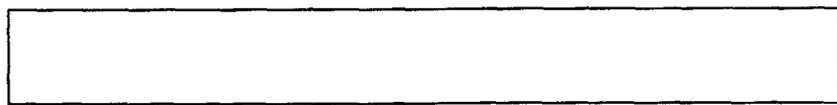
Name: LOVINGTON
 Date: 3/11/2004
 Scale: 1 inch equals 2222 feet

Location: 032° 53' 11.1" N 103° 17' 24.5" W
 Caption: Mack Energy Corporation
 Sec 30, T16S, R37E
 Lea County, New Mexico

Figure 2
Site Plan



Well Stake → ⊕



BH #4
✧

BH #1
✧

BH #2
✧

BH #3
✧

Lease Road

Not to Scale

✧ Proposed location of soil borings



Mack Energy Corporation	Monsanto 30 State #5 Sec. 30, T16S, R37E Lea County, New Mexico	Safety & Environmental Solutions, Inc.
-------------------------	---	---

Appendix A
Analytical Results



PHONE (915) 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

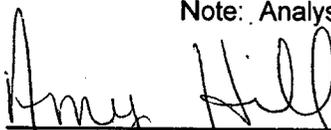
Receiving Date: 02/09/04
Reporting Date: 02/10/04
Project Number: MAC-04-001
Project Name: MASANTO 30 STATE #5
Project Location: LOVINGTON, NM

Analysis Date: 02/10/04
Sampling Date: 02/06/04
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: AH

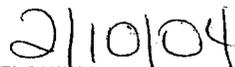
LAB NUMBER	SAMPLE ID	Cl ⁻ (mg/Kg)
H8449-1	BH 1 5'	1744
H8449-2	BH 1 10'	4878
H8449-3	BH 1 15'	8477
H8449-4	BH 1 20'	7598
H8449-5	BH 1 25'	2879
H8449-6	BH 1 30'	4159
H8449-7	BH 1 35'	5758
H8449-8	BH 1 40'	5918
H8449-9	BH 1 45'	4559
H8449-10	BH 1 50'	2959
H8449-11	BH 1 55'	1679
H8449-12	BH 1 60'	1264
H8449-13	BH 1 65'	560
H8449-14	BH 1 70'	176
Quality Control		1000
True Value QC		1000
% Recovery		100
Relative Percent Difference		2.0

METHOD: Standard Methods 4500-Cl⁻B

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



Chemist



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. **Cardinal** shall 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.



CARDINAL LABORATORIES, INC.

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

Company Name: SEST		PO #:	
Project Manager:		Company: SAME	
Address: 703 E. CLINTON, #103		Attn:	
City: HOBBS		Address:	
Phone #: (505) 397-0510		City:	
Fax #: (505) 393-4388		State:	
Project #: 04-001		Phone #:	
Project Name: MEXMTO 30 SIESE #S		Fax #:	
Project Location: LOWINGTON N.M.			

LAB I.D.	Sample I.D.	FOR LAB USE ONLY				MATRIX				PRES.				SAMPLING	
		# CONTAINERS	(G) RAB OR (COMP)	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID	ICE / COOL	OTHER:	DATE	TIME	
48449-11	BH1 55'	1	9	---	---	---	---	---	---	---	---	16-04	3:25	XX	BTX (418-1) See Remarks
-12	BH1 60'	1	9	---	---	---	---	---	---	---	---	3:50	---	XX	
-13	BH1 65'	1	9	---	---	---	---	---	---	---	---	4:30	---	---	
-14	BH1 70'	1	9	---	---	---	---	---	---	---	---	5:10pm	---	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 analysis. 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.

Phone Result: Yes No Additional Fax #: Yes No

REMARKS: IF previous TPH is > 100 ppm do following sample for TPH & BTX



PHONE (915) 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:

Receiving Date: 02/10/04
Reporting Date: 02/13/04
Project Number: MAC 04-001
Project Name: MONSANTO 30 ST. #5
Project Location: NOT GIVEN

Analysis Date: 02/13/04
Sampling Date: NOT GIVEN
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: GP

LAB NUMBER	SAMPLE ID	Cl ⁻ (mg/Kg)
H8454-1	BH 2- 5'	1390
H8454-2	BH 2-10'	288
H8454-3	BH 2-15'	80
H8454-4	BH 2-20'	64
H8454-5	BH 3- 5'	5000
H8454-6	BH 3-10'	6000
H8454-7	BH 3-15'	8600
H8454-8	BH 3-20'	8600
H8454-9	BH 3-25'	4800
H8454-10	BH 3-30'	3600
H8454-11	BH 3-35'	9200
H8454-12	BH 3-40'	9200
H8454-13	BH 3-45'	9200
H8454-14	BH 3-50'	10400
H8454-15	BH 3-55'	8800
H8454-16	BH 3-60'	9600
H8454-17	BH 3-65'	11200
H8454-18	BH 3-70'	7200
Quality Control		1030
True Value QC		1000
% Recovery		103
Relative Percent Difference		2.9
METHOD: Std. Methods		4500-Cl ⁻ B

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


Chemist

02/13/2004
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. **H8454B: MLC** 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.



PHONE (915) 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:

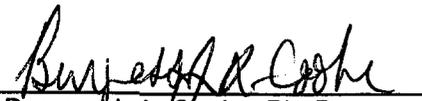
Receiving Date: 02/10/04
 Reporting Date: 02/12/04
 Project Number: MAC 04-001
 Project Name: MONSANTO 30 ST. #5
 Project Location: NOT GIVEN

Sampling Date: NOT GIVEN
 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:		02/11/04	02/12/04	02/12/04	02/12/04	02/12/04
H8454-1	BH 2- 5'	<10	<0.005	<0.005	<0.005	<0.015
H8454-4	BH 2-20'	<10	<0.005	<0.005	<0.005	<0.015
H8454-5	BH 3- 5'	<10	<0.005	<0.005	<0.005	<0.015
H8454-18	BH 3-70'	<10	<0.005	<0.005	<0.005	<0.015
Quality Control		245	0.096	0.098	0.100	0.299
True Value QC		240	0.100	0.100	0.100	0.300
% Recovery		102	95.7	98.1	99.8	99.7
Relative Percent Difference		4.5	3.8	4.2	3.5	3.1

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


 Burgess, J. A. Cooke, Ph. D.

2/12/04
 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. H8454A.XLS 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.



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES, INC.

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

Page _____ of _____

Company Name: SECI		BILL TO PO #:	
Project Manager: BOB ALLEN		Company:	
Address: 703 E. CLAYTON #103		Attn:	
City: HOBBS		Address:	
State: NM Zip: 88240		City:	
Phone #:		State:	
Fax #:		Phone #:	
Project #: MAL 04-001 Project Owner:		Fax #:	
Project Name: MARATHON 30 ST #5			
Project Location: MOLSAUTO			

LAB I.D.	Sample I.D.	MATRIX							PRES.	OTHER:	DATE	TIME
		GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	ACID:	ICE / COOL				
H454-1	643-35	X	X	X	X	X	X					
-12	-40	X	X	X	X	X	X					
-13	-45	X	X	X	X	X	X					
-14	-50	X	X	X	X	X	X					
-15	-55	X	X	X	X	X	X					
-16	-60	X	X	X	X	X	X					
-17	-65	X	X	X	X	X	X					
-18	-70	X	X	X	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 analysis. 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.

(G) RAB OR (COMP. # CONTAINERS Received By: (Lab Staff) Date: _____ Time: _____ Date: 2/10/04 Time: 5:00 PM	Phone Result <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result <input type="checkbox"/> Yes <input type="checkbox"/> No Additional Fax #: REMARKS: * OF BTEX & CHLIF IF PREVIOUS SAMPLES HAVE TP4 > 10
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Checked By: (Initials) Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

