AP - 26

GENERAL CORRESPONDENCE

YEAR(S):

7/14/06 → 99

P. 01

TRANSACTION REPORT

JUL-14-2006 FRI 08:51 AM

FOR:

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JUL-14	08:49 AM	914323660884	2'22"	3	SEND	OK	213	

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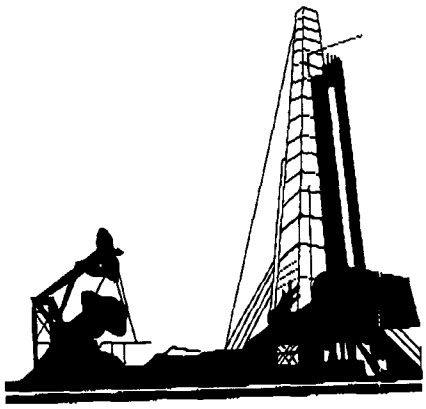


TRANSMITTAL COVER SHEET

OIL CONSERVATION DIVISION
1220 S. ST. FRANCIS DRIVE
SANTA FE, NM 87505
(505) 476-3440
(505)476-3462 (Fax)

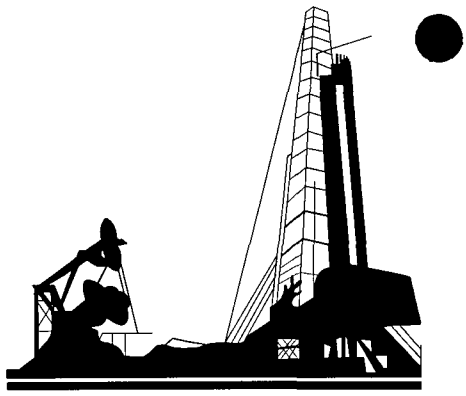
PLEASE DELIVER THIS FAX: fax # 432-366-0884

TO: LOGAN ANDERSON - ELKE ENVR.

FROM: OCD - W PRICE

called 8:49 AM
THEY REC'D

7/14/06



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PLEASE DELIVER THIS FAX: FAX # 432-366-0884

TO: LOGAN ANDERSON - ELKE ENVR.

FROM: OCD - W PRICE

DATE: 7/14/06

PAGES: 3

SUBJECT: ORDER R-12152-A MARALO HUMBLE ST #3

E-MAIL DATED 7/13/06 ENCLOSED

IF YOU HAVE TROUBLE RECEIVING THIS FAX, PLEASE CALL THE OFFICE NUMBER ABOVE.

Price, Wayne, EMNRD

To: elkeenv@yahoo.com

Cc: Johnson, Larry, EMNRD

Subject: OCD Case 131142 Order R-12152-A Maralo Humble State #3 Tank Battery Site

Attention: Maralo, LLC
in Care of Elke Environmental, Inc.
Logan Anderson:

Dear Mr. Anderson:

A. OCD is in receipt of the remediation confirmation samples sent via E-mail on June 20, 2006 and remaining information by US mail the following week. OCD has evaluated the data and hereby approves of backfilling the following excavated areas shown on the Marallo, LLC Plat map. Approved for backfilling are areas 1, 2, 4, 5, 6, 10, 11, 12, 13, 14, 15 (except a small area around sample point B15E), 17 (south half only), 18, and area 22. Maralo shall adhere to the two following conditions as well.

1. The Jal City water line shall not be in contact with any contaminated soils.
2. The on-site water well shall have a barrier placed around and sealed to the casing to prevent a preferential pathway to the groundwater. The barrier design shall be approved by OCD before installation.

B. The bottom hole report results shows some areas with concentrations that exceed the site specific clean soil standard specified in OCD's letter dated March 03, 2006 which was issued pursuant to Order R-12152-A. During the hearing process there was testimony to the issue of having the operator remove contaminated soil down to a reasonable depth in order to support native vegetation. The original investigation plan and drilling program was not completed pursuant to OCD approval and therefore OCD did not have the opportunity to require areas to be delineated or constituents to be sampled. In addition, Maralo never submitted a clean-up plan that properly delineated or addressed the contamination. In a sprit of cooperation OCD used the data presented and formulated a plan of action that in it's estimation wouild protect the environment. However, after OCD received the the Elke Environmental report it was apparent that some of the contaminated areas coincide with the areas that had the deepest migration of contaminants. OCD is concerned these areas may be preferential pathways and could cause groundwater contamination or release harmful vapors in the foreseeable future. Therefore, OCD will require Maralo LLC to present a plan for OCD approval to isolate, remediate or remove contaminants from the following areas show on the attached annotated plat map and defined below:

1. All of area 3, 7, 8, 9, 15 (small area around sample point B15E),16, and 17 (north half).

2. Area 19 sample point B19A shall in addition be delineated for BTEX, TPH and chlorides.

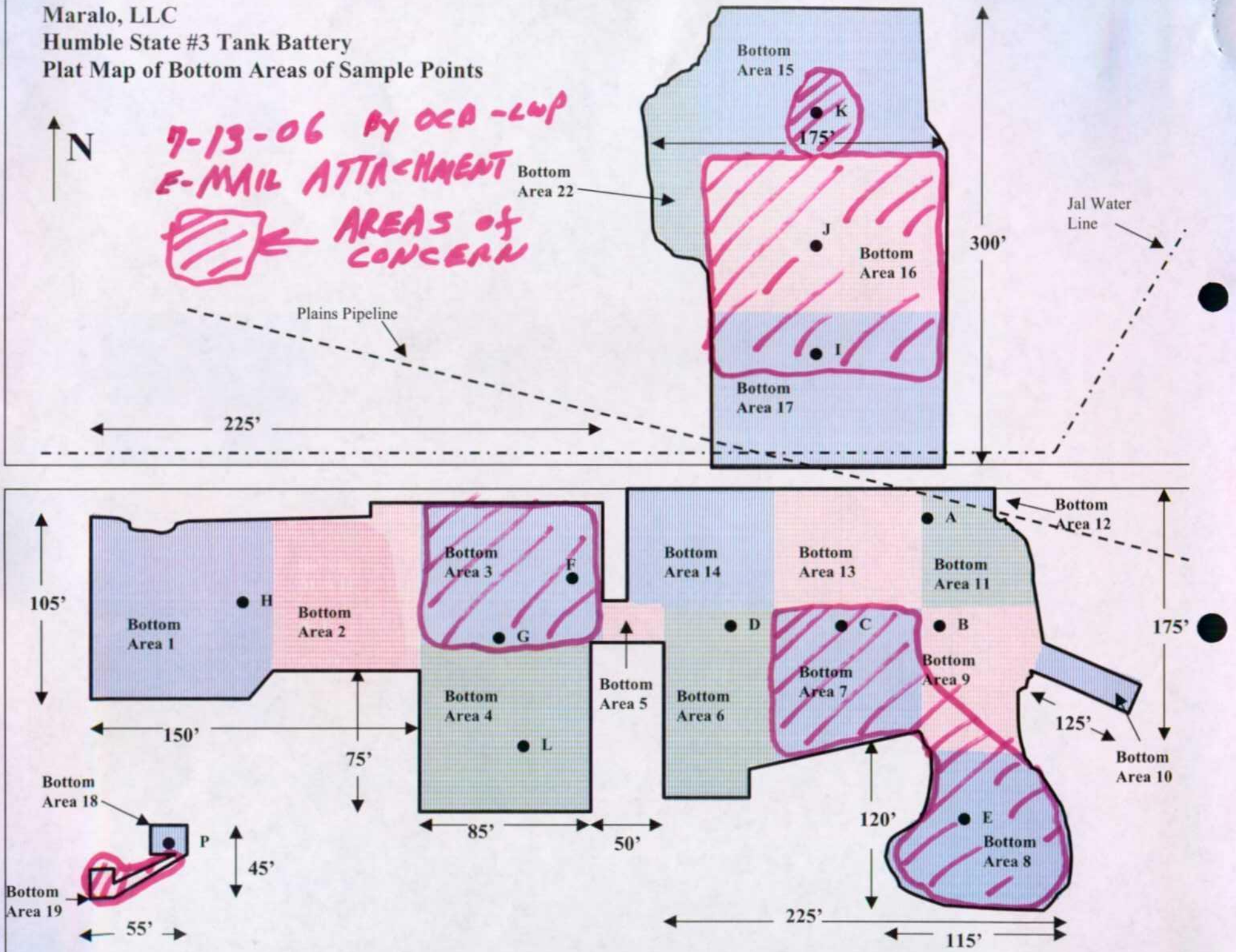
Please submit a plan for OCD approval to address the issues in section A.2 and B. above within 30 days.

If Maralo LLC wishes a technical meeting or guidance concerning the requirements please contact me at 505-476-3490 or E-mail wayne.price.state.nm.us. If OCD does not hear from Maralo LLC within 10 days of receipt of this E-mail then OCD will assume Maralo LLC understands the requirements and shall commence back filling operations and a plan to address the issues listed in Section B of this letter.

cc: Jay Anthony-Landowner
Tom Kellahin-attorney for Maralo, LLC
David Brooks, OCD legal

7/13/2006

Maralo, LLC
Humble State #3 Tank Battery
Plat Map of Bottom Areas of Sample Points



Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768
Phone (432) 366-0043 Fax (432) 366-0884

New Mexico Oil Conservation Division
Mr. Wayne Price
1220 South St. Francis Drive
Sante Fe, New Mexico 87505

2005 JUL 6 PM 3 57

Re: OCD Case 131142 Order R-12152-A
Humble State #3 Tank Battery Site
Jal, New Mexico

Mr. Wayne Price,

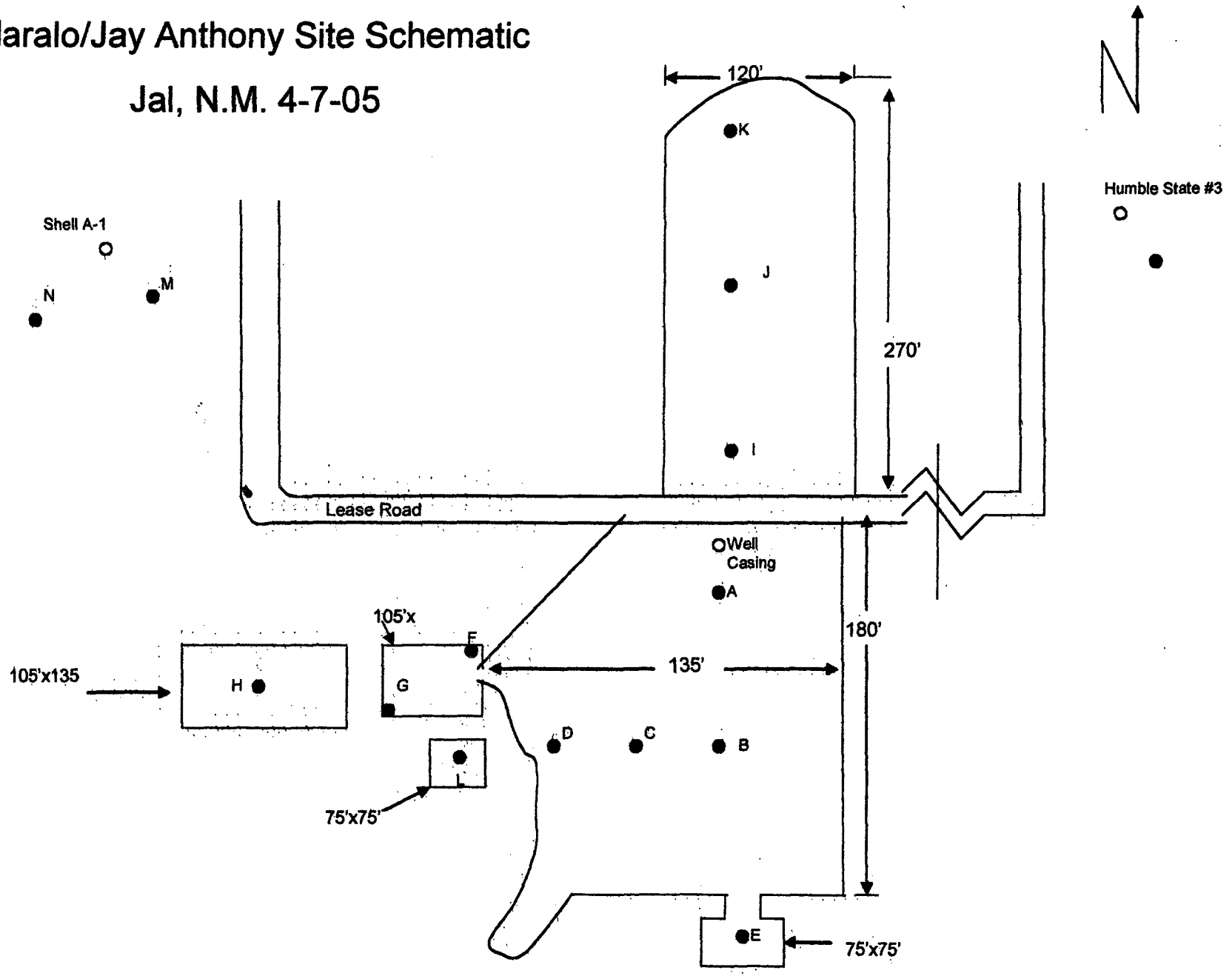
Enclosed are the plat maps, field analytical, and lab confirmation for the drill samples taken in April 2005. The lab report for the sample of the material from the P & A wells that was backfilled in the Tank Battery excavation is also included. If you have any questions about the enclosed documentation please contact me at the office or my cell 432-664-1269.

Sincerely,

Logan Anderson

Maralo/Jay Anthony Site Schematic

Jal, N.M. 4-7-05

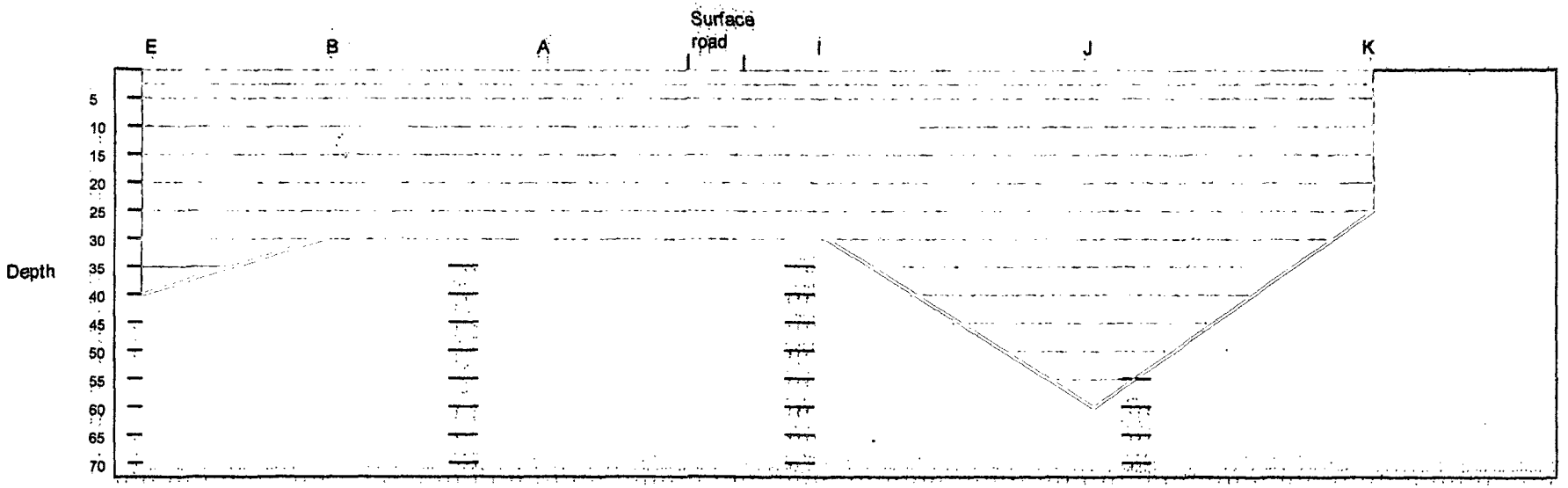


Maralo/Jay Anthony Site Schematic

Jal, N.M. 4-7-05

Looking Horizontally East to West

Area in red is more than 100 ppm PID reading

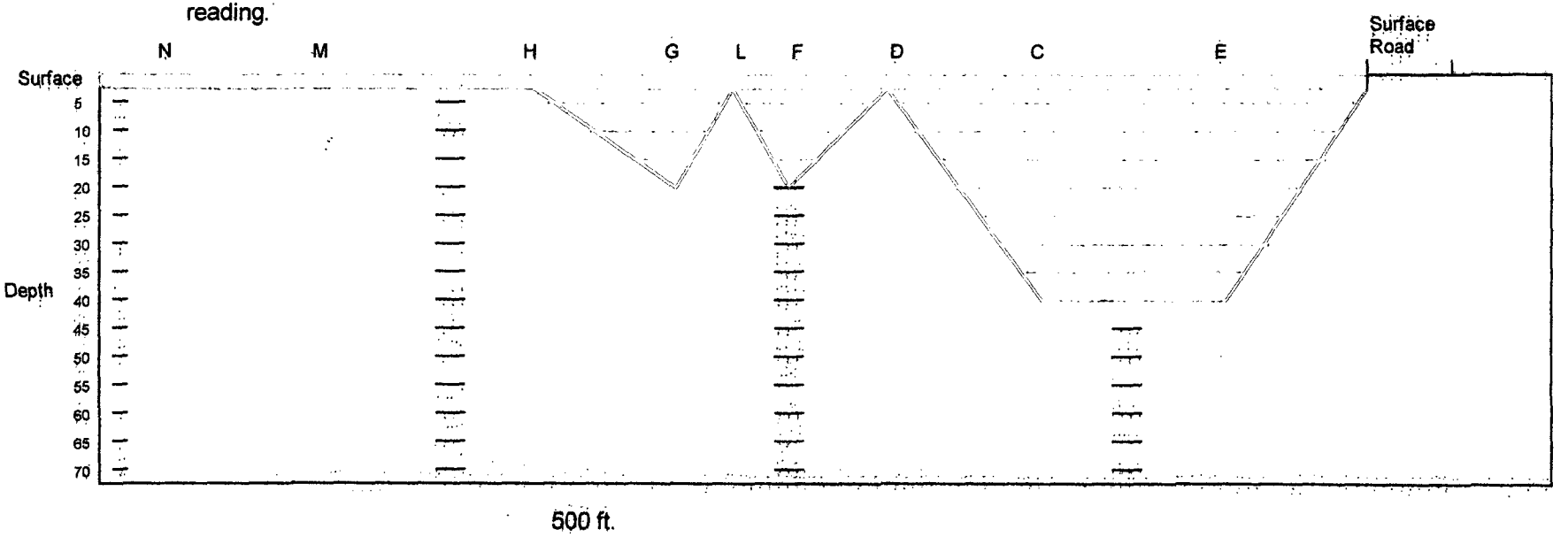


Maralo/Jay Anthony Site Schematic

Jal, N.M. 4-7-05

Looking Horizontally South to North

Area in Red is more than 100 ppm PID reading.



MARALO-JAY ANTHONY SITE

Location and Sample Data 4-7 & 8- 2005

GPS	Depth	PID	TPH	Cl
Sample Pt. A N32 05'25.2" W103 12'52.2"	5 ft.	0.01		
	10 ft.	332		
	15 ft.	356		
	20 ft.	394		
	25 ft.	189	146	24.6
	30 ft.	226		
	35 ft.	31.1		
	40 ft.	17.7		

	Depth	PID	TPH	Cl
Sample Pt. B N32 05'24.5" W103 12'52.1"	5ft.	0.01		
	10 ft.	332		
	15 ft.	356		
	20 ft.	394		
	25 ft.	189		
	30 ft.	226		
	35 ft.	31		
	40 ft.	17.7	155	45.1

Sample Pt. C N32 05'24.4" W103 12'52.9"	5 ft.	230		
	10 ft.	304		
	15 ft.	329		
	20 ft.	504		
	25 ft.	312		
	30 ft.	977		
	35 ft.	502		
	40 ft.	223		
	45 ft.	67		
	50 ft.	28	419	40.1

Sample Pt. D N32 05'24.4" W103 12'53.6"	5 ft.	2.7		
	10 ft.	1.7		
	15 ft.	21.8		
	20 ft.	25.7		
	25 ft.	11.2		
	30 ft.	2.2	ND	16.1

Sample Pt. E N32 05'23.1" W103 12'51.3"	5 ft.	38.4		
	10 ft.	313		
	15 ft.	314		
	20 ft.	455		
	25 ft.	288		
	30 ft.	357		
	35 ft.	350		
	40 ft.	405		
	45 ft.	56.6		
	50 ft.	31.7	505	52.7

Sample Pt. F N32 05'24.9" W103 12'54.8"	5 ft.	458		
	10 ft.	482		
	15 ft.	284		
	20 ft.	222		
	25 ft.	27.3		
	30 ft.	8.3	184	93.9

	GPS	Depth	PID	TPH	Cl
Sample Pt. G	N32 05'24.5" W103 12'55.2"	5 ft.	308		
		10 ft.	312		
		15 ft.	310		
		20 ft.	286		
		25 ft.	41.4		
		30 ft.	21	159	180

	GPS	Depth	PID	TPH	Cl
Sample Pt. H	N32 05'24.7" W103 12'56.4"	5 ft.	0.1		
		10 ft.	0.1		
		15 ft.	2.8		
		20 ft.	0.1		
		25 ft.	0.1		
		30 ft.	0.1	ND	38

	GPS	Depth	PID	TPH	Cl
Sample Pt. I	N32 05'26.6" W103 12'52.4"	5 ft.	135		
		10 ft.	651		
		15 ft.	944		
		20 ft.	769		
		25 ft.	1120		
		30 ft.	837		
		35 ft.	84.4		
		40 ft.	99.3		
		45 ft.	33.3		
		50 ft.	92.9		
		55 ft.	26.1		
		60 ft.	29.5	ND	43

	GPS	Depth	PID	TPH	Cl
Sample Pt. J	N32 05'27.6" W103 12'52.4"	5 ft.	307		
		10 ft.	519		
		15 ft.	525		
		20 ft.	622		
		25 ft.	292		
		30 ft.	271		
		35 ft.	231		
		40 ft.	326		
		45 ft.	329		
		50 ft.	201		
		55 ft.	269		
		60 ft.	307		
		65 ft.	84.3		
		70 ft.	39.1	173	209

	GPS	Depth	PID	TPH	Cl
Sample Pt. K	N32 05'28.2" W103 12'52.3"	5 ft.	291		
		10 ft.	426		
		15 ft.	311		
		20 ft.	267		
		25 ft.	268		
		30 ft.	56.7		
		35 ft.	24.4		
		40 ft.	33.6	215	220

	GPS	Depth	PID	TPH	Cl
Sample Pt. L	N32 05'23.8" W103 12'55.1"	5 ft.	0.6		
		10 ft.	0.1		
		15 ft.	2.2		
		20 ft.	0.1		
		25 ft.	0.1		
		30 ft.	0.1	ND	106

	GPS	Depth	PID	TPH	Cl
Sample Pt. M	N32 05'32.4" W103 13'00.0"	5 ft.	23.5		
		10 ft.	3.3		
		15 ft.	2.5		
		20 ft.	0.1		
		25 ft.	0.2		899

	GPS	Depth	PID	TPH	Cl
Sample Pt. N	N32 05'32.1" W103 13'00.4"	5 ft.	0.1		
		10 ft.	0.6		
		15 ft.	9.1		
		20 ft.	4.7		
		25 ft.	3	ND	467

	GPS	Depth	PID	TPH	Cl
Sample Pt. O	N32 05'32.4" W103 12'45.4"	5 ft.	0.1		
		10 ft.	0.1		
		15 ft.	0.1		
		20 ft.	0.1		662

Sample Pt. Well N32 05'25.5" W103 12'[redacted]

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Logan Anderson

Elke Environmental

P.O. Box 14167

Odessa, TX 79768

SPLP of Backfill

Project: Maralo

Project Number: None Given

Location: Humble State #3

Lab Order Number: 6F20004

Report Date: 06/22/06

Elke Environmental
P.O. Box 14167
Odessa TX, 79768

Project: Maralo
Project Number: None Given
Project Manager: Logan Anderson

Fax: (432) 366-0884

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Backfill@ 11'	6F20004-01	Soil	06/20/06 10:05	06/20/06 13:24

Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Backfill@ 11' (6F20004-01) Soil									
Carbon Ranges C6-C12	ND	3.00	mg/L	0.08	EF62112	06/21/06	06/21/06	1312/8015M	
Carbon Ranges C12-C28	ND	3.00	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	3.00	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	3.00	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*73.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*71.6 %*	*70-130*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Elke Environmental
P.O. Box 14167
Odessa TX, 79768

Project: Maralo
Project Number: None Given
Project Manager: Logan Anderson

Fax: (432) 366-0884

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Backfill@ 11' (6F20004-01) Soil									
Chloride	ND	5.00	mg/L	1	EF62204	06/22/06	06/22/06	1312/9253	
% Moisture	**2.2**	0.1	%	"	EF62104	06/20/06	06/21/06	% calculation	

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Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

SPLP Metals 1312 by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Extracted	Prepared	Analyzed	Method	Notes
Backfill@ 11' (6F20004-01) Soil										
Mercury	**J [0.000120]**	0.000250	mg/L	1	EF62120	SPLP6/20/06	06/21/06	06/21/06	EPA 7470A	J
Chromium	**J [0.00468]**	0.00975	"	10	EF62123	SPLP 06/20/06	06/21/06	06/21/06	EPA 6020A	J
Arsenic	**ND**	0.0170	"	"	"	"	"	"	"	
Selenium	ND	0.0300	"	"	"	"	"	"	"	
Silver	ND	0.00405	"	"	"	"	"	"	"	
Cadmium	ND	0.00692	"	"	"	"	"	"	"	
Barium	**0.0229**	0.00489	"	"	"	"	"	"	"	
Lead	ND	0.00296	"	"	"	"	"	"	"	

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

SPLP Volatile Halocarbons by EPA Method 1312/8021B

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Extracted	Prepared	Analyzed	Method	Notes
Backfill@ 11' (6F20004-01) Soil										
Benzene	ND	0.00100	mg/L	1	EF62109	06/20/06 SPLP	06/21/06	06/21/06	EPA 8021B	
Toluene	**J [0.000663]**	0.00100	"	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	"	
Xylene (p/m)	**ND**	0.00100	"	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*101 %*		*80-120*	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*82.8 %*		*80-120*	"	"	"	"	"	

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Elke Environmental
P.O. Box 14167
Odessa TX, 79768

Project: Maralo
Project Number: None Given
Project Manager: Logan Anderson

Fax: (432) 366-0884

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62112 - EPA GC 1312										
Blank (EF62112-BLK1)				Prepared & Analyzed: 06/21/06						
Carbon Ranges C6-C12	ND	3.00	mg/L							
Carbon Ranges C12-C28	ND	3.00	"							
Carbon Ranges C28-C35	ND	3.00	"							
Total Hydrocarbon nC6-nC35	ND	3.00	"							
Surrogate: 1-Chlorooctane	*36.3*		"	*50.0*		*72.6*	*70-130*			
Surrogate: 1-Chlorooctadecane	*36.0*		"	*50.0*		*72.0*	*70-130*			
LCS (EF62112-BS1)				Prepared & Analyzed: 06/21/06						
Carbon Ranges C6-C12	50.2	3.00	mg/L	50.0		100	75-125			
Carbon Ranges C12-C28	47.0	3.00	"	50.0		94.0	75-125			
Carbon Ranges C28-C35	ND	3.00	"	0.00			75-125			
Total Hydrocarbon nC6-nC35	97.2	3.00	"	100		97.2	75-125			
Surrogate: 1-Chlorooctane	*37.9*		"	*50.0*		*75.8*	*70-130*			
Surrogate: 1-Chlorooctadecane	*37.5*		"	*50.0*		*75.0*	*70-130*			
Calibration Check (EF62112-CCV1)				Prepared & Analyzed: 06/21/06						
Carbon Ranges C6-C12	23.5		mg/L	25.0		94.0	80-120			
Carbon Ranges C12-C28	27.9		"	25.0		112	80-120			
Total Hydrocarbon nC6-nC35	51.4		"	50.0		103	80-120			
Surrogate: 1-Chlorooctane	*45.5*		"	*50.0*		*91.0*	*70-130*			
Surrogate: 1-Chlorooctadecane	*41.1*		"	*50.0*		*82.2*	*70-130*			
Matrix Spike (EF62112-MS1)	**Source: 6F20004-01**			Prepared & Analyzed: 06/21/06						
Carbon Ranges C6-C12	49.7	3.00	mg/L	50.0	ND	99.4	75-125			
Carbon Ranges C12-C28	47.9	3.00	"	50.0	ND	95.8	75-125			
Carbon Ranges C28-C35	ND	3.00	"	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	97.6	3.00	"	100	ND	97.6	75-125			
Surrogate: 1-Chlorooctane	*41.1*		"	*50.0*		*82.2*	*70-130*			
Surrogate: 1-Chlorooctadecane	*35.4*		"	*50.0*		*70.8*	*70-130*			

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Elke Environmental
P.O. Box 14167
Odessa TX, 79768

Project: Maralo
Project Number: None Given
Project Manager: Logan Anderson

Fax: (432) 366-0884

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62112 - EPA GC 1312										
Matrix Spike Dup (EF62112-MSD1)	**Source: 6F20004-01**			Prepared & Analyzed: 06/21/06						
Carbon Ranges C6-C12	49.9	3.00	mg/L	50.0	ND	99.8	75-125	0.402	20	
Carbon Ranges C12-C28	47.9	3.00	"	50.0	ND	95.8	75-125	0.00	20	
Carbon Ranges C28-C35	ND	3.00	"	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	97.8	3.00	"	100	ND	97.8	75-125	0.205	20	
Surrogate: 1-Chlorooctane	*41.3*		"	*50.0*		*82.6*	*70-130*			
Surrogate: 1-Chlorooctadecane	*35.7*		"	*50.0*		*71.4*	*70-130*			

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Elke Environmental
P.O. Box 14167
Odessa TX, 79768

Project: Maralo
Project Number: None Given
Project Manager: Logan Anderson

Fax: (432) 366-0884

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62104 - General Preparation (Prep)										
Duplicate (EF62104-DUP1)	**Source: 6F19007-01**			Prepared: 06/20/06 Analyzed: 06/21/06						
% Solids	92.5		%		93.1			0.647	20	
Duplicate (EF62104-DUP2)	**Source: 6F20013-03**			Prepared: 06/20/06 Analyzed: 06/21/06						
% Solids	97.0		%		95.0			2.08	20	
Batch EF62204 - EPA 1312/9253										
Blank (EF62204-BLK1)				Prepared & Analyzed: 06/22/06						
Chloride	0.00	5.00	mg/L							
LCS (EF62204-BS1)				Prepared & Analyzed: 06/22/06						
Chloride	103		mg/L	100		103	80-120			
LCS Dup (EF62204-BSD1)				Prepared & Analyzed: 06/22/06						
Chloride	103		mg/L	100		103	80-120	0.00	20	
Matrix Spike (EF62204-MS1)	**Source: 6F20004-01**			Prepared & Analyzed: 06/22/06						
Chloride	4960		mg/L	5000	ND	99.2	80-120			
Reference (EF62204-SRM1)				Prepared & Analyzed: 06/22/06						
Chloride	4700		mg/L	5000		94.0	80-120			

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Elke Environmental
P.O. Box 14167
Odessa TX, 79768

Project: Maralo
Project Number: None Given
Project Manager: Logan Anderson

Fax: (432) 366-0884

SPLP Metals 1312 by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62120 - EPA 1312/7470										
Blank (EF62120-BLK1)				Prepared & Analyzed: 06/21/06						
Mercury	ND	0.000250	mg/L							
LCS (EF62120-BS1)				Prepared & Analyzed: 06/21/06						
Mercury	0.00115	0.000250	mg/L	0.00100		115	85-115			
LCS Dup (EF62120-BSD1)				Prepared & Analyzed: 06/21/06						
Mercury	0.00111	0.000250	mg/L	0.00100		111	85-115	3.54	20	
Calibration Check (EF62120-CCV1)				Prepared & Analyzed: 06/21/06						
Mercury	0.00109		mg/L	0.00100		109	90-110			
Matrix Spike (EF62120-MS1)		**Source: 6F20004-01**		Prepared & Analyzed: 06/21/06						
Mercury	0.00111	0.000250	mg/L	0.00100	0.000120	99.0	75-125			
Batch EF62123 - EPA 1312/3005										
Blank (EF62123-BLK1)				Prepared & Analyzed: 06/21/06						
Chromium	ND	0.000975	mg/L							
Arsenic	ND	0.00170	"							
Selenium	ND	0.00300	"							
Silver	ND	0.000405	"							
Cadmium	ND	0.000692	"							
Barium	ND	0.000489	"							
Lead	ND	0.000296	"							
LCS (EF62123-BS1)				Prepared & Analyzed: 06/21/06						
Chromium	0.198	0.000975	mg/L	0.200		99.0	85-115			
Arsenic	0.847	0.00170	"	0.800		106	85-115			
Selenium	0.449	0.00300	"	0.400		112	85-115			
Silver	0.105	0.000405	"	0.100		105	85-115			
Cadmium	0.208	0.000692	"	0.200		104	85-115			
Barium	0.219	0.000489	"	0.200		110	85-115			
Lead	1.14	0.000296	"	1.10		104	85-115			

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Elke Environmental
P.O. Box 14167
Odessa TX, 79768

Project: Maralo
Project Number: None Given
Project Manager: Logan Anderson

Fax: (432) 366-0884

SPLP Metals 1312 by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62123 - EPA 1312/3005										
LCS Dup (EF62123-BSD1)				Prepared & Analyzed: 06/21/06						
Chromium	0.198	0.000975	mg/L	0.200		99.0	85-115	0.00	20	
Arsenic	0.857	0.00170	"	0.800		107	85-115	1.17	20	
Selenium	0.449	0.00300	"	0.400		112	85-115	0.00	20	
Silver	0.107	0.000405	"	0.100		107	85-115	1.89	20	
Cadmium	0.208	0.000692	"	0.200		104	85-115	0.00	20	
Barium	0.215	0.000489	"	0.200		108	85-115	1.84	20	
Lead	1.15	0.000296	"	1.10		105	85-115	0.873	20	
Calibration Check (EF62123-CCV1)				Prepared & Analyzed: 06/21/06						
Chromium	0.0470		mg/L	0.0500		94.0	90-110			
Arsenic	0.0504		"	0.0500		101	90-110			
Selenium	0.0513		"	0.0500		103	90-110			
Silver	0.0504		"	0.0500		101	90-110			
Cadmium	0.0495		"	0.0500		99.0	90-110			
Barium	0.0507		"	0.0500		101	90-110			
Lead	0.0502		"	0.0500		100	90-110			
Matrix Spike (EF62123-MS1)	**Source: 6F20004-01**			Prepared & Analyzed: 06/21/06						
Chromium	0.185	0.00975	mg/L	0.200	0.00468	90.2	75-125			
Arsenic	0.787	0.0170	"	0.800	ND	98.4	75-125			
Selenium	0.403	0.0300	"	0.400	ND	101	75-125			
Silver	0.119	0.00405	"	0.100	ND	119	75-125			
Cadmium	0.192	0.00692	"	0.200	ND	96.0	75-125			
Barium	0.232	0.00489	"	0.200	0.0229	105	75-125			
Lead	1.04	0.00296	"	1.10	ND	94.5	75-125			
Matrix Spike Dup (EF62123-MSD1)	**Source: 6F20004-01**			Prepared & Analyzed: 06/21/06						
Chromium	0.185	0.00975	mg/L	0.200	0.00468	90.2	75-125	0.00	20	
Arsenic	0.796	0.0170	"	0.800	ND	99.5	75-125	1.14	20	
Selenium	0.417	0.0300	"	0.400	ND	104	75-125	3.41	20	
Silver	0.116	0.00405	"	0.100	ND	116	75-125	2.55	20	
Cadmium	0.193	0.00692	"	0.200	ND	96.5	75-125	0.519	20	
Barium	0.232	0.00489	"	0.200	0.0229	105	75-125	0.00	20	
Lead	1.04	0.00296	"	1.10	ND	94.5	75-125	0.00	20	

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Odessa TX, 79768

Project: Maralo
Project Number: None Given
Project Manager: Logan Anderson

Fax: (432) 366-0884

SPLP Volatile Halocarbons by EPA Method 1312/8021B - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62109 - EPA GC 1312										
Blank (EF62109-BLK1)				Prepared & Analyzed: 06/21/06						
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	*45.8*		*ug/kg*	*40.0*		*114*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*37.6*		*"*	*40.0*		*94.0*	*80-120*			
LCS (EF62109-BS1)				Prepared & Analyzed: 06/21/06						
Benzene	0.0523	0.00100	mg/L	0.0500		105	80-120			
Toluene	0.0568	0.00100	"	0.0500		114	80-120			
Ethylbenzene	0.0548	0.00100	"	0.0500		110	80-120			
Xylene (p/m)	0.119	0.00100	"	0.100		119	80-120			
Xylene (o)	0.0582	0.00100	"	0.0500		116	80-120			
Surrogate: a,a,a-Trifluorotoluene	*42.8*		*ug/kg*	*40.0*		*107*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*41.1*		*"*	*40.0*		*103*	*80-120*			
Calibration Check (EF62109-CCV1)				Prepared & Analyzed: 06/21/06						
Benzene	53.5		ug/kg	50.0		107	80-120			
Toluene	58.0		"	50.0		116	80-120			
Ethylbenzene	55.2		"	50.0		110	80-120			
Xylene (p/m)	115		"	100		115	80-120			
Xylene (o)	57.0		"	50.0		114	80-120			
Surrogate: a,a,a-Trifluorotoluene	*41.1*		*"*	*40.0*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*40.7*		*"*	*40.0*		*102*	*80-120*			
Matrix Spike (EF62109-MS1)	**Source: 6F20004-01**			Prepared & Analyzed: 06/21/06						
Benzene	0.0533	0.00100	mg/L	0.0500	ND	107	80-120			
Toluene	0.0585	0.00100	"	0.0500	0.000663	116	80-120			
Ethylbenzene	0.0516	0.00100	"	0.0500	ND	103	80-120			
Xylene (p/m)	0.120	0.00100	"	0.100	ND	120	80-120			
Xylene (o)	0.0586	0.00100	"	0.0500	ND	117	80-120			
Surrogate: a,a,a-Trifluorotoluene	*40.4*		*ug/kg*	*40.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*40.0*		*"*	*40.0*		*100*	*80-120*			

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Elke Environmental
P.O. Box 14167
Odessa TX, 79768

Project: Maralo
Project Number: None Given
Project Manager: Logan Anderson

Fax: (432) 366-0884

SPLP Volatile Halocarbons by EPA Method 1312/8021B - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62109 - EPA GC 1312										
Matrix Spike Dup (EF62109-MSD1)	**Source: 6F20004-01**			Prepared & Analyzed: 06/21/06						
Benzene	0.0496	0.00100	mg/L	0.0500	ND	99.2	80-120	7.57	20	
Toluene	0.0558	0.00100	"	0.0500	0.000663	110	80-120	5.31	20	
Ethylbenzene	0.0526	0.00100	"	0.0500	ND	105	80-120	1.92	20	
Xylene (p/m)	0.114	0.00100	"	0.100	ND	114	80-120	5.13	20	
Xylene (o)	0.0564	0.00100	"	0.0500	ND	113	80-120	3.48	20	
Surrogate: a,a,a-Trifluorotoluene	*40.5*		*ug/kg*	*40.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*39.5*		"	*40.0*		*98.8*	*80-120*			

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Elke Environmental
P.O. Box 14167
Odessa TX, 79768

Project: Maralo
Project Number: None Given
Project Manager: Logan Anderson

Fax: (432) 366-0884

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 6/22/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

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If you have received this material in error, please notify us immediately at 432-563-1800.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

GPS 32°05.416' / 103° 12.918'

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: LOGAN ANDERSON
Company Name: ELKE ENVIRONMENTAL
Company Address: PO BOX 14167
City/State/Zip: Odessa, TX 79768
Telephone No: 366-0043
Fax No: 366-0884
Sampler Signature: [signature]
Email:

Project Name: Marala
Project #:
Project Loc: Humble State #3
PO #:

Analyze For: SPLP 1312 (TPH, Anions, Metals, BTEX)

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers 4oz	Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Water	Sludge	Soil	Other (specify):	TPH: 418.1 8015M 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24 hr	Standard TAT
6F20004 -01	BACKFILL @ 11'	6-20-06	10:05AM	1	X									X		X		X		X			X			X	

Special Instructions: Rush 1312 SPLP FOR BTEX 8021B, TPH 8015M + Chloride RCRA 8 METALS

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	6-20-06	10:25AM	[signature]	6-20-06	10:25A
[signature]	6-20-06	13:24	Received by ELOT: [signature]	6/20/06	13:24

Sample Containers Intact? (Y) N
Labels on container? (Y) N
Custody Seals: (Containers) / Coolers
Temperature Upon Receipt: 5.0

Laboratory Comments: 4oz glass

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: Elke Env.

Date/Time: 6/20/06 13:24

Order #: 6F20004

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	5.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

_____

_____

_____

Variance Documentation:

Contact Person: _____ Date/Time: _____ Contacted by: _____

Regarding:

_____

_____

_____

Corrective Action Taken:

_____

_____

_____

_____

_____

_____

_____

_____

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Rob Elam

Allstate Environmental Services, LLC

P.O. Box 11322

Midland, TX 79702

DRILLING REPORT

Project: Anthony-Maralo

Project Number: None Given

Location: Anthony-Maralo

Lab Order Number: 5D08008

Report Date: 04/15/05

Allstate Environmental Services, LLC	Project: Anthony-Maralo	Fax: (432) 682-4182
P.O. Box 11322	Project Number: None Given	**Reported:**
Midland TX, 79702	Project Manager: Rob Elam	04/15/05 07:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
JA-A-25'	5D08008-01	Soil	04/06/05 07:20	04/08/05 13:15
JA-B-40'	5D08008-02	Soil	04/06/05 07:40	04/08/05 13:15
JA-C-50	5D08008-03	Soil	04/06/05 08:00	04/08/05 13:15
JA-D-30	5D08008-04	Soil	04/06/05 08:20	04/08/05 13:15
JA-H-30	5D08008-05	Soil	04/06/05 09:40	04/08/05 13:15
JA-G-30	5D08008-06	Soil	04/06/05 09:20	04/08/05 13:15
JA-F-30	5D08008-07	Soil	04/06/05 09:00	04/08/05 13:15
JA-E-50	5D08008-08	Soil	04/06/05 08:40	04/08/05 13:15
JA-I-60	5D08008-09	Soil	04/06/05 07:00	04/08/05 13:15
JA-J-70	5D08008-10	Soil	04/07/05 07:00	04/08/05 13:15
JA-K-40	5D08008-11	Soil	04/07/05 07:20	04/08/05 13:15
JA-L-30	5D08008-12	Soil	04/07/05 07:40	04/08/05 13:15
JA-B-30	5D08008-13	Soil	04/07/05 08:00	04/08/05 13:15
Humble State #3 0-20	5D08008-14	Soil	04/07/05 11:00	04/08/05 13:15
Shell A #1- N-25	5D08008-15	Soil	04/07/05 10:20	04/08/05 13:15
Shell A #1- M-25	5D08008-16	Soil	04/07/05 10:00	04/08/05 13:15
JA-J-60	5D08008-17	Soil	04/07/05 10:40	04/08/05 13:15
JA-I-30	5D08008-18	Soil	04/07/05 11:20	04/08/05 13:15
JA-E-40	5D08008-19	Soil	04/07/05 11:40	04/08/05 13:15

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Allstate Environmental Services, LLC	Project: Anthony-Maralo	Fax: (432) 682-4182
P.O. Box 11322	Project Number: None Given	**Reported:**
Midland TX, 79702	Project Manager: Rob Elam	04/15/05 07:34

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
JA-A-25' (5D08008-01) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	ED50813	04/08/05	04/10/05	EPA 8015M	
Diesel Range Organics >C12-C35	**146**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**146**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*98.4 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*105 %*	*70-130*		"	"	"	"	
JA-B-40' (5D08008-02) Soil									
Gasoline Range Organics C6-C12	**J [7.13]**	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	J
Diesel Range Organics >C12-C35	**155**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**155**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*109 %*	*70-130*		"	"	"	"	
JA-C-50 (5D08008-03) Soil									
Gasoline Range Organics C6-C12	**21.7**	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	**397**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**419**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*108 %*	*70-130*		"	"	"	"	
JA-D-30 (5D08008-04) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*95.2 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*98.8 %*	*70-130*		"	"	"	"	
JA-H-30 (5D08008-05) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*95.2 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*99.2 %*	*70-130*		"	"	"	"	

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Allstate Environmental Services, LLC	Project: Anthony-Maralo	Fax: (432) 682-4182
P.O. Box 11322	Project Number: None Given	**Reported:**
Midland TX, 79702	Project Manager: Rob Elam	04/15/05 07:34

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
JA-G-30 (5D08008-06) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	**159**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**159**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*91.6 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*96.4 %*	*70-130*		"	"	"	"	
JA-F-30 (5D08008-07) Soil									
Gasoline Range Organics C6-C12	**J [8.53]**	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	J
Diesel Range Organics >C12-C35	**184**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**184**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*92.4 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*95.2 %*	*70-130*		"	"	"	"	
JA-E-50 (5D08008-08) Soil									
Gasoline Range Organics C6-C12	**32.5**	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	**472**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**505**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*90.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*92.8 %*	*70-130*		"	"	"	"	
JA-I-60 (5D08008-09) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*120 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*121 %*	*70-130*		"	"	"	"	
JA-J-70 (5D08008-10) Soil									
Gasoline Range Organics C6-C12	**24.5**	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	**148**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**173**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*105 %*	*70-130*		"	"	"	"	

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Allstate Environmental Services, LLC	Project: Anthony-Maralo	Fax: (432) 682-4182
P.O. Box 11322	Project Number: None Given	**Reported:**
Midland TX, 79702	Project Manager: Rob Elam	04/15/05 07:34

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
JA-K-40 (5D08008-11) Soil									
Gasoline Range Organics C6-C12	**15.7**	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	**199**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**215**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*88.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*91.8 %*	*70-130*		"	"	"	"	
JA-L-30 (5D08008-12) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*86.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*89.8 %*	*70-130*		"	"	"	"	
JA-B-30 (5D08008-13) Soil									
Gasoline Range Organics C6-C12	**18.0**	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	**85.5**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**104**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*94.2 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*95.4 %*	*70-130*		"	"	"	"	
Humble State #3 0-20 (5D08008-14) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*84.4 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*87.4 %*	*70-130*		"	"	"	"	
Shell A #1- N-25 (5D08008-15) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*96.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*98.6 %*	*70-130*		"	"	"	"	

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Allstate Environmental Services, LLC	Project: Anthony-Maralo	Fax: (432) 682-4182
P.O. Box 11322	Project Number: None Given	**Reported:**
Midland TX, 79702	Project Manager: Rob Elam	04/15/05 07:34

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Shell A #1- M-25 (5D08008-16) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*86.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*86.8 %*	*70-130*		"	"	"	"	
JA-J-60 (5D08008-17) Soil									
Gasoline Range Organics C6-C12	**439**	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	**3160**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**3600**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*96.2 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*109 %*	*70-130*		"	"	"	"	
JA-I-30 (5D08008-18) Soil									
Gasoline Range Organics C6-C12	**139**	10.0	mg/kg dry	1	ED50813	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	**424**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**563**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*78.4 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*87.4 %*	*70-130*		"	"	"	"	
JA-E-40 (5D08008-19) Soil									
Gasoline Range Organics C6-C12	**1060**	10.0	mg/kg dry	1	ED50815	04/08/05	04/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	**6230**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**7290**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*93.4 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*102 %*	*70-130*		"	"	"	"	

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Allstate Environmental Services, LLC	Project: Anthony-Maralo	Fax: (432) 682-4182
P.O. Box 11322	Project Number: None Given	**Reported:**
Midland TX, 79702	Project Manager: Rob Elam	04/15/05 07:34

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
JA-A-25' (5D08008-01) Soil									
Chloride	**24.6**	5.00	mg/kg	10	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**10.7**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
JA-B-40' (5D08008-02) Soil									
Chloride	**45.1**	5.00	mg/kg	10	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**8.3**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
JA-C-50 (5D08008-03) Soil									
Chloride	**40.1**	5.00	mg/kg	10	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**7.2**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
JA-D-30 (5D08008-04) Soil									
Chloride	**16.1**	5.00	mg/kg	10	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**5.5**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
JA-H-30 (5D08008-05) Soil									
Chloride	**37.7**	10.0	mg/kg	20	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**8.1**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
JA-G-30 (5D08008-06) Soil									
Chloride	**180**	10.0	mg/kg	20	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**9.1**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
JA-F-30 (5D08008-07) Soil									
Chloride	**93.9**	10.0	mg/kg	20	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**8.9**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
JA-E-50 (5D08008-08) Soil									
Chloride	**52.7**	5.00	mg/kg	10	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**6.8**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Allstate Environmental Services, LLC	Project: *Anthony-Maralo*	Fax: (432) 682-4182
P.O. Box 11322	Project Number: None Given	**Reported:**
Midland TX, 79702	Project Manager: Rob Elam	04/15/05 07:34

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
JA-I-60 (5D08008-09) Soil									
Chloride	**42.9**	5.00	mg/kg	10	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**7.4**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
JA-J-70 (5D08008-10) Soil									
Chloride	**209**	5.00	mg/kg	10	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**7.4**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
JA-K-40 (5D08008-11) Soil									
Chloride	**220**	10.0	mg/kg	20	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**6.4**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
JA-L-30 (5D08008-12) Soil									
Chloride	**106**	25.0	mg/kg	50	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
JA-B-30 (5D08008-13) Soil									
Chloride	**35.5**	5.00	mg/kg	10	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**11.5**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
Humble State #3 0-20 (5D08008-14) Soil									
Chloride	**467**	20.0	mg/kg	40	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**3.2**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
Shell A #1- N-25 (5D08008-15) Soil									
Chloride	**662**	50.0	mg/kg	100	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**8.8**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
Shell A #1- M-25 (5D08008-16) Soil									
Chloride	**899**	50.0	mg/kg	100	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**10.5**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Allstate Environmental Services, LLC	Project: Anthony-Maralo	Fax: (432) 682-4182
P.O. Box 11322	Project Number: None Given	**Reported:**
Midland TX, 79702	Project Manager: Rob Elam	04/15/05 07:34

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
JA-J-60 (5D08008-17) Soil									
Chloride	**175**	5.00	mg/kg	10	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**7.7**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
JA-I-30 (5D08008-18) Soil									
Chloride	**33.2**	5.00	mg/kg	10	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**8.6**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	
JA-E-40 (5D08008-19) Soil									
Chloride	**65.3**	5.00	mg/kg	10	ED51212	04/11/05	04/11/05	EPA 300.0	
% Moisture	**6.3**	0.1	%	1	ED51107	04/08/05	04/11/05	% calculation	

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED50813 - Solvent Extraction (GC)										
Blank (ED50813-BLK1)				Prepared: 04/08/05 Analyzed: 04/10/05						
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*36.4*		*mg/kg*	*50.0*		*72.8*	*70-130*			
Surrogate: 1-Chlorooctadecane	*36.1*		"	*50.0*		*72.2*	*70-130*			
LCS (ED50813-BS1)				Prepared: 04/08/05 Analyzed: 04/10/05						
Gasoline Range Organics C6-C12	494	10.0	mg/kg wet	500		98.8	75-125			
Diesel Range Organics >C12-C35	483	10.0	"	500		96.6	75-125			
Total Hydrocarbon C6-C35	977	10.0	"	1000		97.7	75-125			
Surrogate: 1-Chlorooctane	*38.6*		*mg/kg*	*50.0*		*77.2*	*70-130*			
Surrogate: 1-Chlorooctadecane	*38.2*		"	*50.0*		*76.4*	*70-130*			
Calibration Check (ED50813-CCV1)				Prepared: 04/08/05 Analyzed: 04/10/05						
Gasoline Range Organics C6-C12	497		mg/kg	500		99.4	80-120			
Diesel Range Organics >C12-C35	511		"	500		102	80-120			
Total Hydrocarbon C6-C35	1010		"	1000		101	80-120			
Surrogate: 1-Chlorooctane	*58.6*		"	*50.0*		*117*	*70-130*			
Surrogate: 1-Chlorooctadecane	*59.9*		"	*50.0*		*120*	*70-130*			
Matrix Spike (ED50813-MS1)	**Source: 5D08008-01**			Prepared: 04/08/05 Analyzed: 04/11/05						
Gasoline Range Organics C6-C12	588	10.0	mg/kg dry	560	ND	105	75-125			
Diesel Range Organics >C12-C35	734	10.0	"	560	146	105	75-125			
Total Hydrocarbon C6-C35	1320	10.0	"	1120	146	105	75-125			
Surrogate: 1-Chlorooctane	*56.5*		*mg/kg*	*50.0*		*113*	*70-130*			
Surrogate: 1-Chlorooctadecane	*60.3*		"	*50.0*		*121*	*70-130*			
Matrix Spike Dup (ED50813-MSD1)	**Source: 5D08008-01**			Prepared: 04/08/05 Analyzed: 04/11/05						
Gasoline Range Organics C6-C12	587	10.0	mg/kg dry	560	ND	105	75-125	0.170	20	
Diesel Range Organics >C12-C35	692	10.0	"	560	146	97.5	75-125	5.89	20	
Total Hydrocarbon C6-C35	1280	10.0	"	1120	146	101	75-125	3.08	20	
Surrogate: 1-Chlorooctane	*55.2*		*mg/kg*	*50.0*		*110*	*70-130*			
Surrogate: 1-Chlorooctadecane	*57.9*		"	*50.0*		*116*	*70-130*			

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Allstate Environmental Services, LLC	Project: Anthony-Maralo	Fax: (432) 682-4182
P.O. Box 11322	Project Number: None Given	**Reported:**
Midland TX, 79702	Project Manager: Rob Elam	04/15/05 07:34

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED50815 - Solvent Extraction (GC)										
Blank (ED50815-BLK1)				Prepared: 04/08/05 Analyzed: 04/11/05						
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*38.9*		*mg/kg*	*50.0*		*77.8*	*70-130*			
Surrogate: 1-Chlorooctadecane	*39.2*		*"*	*50.0*		*78.4*	*70-130*			
LCS (ED50815-BS1)				Prepared: 04/08/05 Analyzed: 04/11/05						
Gasoline Range Organics C6-C12	460	10.0	mg/kg wet	500		92.0	75-125			
Diesel Range Organics >C12-C35	449	10.0	"	500		89.8	75-125			
Total Hydrocarbon C6-C35	909	10.0	"	1000		90.9	75-125			
Surrogate: 1-Chlorooctane	*39.7*		*mg/kg*	*50.0*		*79.4*	*70-130*			
Surrogate: 1-Chlorooctadecane	*35.8*		*"*	*50.0*		*71.6*	*70-130*			
Calibration Check (ED50815-CCV1)				Prepared: 04/08/05 Analyzed: 04/11/05						
Gasoline Range Organics C6-C12	516		mg/kg	500		103	80-120			
Diesel Range Organics >C12-C35	515		"	500		103	80-120			
Total Hydrocarbon C6-C35	1030		"	1000		103	80-120			
Surrogate: 1-Chlorooctane	*63.8*		*"*	*50.0*		*128*	*70-130*			
Surrogate: 1-Chlorooctadecane	*63.9*		*"*	*50.0*		*128*	*70-130*			
Matrix Spike (ED50815-MS1)	**Source: 5D08010-01**			Prepared: 04/08/05 Analyzed: 04/11/05						
Gasoline Range Organics C6-C12	640	10.0	mg/kg dry	703	ND	91.0	75-125			
Diesel Range Organics >C12-C35	749	10.0	"	703	ND	107	75-125			
Total Hydrocarbon C6-C35	1390	10.0	"	1410	ND	98.6	75-125			
Surrogate: 1-Chlorooctane	*50.7*		*mg/kg*	*50.0*		*101*	*70-130*			
Surrogate: 1-Chlorooctadecane	*44.5*		*"*	*50.0*		*89.0*	*70-130*			
Matrix Spike Dup (ED50815-MSD1)	**Source: 5D08010-01**			Prepared: 04/08/05 Analyzed: 04/11/05						
Gasoline Range Organics C6-C12	638	10.0	mg/kg dry	703	ND	90.8	75-125	0.313	20	
Diesel Range Organics >C12-C35	734	10.0	"	703	ND	104	75-125	2.02	20	
Total Hydrocarbon C6-C35	1370	10.0	"	1410	ND	97.2	75-125	1.45	20	
Surrogate: 1-Chlorooctane	*50.7*		*mg/kg*	*50.0*		*101*	*70-130*			
Surrogate: 1-Chlorooctadecane	*44.5*		*"*	*50.0*		*89.0*	*70-130*			

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED51107 - General Preparation (Prep)										
Blank (ED51107-BLK1)				Prepared: 04/08/05 Analyzed: 04/11/05						
% Moisture	ND	0.1	%							
Duplicate (ED51107-DUP1)		**Source: 5D08006-01**		Prepared: 04/08/05 Analyzed: 04/11/05						
% Moisture	6.0	0.1	%		6.9			14.0	20	
Batch ED51212 - Water Extraction										
Blank (ED51212-BLK1)				Prepared & Analyzed: 04/11/05						
Chloride	ND	0.500	mg/kg							
LCS (ED51212-BS1)				Prepared & Analyzed: 04/11/05						
Chloride	10.4		mg/L	10.0		104	80-120			
Calibration Check (ED51212-CCV1)				Prepared & Analyzed: 04/11/05						
Chloride	10.8		mg/L	10.0		108	80-120			
Duplicate (ED51212-DUP1)		**Source: 5D08008-11**		Prepared & Analyzed: 04/11/05						
Chloride	238	10.0	mg/kg		220			7.86	20	

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Allstate Environmental Services, LLC	Project: Anthony-Maralo	Fax: (432) 682-4182
P.O. Box 11322	Project Number: None Given	**Reported:**
Midland TX, 79702	Project Manager: Rob Elam	04/15/05 07:34

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Celey D. Keene Date: 4/15/2005

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
James L. Hawkins, Chemist/Geologist
Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

rg 1 of 2

Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Rob Elam
Company Name: Allstate Environmental Services
Company Address: PO Box 11322
City/State/Zip: Midland, Texas ~~79229~~ 79702
Telephone No: 432-682-3547
Fax No: 432-682-4182
Sampler Signature: [signature]

Project Name: Anthony - Marato
Project #:
Project Loc: Anthony - Marato
PO #:

5D08008

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TPH: 418.1 (8015M) 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.					RUSH TAT (Pre-Schedule)	Standard TAT
01	JA-A-25'	4/6	720	1	✓									✓		✓		✓													✓
02	JA-B-40'	4/6	740	1	✓									✓		✓		✓													✓
03	JA-C-50	4/6	800	1	✓									✓		✓		✓													✓
04	JA-D-30	4/6	820	1	✓									✓		✓		✓													✓
05	JA-H-30	4/6	940	1	✓									✓		✓		✓													✓
06	JA-G-30	4/6	920	1	✓									✓		✓		✓													✓
07	JA-F-30	4/6	900	1	✓									✓		✓		✓													✓
08	JA-E-50	4/6	840	1	✓									✓		✓		✓													✓
09	JA-I-60	4/6	0700	1	✓									✓		✓		✓													✓
10	JA-J-70	4/7	0700	1	✓									✓		✓		✓													✓

Special Instructions:
8015 & Chlorides

Sample Containers Intact? (Y) N
Temperature Upon Receipt: 4.0°c
Laboratory Comments:
4oz glass on ice w/labels

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	4/8/05	1315			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Jeanne McMurry	4-8-05	1315

* Already Invoiced # 21965

Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Rob Elam
Company Name: Allstate Environmental Services
Company Address: POBox 11322
City/State/Zip: Midland, Texas 79702
Telephone No: 432-682-3547 Fax No: 432-682-4182
Sampler Signature: Robert P. Elam

Project Name: Anthony - Maralo
Project #:
Project Loc: Anthony - Maralo
PO #:

5D08008

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: TPH: 418.1 (SPLIT) 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO_4, CO_3, HCO_3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	TOTAL:	RUSH TAT (Pre-Schedule)	Standard TAT
11	JA-K-40	4/7	720	1	✓									✓		✓		✓										✓
12	JA-L-30	4/7	740	1	✓									✓		✓		✓										✓
13	JA-B-30	4/7	800	1	✓									✓		✓		✓										✓
14	Humble State #3 0-20	4/7	1100	1	✓									✓		✓		✓										✓
15	Shell A # 1 - N-25	4/7	1020	1	✓									✓		✓		✓										✓
16	Shell A # 1 - M-25	4/7	1080	1	✓									✓		✓		✓										✓
17	JA-J-60	4/7	1040	1	✓									✓		✓		✓										✓
18	JA-I -30	4/7	1120	1	✓									✓		✓		✓										✓
19	JA-E-40	4/7	1140	1	✓									✓		✓		✓										✓

Special Instructions:
8015 + Chlorides

Sample Containers Intact? (Y) N
Temperature Upon Receipt:
Laboratory Comments: 4.0°c

4oz glass on ice w/labels

Relinquished by:	Date	Time	Received by:	Date	Time
Robert P. Elam	4/8/05	1315			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Jana McMurry	4-8-05	1315

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: Allstar Environmental

Date/Time: 04-08-05 @ 1315

Order #: 5D08008

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	4.0 C
Shipping container/cooler in good condition?	(Yes)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	(Not present)
Custody Seals intact on sample bottles?	Yes	No	(Not present)
Chain of custody present?	(Yes)	No	
Sample Instructions complete on Chain of Custody?	(Yes)	No	
Chain of Custody signed when relinquished and received?	(Yes)	No	
Chain of custody agrees with sample label(s)	(Yes)	No	
Container labels legible and intact?	(Yes)	No	
Sample Matrix and properties same as on chain of custody?	(Yes)	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	(Yes)	No	
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	(Yes)	No	
VOC samples have zero headspace?	(Yes)	No	Not Applicable

Other observations:

_____

_____

_____

Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____

Regarding:

_____

_____

_____

Corrective Action Taken:

_____

_____

_____

_____

_____

_____

_____

_____

Price, Wayne, EMNRD

From: Hamp Kerby [elkeenv@yahoo.com]

Sent: Tuesday, June 20, 2006 11:55 AM

To: Price, Wayne, EMNRD

Subject: Maralo - Humble State #3 Tank Battery

Attachments: 728349218-Plat Map Before Excavation.doc; 3135554616-Final Plat Map for Walls.doc; 974159496-Final Plat Map for Bottoms.doc; 1101085636-Field Analytical Walls.doc; 164352802-Lab Summary Walls.doc; 861140073-Lab Summary Bottoms.doc

Mr. Wayne Price,

Attached are the plat maps of the site and the field and lab analysis summaries. I will also be sending pictures of all the walls and bottoms, and the lab reports in the mail. If you have any questions please contact me at 432-664-1269.

Thanks,
Logan Anderson

Yahoo! Messenger with Voice. Make PC-to-Phone Calls to the US (and 30+ countries) for 2¢/min or less.

Price, Wayne, EMNRD

From: Hamp Kerby [elkeenv@yahoo.com]
Sent: Thursday, June 22, 2006 2:29 PM
To: Price, Wayne, EMNRD
Subject: Maralo Humble State #3 Tank Battery
Attachments: 4289071053-Lab Analysis Soil from P & A Wells.pdf

Mr. Wayne Price,

Enclosed is the lab analysis for the soil that came from the Plugged and Abandoned wells and backfilled into the main excavation of the Humble State #3 Tank Battery site. The sample was taken in witness of Larry Johnson with the Hobbs Field Office of the NMOCD, and is a grab sample of the most visually contaminated soil backfilled so far.

Thanks,
Logan Anderson

Yahoo! Messenger with Voice. PC-to-Phone calls for ridiculously low rates.

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Logan Anderson

Elke Environmental

P.O. Box 14167

Odessa, TX 79768

Project: Maralo

Project Number: None Given

Location: Humble State #3

Lab Order Number: 6F20004

Report Date: 06/22/06

Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Backfill@ 11'	6F20004-01	Soil	06/20/06 10:05	06/20/06 13:24

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Backfill@ 11' (6F20004-01) Soil									
Carbon Ranges C6-C12	ND	3.00	mg/L	0.08	EF62112	06/21/06	06/21/06	1312/8015M	
Carbon Ranges C12-C28	ND	3.00	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	3.00	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	3.00	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*73.0 %*		*70-130*	"	"	"	"	
Surrogate: 1-Chlorooctadecane		*71.6 %*		*70-130*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Backfill@ 11' (6F20004-01) Soil									
Chloride	ND	5.00	mg/L	1	EF62204	06/22/06	06/22/06	1312/9253	
% Moisture	**2.2**	0.1	%	"	EF62104	06/20/06	06/21/06	% calculation	

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Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

SPLP Metals 1312 by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Extracted	Prepared	Analyzed	Method	Notes
Backfill@ 11' (6F20004-01) Soil										
Mercury	**J [0.000120]**	0.000250	mg/L	1	EF62120	SPLP6/20/06	06/21/06	06/21/06	EPA 7470A	J
Chromium	**J [0.00468]**	0.00975	"	10	EF62123	SPLP 06/20/06	06/21/06	06/21/06	EPA 6020A	J
Arsenic	**ND**	0.0170	"	"	"	"	"	"	"	
Selenium	ND	0.0300	"	"	"	"	"	"	"	
Silver	ND	0.00405	"	"	"	"	"	"	"	
Cadmium	ND	0.00692	"	"	"	"	"	"	"	
Barium	**0.0229**	0.00489	"	"	"	"	"	"	"	
Lead	ND	0.00296	"	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

SPLP Volatile Halocarbons by EPA Method 1312/8021B

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Extracted	Prepared	Analyzed	Method	Notes
Backfill@ 11' (6F20004-01) Soil										
Benzene	ND	0.00100	mg/L	1	EF62109	06/20/06 SPLP	06/21/06	06/21/06	EPA 8021B	
Toluene	**J [0.000663]**	0.00100	"	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	"	
Xylene (p/m)	**ND**	0.00100	"	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*101 %*		*80-120*	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*82.8 %*		*80-120*	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62112 - EPA GC 1312										
Blank (EF62112-BLK1)				Prepared & Analyzed: 06/21/06						
Carbon Ranges C6-C12	ND	3.00	mg/L							
Carbon Ranges C12-C28	ND	3.00	"							
Carbon Ranges C28-C35	ND	3.00	"							
Total Hydrocarbon nC6-nC35	ND	3.00	"							
Surrogate: 1-Chlorooctane	*36.3*		"	*50.0*		*72.6*	*70-130*			
Surrogate: 1-Chlorooctadecane	*36.0*		"	*50.0*		*72.0*	*70-130*			
LCS (EF62112-BS1)				Prepared & Analyzed: 06/21/06						
Carbon Ranges C6-C12	50.2	3.00	mg/L	50.0		100	75-125			
Carbon Ranges C12-C28	47.0	3.00	"	50.0		94.0	75-125			
Carbon Ranges C28-C35	ND	3.00	"	0.00			75-125			
Total Hydrocarbon nC6-nC35	97.2	3.00	"	100		97.2	75-125			
Surrogate: 1-Chlorooctane	*37.9*		"	*50.0*		*75.8*	*70-130*			
Surrogate: 1-Chlorooctadecane	*37.5*		"	*50.0*		*75.0*	*70-130*			
Calibration Check (EF62112-CCV1)				Prepared & Analyzed: 06/21/06						
Carbon Ranges C6-C12	23.5		mg/L	25.0		94.0	80-120			
Carbon Ranges C12-C28	27.9		"	25.0		112	80-120			
Total Hydrocarbon nC6-nC35	51.4		"	50.0		103	80-120			
Surrogate: 1-Chlorooctane	*45.5*		"	*50.0*		*91.0*	*70-130*			
Surrogate: 1-Chlorooctadecane	*41.1*		"	*50.0*		*82.2*	*70-130*			
Matrix Spike (EF62112-MS1)	**Source: 6F20004-01**			Prepared & Analyzed: 06/21/06						
Carbon Ranges C6-C12	49.7	3.00	mg/L	50.0	ND	99.4	75-125			
Carbon Ranges C12-C28	47.9	3.00	"	50.0	ND	95.8	75-125			
Carbon Ranges C28-C35	ND	3.00	"	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	97.6	3.00	"	100	ND	97.6	75-125			
Surrogate: 1-Chlorooctane	*41.1*		"	*50.0*		*82.2*	*70-130*			
Surrogate: 1-Chlorooctadecane	*35.4*		"	*50.0*		*70.8*	*70-130*			

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Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62112 - EPA GC 1312										
Matrix Spike Dup (EF62112-MSD1)	**Source: 6F20004-01**			Prepared & Analyzed: 06/21/06						
Carbon Ranges C6-C12	49.9	3.00	mg/L	50.0	ND	99.8	75-125	0.402	20	
Carbon Ranges C12-C28	47.9	3.00	"	50.0	ND	95.8	75-125	0.00	20	
Carbon Ranges C28-C35	ND	3.00	"	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	97.8	3.00	"	100	ND	97.8	75-125	0.205	20	
Surrogate: 1-Chlorooctane	*41.3*		"	*50.0*		*82.6*	*70-130*			
Surrogate: 1-Chlorooctadecane	*35.7*		"	*50.0*		*71.4*	*70-130*			

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62104 - General Preparation (Prep)										
Duplicate (EF62104-DUP1)	**Source: 6F19007-01**			Prepared: 06/20/06 Analyzed: 06/21/06						
% Solids	92.5		%		93.1			0.647	20	
Duplicate (EF62104-DUP2)	**Source: 6F20013-03**			Prepared: 06/20/06 Analyzed: 06/21/06						
% Solids	97.0		%		95.0			2.08	20	
Batch EF62204 - EPA 1312/9253										
Blank (EF62204-BLK1)				Prepared & Analyzed: 06/22/06						
Chloride	0.00	5.00	mg/L							
LCS (EF62204-BS1)				Prepared & Analyzed: 06/22/06						
Chloride	103		mg/L	100		103	80-120			
LCS Dup (EF62204-BSD1)				Prepared & Analyzed: 06/22/06						
Chloride	103		mg/L	100		103	80-120	0.00	20	
Matrix Spike (EF62204-MS1)	**Source: 6F20004-01**			Prepared & Analyzed: 06/22/06						
Chloride	4960		mg/L	5000	ND	99.2	80-120			
Reference (EF62204-SRM1)				Prepared & Analyzed: 06/22/06						
Chloride	4700		mg/L	5000		94.0	80-120			

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Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

SPLP Metals 1312 by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62120 - EPA 1312/7470										
Blank (EF62120-BLK1)				Prepared & Analyzed: 06/21/06						
Mercury	ND	0.000250	mg/L							
LCS (EF62120-BS1)				Prepared & Analyzed: 06/21/06						
Mercury	0.00115	0.000250	mg/L	0.00100		115	85-115			
LCS Dup (EF62120-BSD1)				Prepared & Analyzed: 06/21/06						
Mercury	0.00111	0.000250	mg/L	0.00100		111	85-115	3.54	20	
Calibration Check (EF62120-CCV1)				Prepared & Analyzed: 06/21/06						
Mercury	0.00109		mg/L	0.00100		109	90-110			
Matrix Spike (EF62120-MS1)		**Source: 6F20004-01**		Prepared & Analyzed: 06/21/06						
Mercury	0.00111	0.000250	mg/L	0.00100	0.000120	99.0	75-125			
Batch EF62123 - EPA 1312/3005										
Blank (EF62123-BLK1)				Prepared & Analyzed: 06/21/06						
Chromium	ND	0.000975	mg/L							
Arsenic	ND	0.00170	"							
Selenium	ND	0.00300	"							
Silver	ND	0.000405	"							
Cadmium	ND	0.000692	"							
Barium	ND	0.000489	"							
Lead	ND	0.000296	"							
LCS (EF62123-BS1)				Prepared & Analyzed: 06/21/06						
Chromium	0.198	0.000975	mg/L	0.200		99.0	85-115			
Arsenic	0.847	0.00170	"	0.800		106	85-115			
Selenium	0.449	0.00300	"	0.400		112	85-115			
Silver	0.105	0.000405	"	0.100		105	85-115			
Cadmium	0.208	0.000692	"	0.200		104	85-115			
Barium	0.219	0.000489	"	0.200		110	85-115			
Lead	1.14	0.000296	"	1.10		104	85-115			

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Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

SPLP Metals 1312 by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62123 - EPA 1312/3005										
LCS Dup (EF62123-BSD1)				Prepared & Analyzed: 06/21/06						
Chromium	0.198	0.000975	mg/L	0.200		99.0	85-115	0.00	20	
Arsenic	0.857	0.00170	"	0.800		107	85-115	1.17	20	
Selenium	0.449	0.00300	"	0.400		112	85-115	0.00	20	
Silver	0.107	0.000405	"	0.100		107	85-115	1.89	20	
Cadmium	0.208	0.000692	"	0.200		104	85-115	0.00	20	
Barium	0.215	0.000489	"	0.200		108	85-115	1.84	20	
Lead	1.15	0.000296	"	1.10		105	85-115	0.873	20	
Calibration Check (EF62123-CCV1)				Prepared & Analyzed: 06/21/06						
Chromium	0.0470		mg/L	0.0500		94.0	90-110			
Arsenic	0.0504		"	0.0500		101	90-110			
Selenium	0.0513		"	0.0500		103	90-110			
Silver	0.0504		"	0.0500		101	90-110			
Cadmium	0.0495		"	0.0500		99.0	90-110			
Barium	0.0507		"	0.0500		101	90-110			
Lead	0.0502		"	0.0500		100	90-110			
Matrix Spike (EF62123-MS1)		**Source: 6F20004-01**		Prepared & Analyzed: 06/21/06						
Chromium	0.185	0.00975	mg/L	0.200	0.00468	90.2	75-125			
Arsenic	0.787	0.0170	"	0.800	ND	98.4	75-125			
Selenium	0.403	0.0300	"	0.400	ND	101	75-125			
Silver	0.119	0.00405	"	0.100	ND	119	75-125			
Cadmium	0.192	0.00692	"	0.200	ND	96.0	75-125			
Barium	0.232	0.00489	"	0.200	0.0229	105	75-125			
Lead	1.04	0.00296	"	1.10	ND	94.5	75-125			
Matrix Spike Dup (EF62123-MSD1)		**Source: 6F20004-01**		Prepared & Analyzed: 06/21/06						
Chromium	0.185	0.00975	mg/L	0.200	0.00468	90.2	75-125	0.00	20	
Arsenic	0.796	0.0170	"	0.800	ND	99.5	75-125	1.14	20	
Selenium	0.417	0.0300	"	0.400	ND	104	75-125	3.41	20	
Silver	0.116	0.00405	"	0.100	ND	116	75-125	2.55	20	
Cadmium	0.193	0.00692	"	0.200	ND	96.5	75-125	0.519	20	
Barium	0.232	0.00489	"	0.200	0.0229	105	75-125	0.00	20	
Lead	1.04	0.00296	"	1.10	ND	94.5	75-125	0.00	20	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

SPLP Volatile Halocarbons by EPA Method 1312/8021B - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62109 - EPA GC 1312										
Blank (EF62109-BLK1)				Prepared & Analyzed: 06/21/06						
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	*45.8*		*ug/kg*	*40.0*		*114*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*37.6*		*"*	*40.0*		*94.0*	*80-120*			
LCS (EF62109-BS1)				Prepared & Analyzed: 06/21/06						
Benzene	0.0523	0.00100	mg/L	0.0500		105	80-120			
Toluene	0.0568	0.00100	"	0.0500		114	80-120			
Ethylbenzene	0.0548	0.00100	"	0.0500		110	80-120			
Xylene (p/m)	0.119	0.00100	"	0.100		119	80-120			
Xylene (o)	0.0582	0.00100	"	0.0500		116	80-120			
Surrogate: a,a,a-Trifluorotoluene	*42.8*		*ug/kg*	*40.0*		*107*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*41.1*		*"*	*40.0*		*103*	*80-120*			
Calibration Check (EF62109-CCV1)				Prepared & Analyzed: 06/21/06						
Benzene	53.5		ug/kg	50.0		107	80-120			
Toluene	58.0		"	50.0		116	80-120			
Ethylbenzene	55.2		"	50.0		110	80-120			
Xylene (p/m)	115		"	100		115	80-120			
Xylene (o)	57.0		"	50.0		114	80-120			
Surrogate: a,a,a-Trifluorotoluene	*41.1*		*"*	*40.0*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*40.7*		*"*	*40.0*		*102*	*80-120*			
Matrix Spike (EF62109-MS1)	**Source: 6F20004-01**			Prepared & Analyzed: 06/21/06						
Benzene	0.0533	0.00100	mg/L	0.0500	ND	107	80-120			
Toluene	0.0585	0.00100	"	0.0500	0.000663	116	80-120			
Ethylbenzene	0.0516	0.00100	"	0.0500	ND	103	80-120			
Xylene (p/m)	0.120	0.00100	"	0.100	ND	120	80-120			
Xylene (o)	0.0586	0.00100	"	0.0500	ND	117	80-120			
Surrogate: a,a,a-Trifluorotoluene	*40.4*		*ug/kg*	*40.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*40.0*		*"*	*40.0*		*100*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

SPLP Volatile Halocarbons by EPA Method 1312/8021B - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62109 - EPA GC 1312										
Matrix Spike Dup (EF62109-MSD1)	**Source: 6F20004-01**			Prepared & Analyzed: 06/21/06						
Benzene	0.0496	0.00100	mg/L	0.0500	ND	99.2	80-120	7.57	20	
Toluene	0.0558	0.00100	"	0.0500	0.000663	110	80-120	5.31	20	
Ethylbenzene	0.0526	0.00100	"	0.0500	ND	105	80-120	1.92	20	
Xylene (p/m)	0.114	0.00100	"	0.100	ND	114	80-120	5.13	20	
Xylene (o)	0.0564	0.00100	"	0.0500	ND	113	80-120	3.48	20	
Surrogate: a,a,a-Trifluorotoluene	*40.5*		*ug/kg*	*40.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*39.5*		*"*	*40.0*		*98.8*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Elke Environmental	Project: Maralo	Fax: (432) 366-0884
P.O. Box 14167	Project Number: None Given	
Odessa TX, 79768	Project Manager: Logan Anderson	

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K. Tuttle Date: 6/22/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

GPS 32°05.416' 103° 12.918'

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: LOGAN AUBERSON
Company Name: ELKE ENVIRONMENTAL
Company Address: PO BOX 14167
City/State/Zip: Odessa, TX 79768
Telephone No: 366-0043 Fax No: 366-0884
Sampler Signature: Kim Baker
Email:

Project Name: Manola
Project #:
Project Loc: Humble State #3
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO3	HCl	NaOH	H2SO4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TPH: 418.1 / 8015M / 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M	RUSH TAT (Pre-Schedule) 24 HRS	Standard TAT
01	BACKFILL @ 11'	6-20-06	10:05AM	1	X									X		X	X	X	X	X			X			X	

SPLP SPLP SPLP SPLP
1312 TOTAL:

Special Instructions:
Rush 1312 SPLP FOR BTEX 8021B, TPH 8015M + Chloride
RCRA8METALS

Sample Containers Intact? Y N
Labels on container? Y N
Custody Seals: Containers / Cooler
Temperature Upon Receipt: 5.0

Laboratory Comments:
4oz glass

Relinquished by:	Date	Time	Received by:	Date	Time
Kim Baker	6-20-06	10:25AM		6-20-06	10:25
	6-20-06	13:24	Received by ELOT:	6/20/06	13:24

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: Elke Env.

Date/Time: 06/20/06 13:24

Order #: 6F20004

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	5.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

Contact Person: _____ Date/Time: _____ Contacted by: _____

Regarding:

Corrective Action Taken:

Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768
Phone (432) 366-0043 Fax (432) 366-0884

New Mexico Oil Conservation Division
Mr. Wayne Price
1220 South St. Francis Drive
Sante Fe, New Mexico 87505

Re: OCD Case 131142 Order R-12152-A
Humble State #3 Tank Battery Site
Jal, New Mexico

Mr. Wayne Price,

Enclosed are the plat maps, field analytical, lab confirmation, and pictures with descriptions of the Tank Battery Site needed for approval of the site to be backfilled. A final report will be sent at the completion of the backfill. If you have any questions about the enclosed report please contact me at the office or my cell 432-664-1269.

Sincerely,

Logan Anderson

664-1269

Price, Wayne, EMNRD

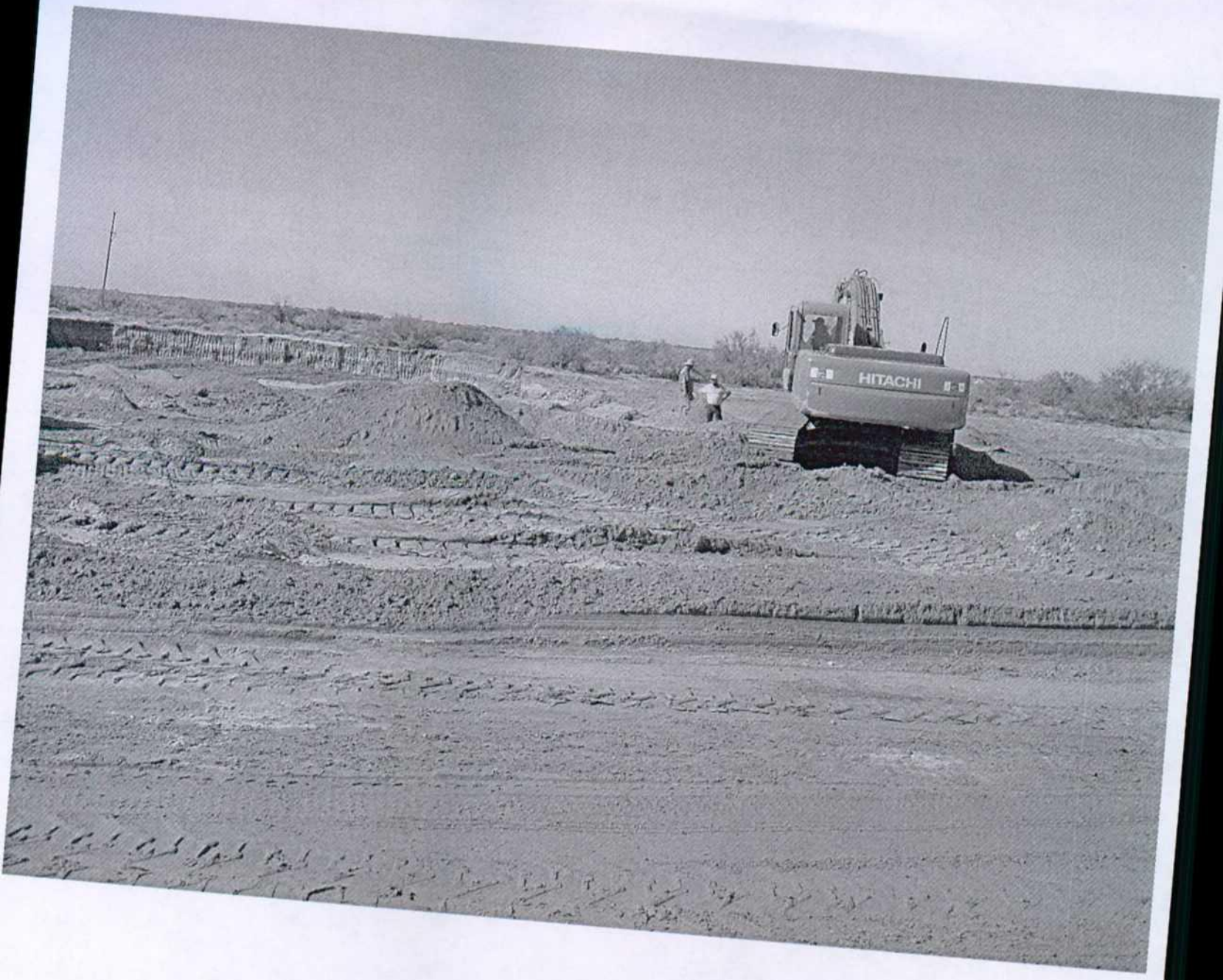
From: Johnson, Larry, EMNRD
Sent: Wednesday, June 21, 2006 8:34 AM
To: Price, Wayne, EMNRD
Cc: Caperton, Patricia, EMNRD
Subject: Anthony Sampling
Attachments: P6200006.JPG; P6200007.JPG; P6200009.JPG; P6200010.JPG; P6200012.JPG; P6200014.JPG; P6200020.JPG

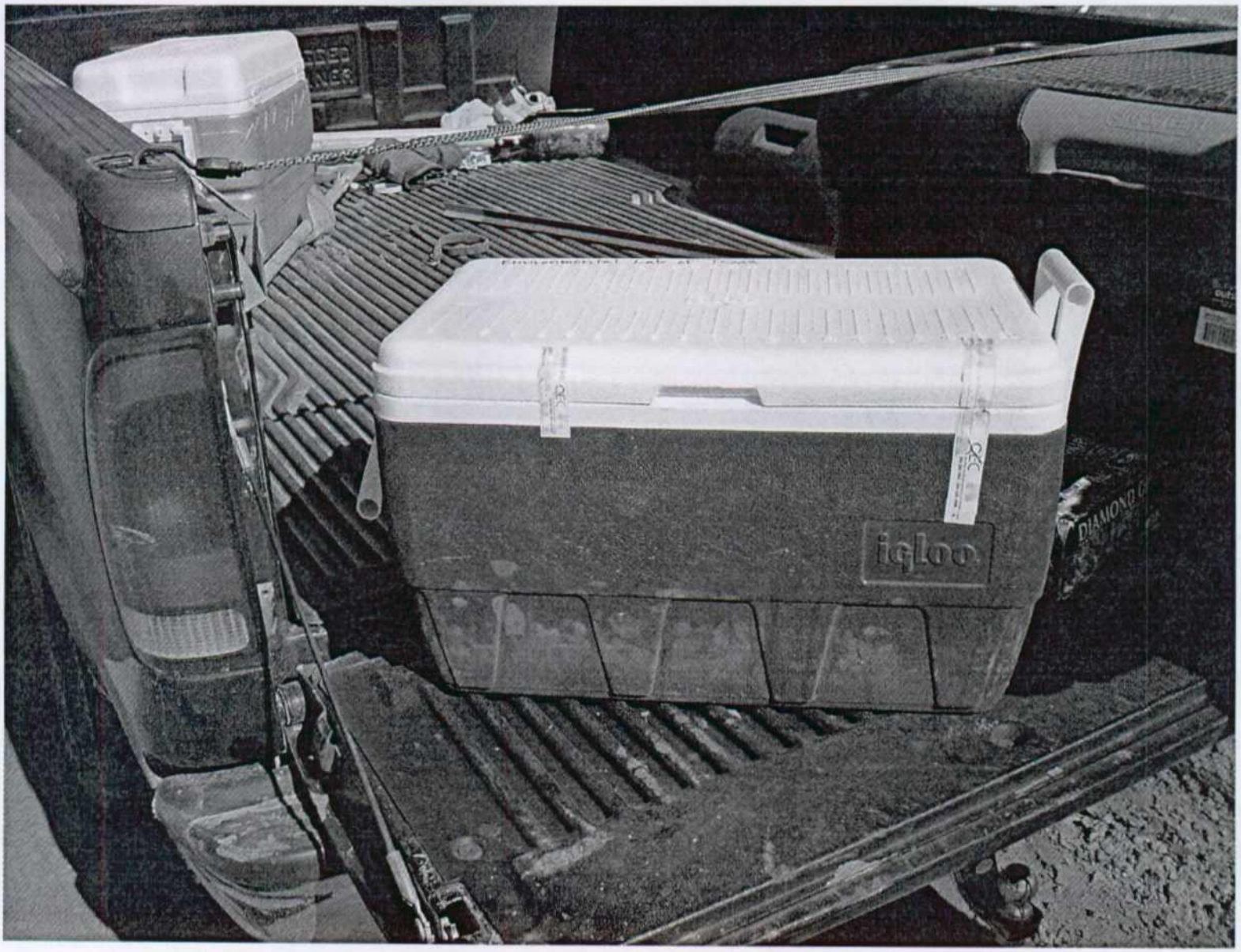
06- looking S on W side
07- measured depth approx 11' to grade
09- retrieve fresh sample from bucket
10- packing sample jar
12- sample ID and seal glass
14- sample on ice
20- sealed ice transport container w/chain of custody sheet

Headed to Lovington --- LJ


HITACHI

121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136


HITACHI


igloo

Price, Wayne, EMNRD

From: Price, Wayne, EMNRD

Sent: Tuesday, June 20, 2006 7:48 AM

To: 'elkeenv@yahoo.com'

Cc: Johnson, Larry, EMNRD; Sheeley, Paul, EMNRD; Sanchez, Daniel J., EMNRD; Macquesten, Gail, EMNRD; Brooks, David K., EMNRD

Subject: OCD Order 13142 Case #12152-A Maralo Humble State #3 Tank Battery

Attachments: Maralo Clean-up plan.doc

To: Tom Kellahin-Attorney for Maralo LLC.
Mr. Rob Elam-Elk Environmental consultant for Maralo
Mr. Jay Anthony-Landowner

Please find attached a copy of the clean-up requirement dated March 03, 2006 pursuant to OCD Order 13142 case # 12152-A. OCD understands that waste material generated off-site has been placed in one of the excavated areas. After reviewing the attached clean-up plan issued pursuant to an OCD Commission Order there does not appear to be an allowance for this activity. Therefore, your are hereby ordered to cease and desist in placing any further waste material into the Humble #3 Tank Battery Site.

In a sprit of cooperation and to facilitate a prompt closure, OCD would like Maralo LLC to perform the following actions:

1. Contact the OCD Hobbs office and make arrangements to have OCD witness the sampling of the most visually contaminated material or material with a high olfactory hydrocarbon smell that was placed in the excavation from off-site activities.

2. Collect, sample and analyze this material using approved EPA protocols. The material shall be analyzed using the EPA method 1312 SPLP extraction method and analyzed for BTEX (8021), TPH (8015M GRO/DRO), Chlorides and RCRA 8 metals.

3. Submit the data requested in item #2 above and the data collected to date for OCD review and approval. Please note Maralo must receive written approval before back filing the excavated areas.

cc: Jay Anthony-Landowner
Tom Kellahin-attorney for Maralo LLC.
David Brooks, OCD legal
Gale McQuestron-OCD legal

P. 01

TRANSACTION REPORT

JUN-20-2006 TUE 08:45 AM

FOR:

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#
JUN-20	08:45 AM	915053953264	32"	1	SEND	OK	168

TOTAL : 32S PAGES: 1

Price, Wayne, EMNRD

From: Price, Wayne, EMNRD

Sent: Tuesday, June 20, 2006 7:48 AM

To: 'elkeenv@yahoo.com'

Cc: Johnson, Larry, EMNRD; Sheeley, Paul, EMNRD; Sanchez, Daniel J., EMNRD; Macquesten, Gail, EMNRD; Brooks, David K., EMNRD

Subject: OCD Order 13142 Case #12152-A Maralo Humble State #3 Tank Battery

Attachments: Maralo Clean-up plan.doc

To: Tom Kellahin-Attorney for Maralo LLC.
Mr. Rob Elam-Elk Environmental consultant for Maralo
Mr. Jay Anthony-Landowner

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In a sprit of cooperation and to facilitate a prompt closure, OCD would like Maralo LLC to perform the following actions:

1. Contact the OCD Hobbs office and make arrangements to have OCD witness the sampling of the most visually contaminated material or material with a high olfactory hydrocarbon smell that was placed in the excavation from off-site activities.

2. Collect sample and analyze this material using approved EPA protocols. The material shall be analyzed

TRANSACTION REPORT

JUN-20-2006 TUE 08:46 AM

FOR:

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
JUN-20	08:46 AM	99822047	29"	1	SEND	OK		

TOTAL : 29S PAGES: 1

Price, Wayne, EMNRD

From: Price, Wayne, EMNRD
Sent: Tuesday, June 20, 2006 7:48 AM
To: 'elkeenv@yahoo.com'
Cc: Johnson, Larry, EMNRD; Sheeley, Paul, EMNRD; Sanchez, Daniel J., EMNRD; Macquesten, Gail, EMNRD; Brooks, David K., EMNRD
Subject: OCD Order 13142 Case #12152-A Maralo Humble State #3 Tank Battery
Attachments: Maralo Clean-up plan.doc

To: Tom Kellahin-Attorney for Maralo LLC.
Mr. Rob Elam-Elk Environmental consultant for Maralo
Mr. Jay Anthony-Landowner

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In a sprit of cooperation and to facilitate a prompt closure, OCD would like Maralo LLC to perform the following actions:

1. Contact the OCD Hobbs office and make arrangements to have OCD witness the sampling of the most visually contaminated material or material with a high olfactory hydrocarbon smell that was placed in the excavation from off-site activities.

2. Collect sample and analyze this material using approved EPA protocols. The material shall be analyzed

NEW MEXICO ENERGY, MINERALS and
NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

March 03, 2006

CERTIFIED MAIL
Return Receipt Requested: 7001 1940 0004 7923 4801

Maralo, LLC
Mr. David W. Lauritzen
C/o Cotton, Bledsoe, Tighe & Dawson
P.O. Box 2776
Midland, Texas 79701

Re: OCD Case 131142 Order R-12152-A
Humble State #3 Tank Battery Site
Jal, New Mexico

Dear Ladies and Gentlemen:

On December 09, 2004 the New Mexico Oil Conservation Commission issued an order requiring Maralo LLC. to perform approved delineation and remediation at the Humble State #3 Tank Battery Site. As of this date Maralo LLC has failed to perform the requirements of Order R-12152-A.

Therefore, OCD hereby orders Maralo LLC to perform the following actions:

1. Excavate all on-site contaminated soils that exceed the standards shown in item 2., down to a maximum depth of 10 feet below existing ground surface. All contaminated soils shall be disposed of off-site at an approved OCD facility.

2. Soils containing the following Levels of contaminants are contaminated soils: benzene that exceeds 0.2 mg/kg as determined by EPA SW-846 Method 8021B; total BTEX that exceeds 50 mg/kg as determined by EPA SW-846 Method 8021B; TPH that exceeds 500 mg/kg. (GRO/DRO) combined fraction, as determined by EPA SW-846 Method 8015M; total extractable petroleum hydrocarbon fractions that exceed 5000 mg/kg as determined by EPA 418.1 Method; and chlorides that exceed 250 mg/kg as determined by EPA Method 300.1.

3. Final confirmation samples shall be collected and analyzed for the constituents shown in item 2. Each excavated area shall have at a minimum 5 bottom hole samples taken and each side wall shall have at least one 4 point composite sample collected. In addition all obvious "hot spots" shall be sampled.

4. All excavated areas shall be backfilled and compacted with similar native clean soils only after OCD approval.

5. Re-vegetation by establishment of a vegetative cover over at least 70% of the site, consisting of at least two native plant species and not including noxious weeds, and maintenance of that cover through two successive growing seasons. Deviations for re-vegetation may be allowed if Maralo receives written landowner acceptance.

6. Maralo LLC shall notify the OCD Santa Fe office, OCD District office and the landowner at least 72 hours in advance of all scheduled activities so that the OCD has the opportunity to witness the events and/or split samples during OCD's normal business hours.

7. Maralo LLC shall submit a final report ***for OCD approval by June 15, 2006***. The report shall contain the following information:

   a. A scaled plot plan of the clean-up area showing pertinent features, location and dimensions of all excavated areas and final sample points.

   b. Dated photos of the project, before, and during excavation, at sample points and after final closure.

   c. Records of all waste manifest.

   d. Daily log of major activities.

   e. All Laboratory analytical results cross referenced to sample points.

Please note the OCD requirements stated above do not relieve Maralo LLC of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If Maralo LLC wishes a technical meeting or guidance concerning the remediation requirement please contact Wayne Price Environmental Bureau Chief at 505-476-3487 or E-mail wayne.price.state.nm.us. If OCD does not hear from Maralo LLC within 15 days of receipt of this letter then OCD will assume Maralo LLC understands the requirements and shall commence work.

Failure to perform the required actions by June 16, 2006 may result in civil penalties of $1000 dollars per day for each day that Maralo LLC has been deficient in the clean-up operation.. If Maralo wants a hearing concerning the specific requirements of this directive it may file an application for a hearing with the Division clerk within 15 days of receipt of this letter.

Sincerely,

Daniel Sanchez
Enforcement & Compliance Manager

cc: Jay Anthony-Landowner
Tom Kellahin-attorney for Maralo LLC.
David Brooks, OCD legal

COTTON
BLEDSOE
TIGHE &
DAWSON, PC
Attorneys at Law

Post Office Box 2776
Midland, Texas 79702-2776
500 West Illinois, Suite 300
Midland, Texas 79701
(432) 684-5782
(432) 682-3672 (Fax)

1415 Louisiana, Suite 2100
Houston, Texas 77002
(713) 759-9281
(713) 759-0458 (Fax)
www.cottonbledsoe.com

DAVID W. LAURITZEN, Shareholder • *Also Licensed in New Mexico* • (432) 685-8555 (Direct Dial) • (432) 684-3137 (Direct Fax) • dlauritzen@cbtd.com

June 17, 2005

Via Facsimile (505) 476-3462
David K. Brooks
Assistant General Counsel
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: **Case 13,142, Application of New Mexico Oil Conservation Division, through the Environment Bureau Chief for an Order Requiring Maralo, LLC to Remediate Hydrocarbon Contamination at an Abandoned Well and Battery Site, Lea County, New Mexico (do novo)**

Dear Mr. Brooks:

We are in receipt of your letter of June 13, 2005, inquiring as to Maralo's position with respect to remediation of the Jay Anthony Ranch.

We apologize for any confusion with respect to the issues discussed in your letter. However, Maralo has attempted to comply with the OCD's rulings in this matter. On or about July 9, 2004, after the OCD's first ruling but while Maralo's Motion for Rehearing was pending, Maralo submitted a remediation plan to the Division for approval. A copy of this correspondence is attached hereto for your review.

After the rehearing of this matter at the end of last year, Maralo realized that the Division had also requested a plan delineating the scope of proposed remediation. Preparation of this delineation plan required the hiring of consultants and testing on the Anthony Ranch. This testing took place earlier this year and on May 5, 2005, Maralo filed its delineation plan with the Division. A copy of this plan is also attached hereto for your reference.

Again, Maralo apologizes for any confusion that may have arisen from this issue but has not willfully neglected this matter. We hope the attachments referenced herein resolve some of the confusion surrounding the remediation of the Anthony Ranch.

Please feel free to give Rick strange or me a call at your convenience if you wish to discuss this matter further. Thank you for your professional courtesies.

Very truly yours,

COTTON, BLEDSOE, TIGHE & DAWSON

David W. Lauritzen

DWL:kk
Attachments

cc: William G. Solomon (w/attach.)
Attorney at Law
5151 San Felipe, Suite 400
Houston, Texas 77056-3607

W. Thomas Kellahin (w/attach.)
Kellahin and Kellahin
117 North Guadalupe
Santa Fe, New Mexico 87501

KELLAHIN & KELLAHIN
Attorney at Law

W. Thomas Kellahin
Recognized Specialist in the Area of
Natural Resources-oil and gas law-
New Mexico Board of Legal Specialization

P.O. Box 2265
Santa Fe, New Mexico 87504
117 North Guadalupe
Santa Fe, New Mexico 87501

Telephone 505-982-4285
Facsimile 505-982-2047
kellahin@earthlink.net

May 5, 2005

HAND DELIVERED

2005 MAY 5 PM 3 14

Mr. Roger Anderson,
Environmental Bureau
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: NMOCD Case 13142 (De Novo) Order R-12152-A
Application of the NMOCD for an Order
Requiring Maralo, LLC to Remediate
Hydrocarbon Contamination at an
Abandoned well's tank battery Site
(Jay Anthony Complaint) Lea County, New Mexico

Dear Mr. Anderson:

On behalf of Maralo, LLC I am requesting your "approval of a plan to delineate the extent of the contamination existing at the site of the Humble State Well No. 3 and its associated facilities including areas used for pits, tank batteries and the like" that is enclosed that was prepared by Maralo's environmental expert, Mr. Rob Elam, and transmitted to me by facsimile dated April 26, 2005. Mr. Elam's report consists of the enclosed plat and a one-page written summary.

Very truly yours,

W. Thomas Kellahin

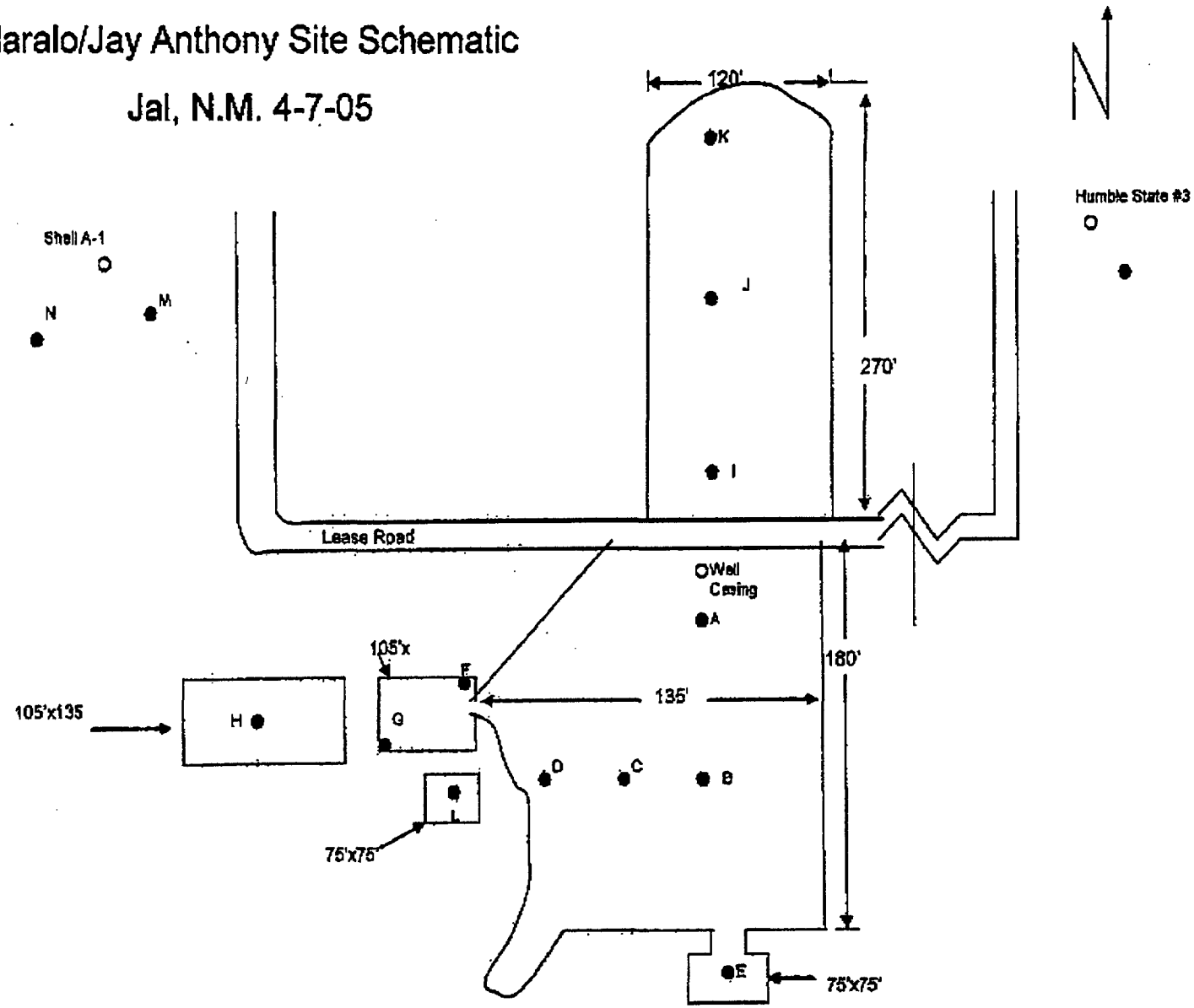
cc: Maralo, LLC;
Rich Strange, Esq. 432-684-3168 (fx)
William Solomon, Esq. 713-960-1672 (fx)

David Sandoval, Esq.
Attorney for Jay Anthony
505-986-0632 (fx)

432-682-4182

Maralo/Jay Anthony Site Schematic

Jal, N.M. 4-7-05



CLOSURE PLAN FOR MARALO-ANTHONY SITE

Maralo proposes to conduct exploratory drilling at the subject site to a depth of 150 ft. if necessary, taking photo ionization detector (PID) samples at 5 ft. intervals to a depth that 2 consecutive samples indicate less than 100 parts per million (ppm) BTEX content. Approximately 15 to 18 borings at points agreed upon by Maralo and Anthony representatives will be selected. The sample will be accessed using a split spoon device with each sample being split with the representatives of each party. Samples for laboratory analysis will be taken at selected points and tested for chloride content and total petroleum hydrocarbon content.

A site drawing is attached indicating proposed drilling/sampling points.

COTTON
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Attorneys at Law

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DAVID W. LAURITZEN, Shareholder • *Also Licensed in New Mexico* • (432) 685-8555 (Direct Dial) • (432) 684-3137 (Direct Fax) • dlauritzen@cbtd.com

July 9, 2004

Via Facsimile (505) 476-3462 and
Certified Mail, Return Receipt Requested
Mark E. Fesmire, P.E.
State of New Mexico
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87504

Via Facsimile (505) 476-3462 and
Certified Mail, Return Receipt Requested
Environmental Bureau of New Mexico
1220 South St. Francis Drive
Santa Fe, New Mexico 87504

Re: **Case No. 13142 / Order No. R-12152 — Submission for Approval of Remediation Plan to Delineate the Lateral and Vertical Extent of Hydrocarbon Contamination Existing at the Site of Humble State Well No. 3 in Unit A of Section 36, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico**

Dear Director Fesmire:

Pursuant to the Order of the Division dated June 9, 2004, and subject to its pending appeal and request for stay, please accept this as Maralo's submission for approval of a remediation work plan to delineate the lateral and vertical extent of the hydrocarbon contamination existing at the site of the Humble State Well No. 3 in Unit A of Section 36, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico.

The hydrocarbon contamination discussed in the above-referenced Case No. 13142 is on the property of one Jay Anthony.

Maralo proposes to excavate and remediate the top two feet of visual TPH impacted soil to a limit of <5,000 PPM or <100 PPM PDI. Subsequently, Maralo will replace remediated soil back to its original location.

Before the OCC
Case 13142 - *De Novo*
OCD Ex. 28

With the data the State has previously accumulated in this case from its own field representatives, as well as the data provided by Mr. Anthony, Maralo submits that no further bores for delineation are needed for the Humble State Well No. 3.

Maralo believes that this remediation work plan will eliminate the source of the contaminated plume, which consequently will eliminate the head necessary to drive contamination to groundwater. To two-foot remediated topsoil <5,000PPM TPH will support vegetation with sufficient annual waterfall for the region. In previous testimony before the OCD, the Division's expert hydrologist, Mr. William C. Olson, indicated that a remediation plan along the lines set out herein would be acceptable to the Division.

Thank you for your attention to this remediation work plan submitted for approval of the Division. As always, if you have any questions or comments, please do not hesitate to contact Rick Strange or me at your convenience. We look forward to hearing from you.

Very truly yours,

COTTON, BLEDSOE, TIGHE & DAWSON

David W. Lauritzen

DWL:kk

cc: ***Via Facsimile (505) 476-3462***
Gail MacQuesten
Attorney for OCD

Via Facsimile (505) 476-3462
William C. Olson
OCD

Via Facsimile (505) 986-0632
David Sandoval
Attorney for Jay Anthony

Via Facsimile (505) 982-2047
W. Thomas Kellahin
Attorney for Maralo, LLC

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

October 20, 2005

CERTIFIED MAIL
RETURN RECEIPT NO. 7001 1940 00047923 4795

William G. Solomon
5151 San Felipe, Suite 400
Houston, Texas 77056-3607

RE: NMOCD Case 131142 Order R-12152-A
HUMBLE STATE #3 TANK BATTERY SITE
JAL, NEW MEXICO

Dear Mr. Solomon:

OCD has been informed that Maralo conducted a site investigation on or about April 6, 2005. This plan was not approved by OCD, which was a requirement of the Order. On July 12, 2005 and August 04, 2005 OCD sent letters requesting that Maralo submit the results of the investigation to assist OCD in determining a proper path forward for the site. As of this date OCD has not received this information.

Please submit the results of the investigation with conclusions and recommendations for a remediation plan by November 11, 2005. If you have any questions please do not hesitate to contact me at 505-476-3487 or e-mail wayne.price@state.nm.us.

Sincerely;

Wayne Price-Pet. Engr. Spec.

xc: Roger Anderson-Environmental Bureau Chief
David Brooks-OCD Legal Counsel
Chris Williams, OCD Hobbs District Office
Jay Anthony-Landowner
Rick Strange-Maralo Attorney At Law

COTTON
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June 17, 2005

Via Facsimile (505) 476-3462
David K. Brooks
Assistant General Counsel
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: **Case 13,142, Application of New Mexico Oil Conservation Division, through the Environment Bureau Chief for an Order Requiring Maralo, LLC to Remediate Hydrocarbon Contamination at an Abandoned Well and Battery Site, Lea County, New Mexico (do novo)**

Dear Mr. Brooks:

We are in receipt of your letter of June 13, 2005, inquiring as to Maralo's position with respect to remediation of the Jay Anthony Ranch.

We apologize for any confusion with respect to the issues discussed in your letter. However, Maralo has attempted to comply with the OCD's rulings in this matter. On or about July 9, 2004, after the OCD's first ruling but while Maralo's Motion for Rehearing was pending, Maralo submitted a remediation plan to the Division for approval. A copy of this correspondence is attached hereto for your review.

After the rehearing of this matter at the end of last year, Maralo realized that the Division had also requested a plan delineating the scope of proposed remediation. Preparation of this delineation plan required the hiring of consultants and testing on the Anthony Ranch. This testing took place earlier this year and on May 5, 2005, Maralo filed its delineation plan with the Division. A copy of this plan is also attached hereto for your reference.

Again, Maralo apologizes for any confusion that may have arisen from this issue but has not willfully neglected this matter. We hope the attachments referenced herein resolve some of the confusion surrounding the remediation of the Anthony Ranch

Please feel free to give Rick strange or me a call at your convenience if you wish to discuss this matter further. Thank you for your professional courtesies.

Very truly yours,

COTTON, BLEDSOE, TIGHE & DAWSON

David W. Lauritzen

DWL:kk
Attachments

cc: William G. Solomon (w/attach.)
Attorney at Law
5151 San Felipe, Suite 400
Houston, Texas 77056-3607

W. Thomas Kellahin (w/attach.)
Kellahin and Kellahin
117 North Guadalupe
Santa Fe, New Mexico 87501

Brooks, David K

From: Price, Wayne
Sent: Thursday, May 05, 2005 9:37 AM
To: Brooks, David K; MacQuesten, Gail; Williams, Chris; Anderson, Roger
Subject: Maralo-Jay Anothey Ranch

I received a phone call from Mr. Anothey informing me that on April 6 and 7 Maralo had Allstate Environmental (Mr. Rob Elan) perform delineation at the site. Mr. Anothey wanted to know if we had received any results. I informed Mr. Another OCD was totally unaware of this action. Do any of you know what is going on so I can inform Mr. Anothey???????

Sincerely:

Wayne Price
New Mexico Oil Conservation Division
1220 S. Saint Francis Drive
Santa Fe, NM 87505
505-476-3487
fax: 505-476-3462
E-mail: WPRICE@state.nm.us

There has been no contact with us by Maralo. So I know nothing about anything they may be doing. Who is Mr. Anothey? the landowner?

D Brooks

KELLAHIN & KELLAHIN
Attorney at Law

W. Thomas Kellahin
Recognized Specialist in the Area of
Natural Resources-oil and gas law-
New Mexico Board of Legal Specialization

P.O. Box 2265
Santa Fe, New Mexico 87504
117 North Guadalupe
Santa Fe, New Mexico 87501

Telephone 505-982-4285
Facsimile 505-982-2047
kellahin@earthlink.net

May 5, 2005

HAND DELIVERED

2005 MAY 5 PM 3 14

Mr. Roger Anderson,
Environmental Bureau
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: NMOCD Case 13142 (De Novo) Order R-12152-A
Application of the NMOCD for an Order
Requiring Maralo, LLC to Remediate
Hydrocarbon Contamination at an
Abandoned well's tank battery Site
(Jay Anthony Complaint) Lea County, New Mexico

Dear Mr. Anderson:

On behalf of Maralo, LLC I am requesting your "approval of a plan to delineate the extent of the contamination existing at the site of the Humble State Well No. 3 and its associated facilities including areas used for pits, tank batteries and the like" that is enclosed that was prepared by Maralo's environmental expert, Mr. Rob Elam, and transmitted to me by facsimile dated April 26, 2005. Mr. Elam's report consists of the enclosed plat and a one-page written summary.

Very truly yours,

W. Thomas Kellahin

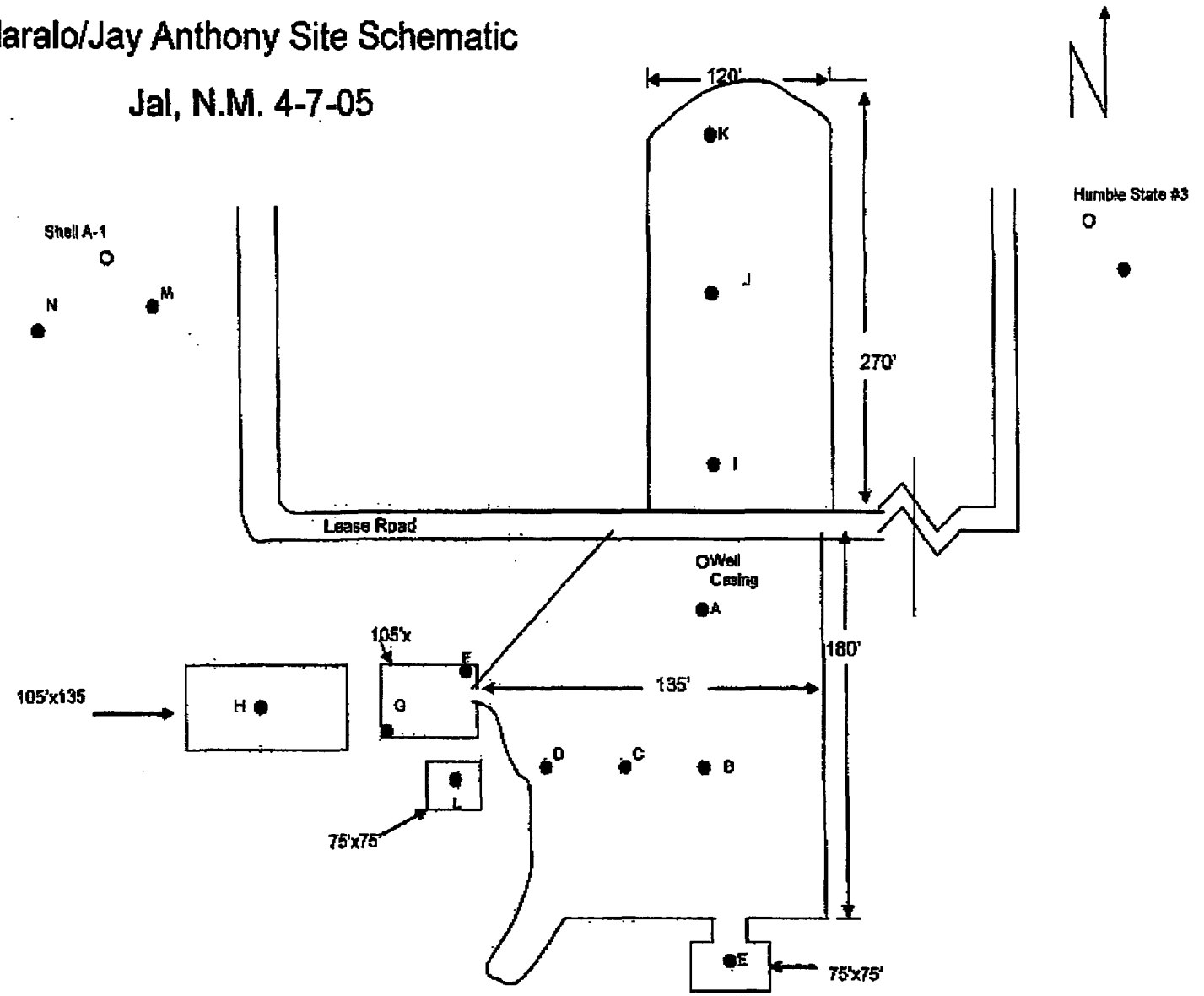
cc: Maralo, LLC;
Rich Strange, Esq. 432-684-3168 (fx)
William Solomon, Esq. 713-960-1672 (fx)

David Sandoval, Esq.
Attorney for Jay Anthony
505-986-0632 (fx)

432-682-4182

Maralo/Jay Anthony Site Schematic

Jal, N.M. 4-7-05



CLOSURE PLAN FOR MARALO-ANTHONY SITE

Maralo proposes to conduct exploratory drilling at the subject site to a depth of 150 ft. if necessary, taking photo ionization detector (PID) samples at 5 ft. intervals to a depth that 2 consecutive samples indicate less than 100 parts per million (ppm) BTEX content. Approximately 15 to 18 borings at points agreed upon by Maralo and Anthony representatives will be selected. The sample will be accessed using a split spoon device with each sample being split with the representatives of each party. Samples for laboratory analysis will be taken at selected points and tested for chloride content and total petroleum hydrocarbon content.

A site drawing is attached indicating proposed drilling/sampling points.

COTTON, BLEDSOE, TIGHE & DAWSON, P.C.

Attorneys at Law
500 W. Illinois
Suite 300
Midland, Texas 79701-4337
(432) 684-5782
Fax No. (432) 682-3672

TO:	Wayne Price		
FIRM/COMPANY:	New Mexico Energy, Minerals & Natural Resources Dept.		
FROM:	Rick G. Strange	**CLIENT NO:**	4802/050
FAX NO:	505/476-3462	**TOTAL # OF PAGES:** (including cover page)	3
DATE/TIME:	August 4, 2005 (8:57AM)	**ATTORNEY #:**	0022

• MESSAGE •

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RICK G. STRANGE • SHAREHOLDER • *BOARD CERTIFIED - CIVIL TRIAL LAW* • *BOARD CERTIFIED - OIL, GAS & MINERAL LAW* •
(432) 685-8574 Direct • (432) 684-3168 Direct Fax • rstrange@cbtd.com

August 4, 2005

BY TELECOPY NUMBER 505/476-3462
Mr. Wayne Price-Pet. Engr. Spec.
New Mexico Energy, Minerals and
Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: NMOCD Case 131142 Orer R-12152-A
Humble State #3 Tank Battery Site
Jal, New Mexico

Dear Mr. Price:

By correspondence dated July 12th, you wrote Joe Pulido with Maralo asking for information about an April 6th testing. Last year, Maralo sold many of its assets and closed the Midland office. It is my understanding that your July 12th letter was returned to you. I assume, therefore, their forwarding order has expired. I received a letter from David Brooks with a copy of your July 12th letter and a request for contact information. Unfortunately, Mr. Brooks' letter arrived while I was out of state on vacation. I apologize for the delay in responding to your request. For your files, Maralo's contact information is:

William G. Solomon
5151 San Felipe, Suite 400
Houston, Texas 77056-3607

I am looking for the sampling information you requested on July 12th and will forward that to you upon receipt.

Very truly yours,

COTTON, BLEDSOE, TIGHE & DAWSON

By: Rick G. Strange

RGS/sm
cc:
Mr. David K. Brooks
Assistant General Counsel
New Mexico Energy, Minerals and
Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

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BLEDSOE
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July 9, 2004

Via Facsimile (505) 476-3462 and
Certified Mail, Return Receipt Requested
Mark E. Fesmire, P.E.
State of New Mexico
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87504

Via Facsimile (505) 476-3462 and
Certified Mail, Return Receipt Requested
Environmental Bureau of New Mexico
1220 South St. Francis Drive
Santa Fe, New Mexico 87504

Re: **Case No. 13142 / Order No. R-12152 — Submission for Approval of Remediation Plan to Delineate the Lateral and Vertical Extent of Hydrocarbon Contamination Existing at the Site of Humble State Well No. 3 in Unit A of Section 36, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico**

Dear Director Fesmire:

Pursuant to the Order of the Division dated June 9, 2004, and subject to its pending appeal and request for stay, please accept this as Maralo's submission for approval of a remediation work plan to delineate the lateral and vertical extent of the hydrocarbon contamination existing at the site of the Humble State Well No. 3 in Unit A of Section 36, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico.

The hydrocarbon contamination discussed in the above-referenced Case No. 13142 is on the property of one Jay Anthony.

Maralo proposes to excavate and remediate the top two feet of visual TPH impacted soil to a limit of <5,000 PPM or <100 PPM PDI. Subsequently, Maralo will replace remediated soil back to its original location.

Before the OCC
Case 13142 - *De Novo*
OCD Ex. 28

With the data the State has previously accumulated in this case from its own field representatives, as well as the data provided by Mr. Anthony, Maralo submits that no further bores for delineation are needed for the Humble State Well No. 3.

Maralo believes that this remediation work plan will eliminate the source of the contaminated plume, which consequently will eliminate the head necessary to drive contamination to groundwater. To two-foot remediated topsoil <5,000PPM TPH will support vegetation with sufficient annual waterfall for the region. In previous testimony before the OCD, the Division's expert hydrologist, Mr. William C. Olson, indicated that a remediation plan along the lines set out herein would be acceptable to the Division.

Thank you for your attention to this remediation work plan submitted for approval of the Division. As always, if you have any questions or comments, please do not hesitate to contact Rick Strange or me at your convenience. We look forward to hearing from you.

Very truly yours,

COTTON, BLEDSOE, TIGHE & DAWSON

David W. Lauritzen

DWL:kk

cc: ***Via Facsimile (505) 476-3462***
Gail MacQuesten
Attorney for OCD

Via Facsimile (505) 476-3462
William C. Olson
OCD

Via Facsimile (505) 986-0632
David Sandoval
Attorney for Jay Anthony

Via Facsimile (505) 982-2047
W. Thomas Kellahin
Attorney for Maralo, LLC

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

July 12, 2005

Mr. Joe Pulido, Manager
Maralo, LLC
P.O. Box 832
Midland, Texas 79702-0832

RE: NMOCD Case 131142 Order R-12152-A
HUMBLE STATE #3 TANK BATTERY SITE
JAL, NEW MEXICO

Dear Mr. Pulido:

The Oil Conservation Division (OCD) is in receipt of Maralo's delineation plan dated May 05, 2005 for the above referenced site. OCD has been informed that Maralo conducted a site investigation on or about April 6, 2005. This plan was not approved by OCD which was a requirement of the Order. In the sprit of cooperation, OCD is requesting that Maralo submit the results of the investigation to assist OCD in determining a proper path forward for the site.

Please submit the results of the investigation with conclusions and recommendations for a remediation plan by July 29, 2005. If you have any questions please do not hesitate to contact me at 505-476-3487 or e-mail wayne.price@state.nm.us.

Sincerely;

Wayne Price-Pet. Engr. Spec.

xc: Roger Anderson-Environmental Bureau Chief
David Brooks-OCD Legal Counsel
Chris Williams, OCD Hobbs District Office
Jay Anthony-Landowner

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

APPLICATION OF THE NEW MEXICO OIL CONSERVATION DIVISION, THROUGH THE ENVIRONMENTAL BUREAU CHIEF, FOR AN ORDER REQUIRING MARALO, LLC TO REMEDIATE HYDROCARBON CONTAMINATION AT AN ABANDONED WELL AND BATTERY SITE; (Jay Anthony Complaint) LEA COUNTY, NEW MEXICO

CASE 13142

MARALO, LLC'S
PROPOSED
ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on November 20, 2003, At Santa Fe, New Mexico, before Examiner David R. Catanach.

Now, on this ___day of December, 2003, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the Division has jurisdiction of this case and the subject matter.

SUBJECT MATTER AND PARTIES

(2) The Division's Environmental Bureau Chief ("EBC"), as the applicant, seeking a Division order requiring Maralo, LLC. ("Maralo") to remediate alleged soil contamination based upon its claim that Maralo is the current operator and violated Division Rules 310 and 313 and therefore is the responsible person to remediate low risk level soil contamination at the tank battery facility at the former Humble State Well No. 3 site located within Unit A of Section 36, Township 25 South, Range 36 East in Lea County, New Mexico.

(3) Maralo claims that it complied with Division Rule 310 and 313 and that it is not the current operator of this facility and is not a responsible person because it ceased all operations on the Humble State Well No. 3 site in 1988 and plugged the well and abandoned the site all in accordance with the Division rules applicable at the time.

(4) Jay Anthony, appeared with counsel, as the owner of the surface within Unit A of this section in support of the applicant. This case was filed by the EBC based upon a compliant filed on October 6, 1999 by Mr. Anthony.

ELEMENTS OF PROOF

(5) This case is the first time such a case has come to hearing before the Division and constitutes a "precedent". **(See Transcript page 76 lines 9-13)** Based upon a review of the testimony of Mr. William Olson, EBC' expert witness, the Division is adopting the following "Elements of Proof" that:

a. there is soil contamination at the former tank battery facility for the abandoned Humble State Well No 3, located in Unit A of Section 36, T25S, R36E, Lea County, New Mexico; **(See Transcript page 47, lines 5-9)**

b. the levels of soil contamination are in excess of current applicable standards; **(See Transcript page 28, lines 22-24)**

c. the soil contamination was caused by placing "tank bottoms" in the pits associated to the Humbler State Well No. 3; **(See Transcript page 36, lines 24-25 and page 37, lines 1-10)**

d. the soil contamination constitutes a violation of Division Rule 313; **(See Transcript page 50, lines 19-23)**

e. Maralo is the current or most recent operator of the former tank battery associated with the Humble State Well No 3. in Unit A of this section; **(See Transcript page 40, lines 4-17)**

f. Maralo is the "responsible person" for the soil contamination and should be required to remediate the contamination. **(See Transcript 66, lines 17-19)**

FACTUAL BACKGROUND

(6) This action concerns an abandoned oil and gas production facility located at the former site of the Humble State Well No. 3 at which all the equipment has been removed, but the site was not remediated in accordance with current Division rules and guidelines. **See EBC's response to Maralo motion to dismiss.**

(7) The EBC submitted evidence demonstrating that:

a. there are the remains of 3 unlined surface pits and 2 tank battery pits (only one pit is associated with the Humble State Well No. 3) within Unit A; **(See located plat attached to EBC Exhibit 3)**

b. the tank battery pit associated with the Humble State Well No. 3 appears to have been used for containment of emulsions, basic sediments and tank bottoms (collectively "tank bottoms"); **(See Transcript page 36, lines 24-25 and page 37, lines 1-10)**

c. it is not now possible to determine the use of the 3 unlined surface pits or the volumes of produced water and associated hydrocarbons disposed into these pits; **(See Transcript page 38, lines 15-18; page 14, lines 17-19 and page 43, lines 14-21)**

d. it is not now possible to determine when the 2 tank batteries were used; **(See Transcript page 38, lines 23-25 and page 43, lines 14-21)**

e. laboratory analyses of soil samples from the various pits contain up to 25,400 parts per million (ppm) of total petroleum hydrocarbons (TPH); up to 0.179 ppm of benzene; up to 0.432 ppm of ethylbenzene, and up to 0.921 ppm of xylene evidencing low risk level of shallow soil contamination; **(See EBC Exhibit 3 & 4 and Transcript page 21, lines 21-24; page 22, lines 19-21; page 62, lines 5-25 and page 63, lines 1-18)**

f. There is no evidence that the abandoned water well located within Unit A has been contaminated by hydrocarbons; **(See EBC Exhibit 7 and Transcript page 11, lines 5-10)**

(8) Maralo submitted evidence by direct testimony and cross-examination demonstrating that:

a. On July 23, 1945, Ralph Lowe drilled the Humble State Well No. 3 at a location 660 feet FNL and 660 feet FEL (Unit A) of Section 3. **(See EBC Exhibit 11)**

b. Ralph Lowe installed 3 unlined surface pits that, in accordance with the custom and practice of the industry, were used for surface disposal of produced water and associated hydrocarbons; **(See Transcript page 92, lines 11-17 and page 102, lines 15-21)**

c. Ralph Lowe installed 1 tank battery, with multiple tanks, two of which were associated with the Humble State Well No.3 but at all times relevant to this matter, Ralph Lowe and therefore Maralo properly disposed of "tank bottoms" associated with the Humble State Well No. 3. **(See Transcript page 93, lines 10-25; page 94, lines 1-25; page 95, lines 1-7 and page 104, lines 15-23)**

d. It is not possible to produce oil without also producing associated water. **(See Transcript page 55, lines 1-20)**

e. On May 1, 1968, Division issued Memorandum 2-68 advising all operators that no exceptions would be granted to Order R-3221 that prohibited any further disposal of produced water into unlined earthen pits after January 1, 1969. **(See Division Memorandum 2-68)**

f. In 1968, in accordance with Division Order R-3336, dated November 9, 1968, Ralph Lowe converted the Humble State Well No 1, located 1980 feet FNL and 1980 feet FEL (Unit G) of Section 3 for the disposal of produced water from the Humble State Well No. 3 and the 3 unlined surface pits were no longer used; **(See Transcript page 93, lines 6-12)**

g. Despite that fact that it is not possible to determine if the soil contamination was caused by tank overflow rather than improper tank bottom disposal, the EBC has assumed that the cause was improper tank bottom disposal. **(See Transcript page 65, lines 1-16)**

h. On April 19, 1974, Maralo, Inc. became the operator of the Humble State Well No 3; **(See Transcript page 40, lines 16-17)**

i. From 1974, Maralo continued to use 2 tanks at the tank battery site to temporally store produced oil from the Humble State Well No. 3 until July 7, 1982 when no further fluids were placed in this tank; **(See Transcript page 91, lines 14-22; page 93, lines 22-25; page 94, lines 1-25; page 104, lines 7-17 also see OCD well file)**

j. On October 15, 1988, Maralo plugged the Humble State Well No. 3, and cleaned the site all of which was approved by the Division. **(See Transcript page 42, lines 1-5, EBC Exhibit 11)**

k. On April 1, 1994, Hal J. Rasmussen became the Division designated operator replacing Maralo; **(See OCD well File)**

l. It is not possible to produce oil and avoid the production of emulsions and basic sediments. **See Transcript page 53, lines 18-15; page 60, lines 10-13 and page 61, lines 1-25)**

m. The EBC admits that there is no evidence that Maralo ever used these surface disposal pits. **(See Transcript page 66, lines 1-3; page 79, lines 10-13)**

n. Despite evidence that the prior operator used these surface pits and the lack of evidence that Maralo did, it is the EBC's policy to "go after the current operator**". (See Transcript page 66, lines 4-25)**

o. At all times during Maralo's operations of the tank battery associated with the Humble State Well No. 3, Maralo operated in such a manner as would reduce as much as practicable the formation of emulsion and basic sediments "Tank Bottoms" **(See Transcript page 93, lines 13-25 and page 94, lines 1-9)**

p. At no time did Maralo store or retain oil in earthen reservoirs or in open receptacles; (**See Transcript page 92, lines 13-17)**

(9) The Division should find that :

a. Division Rule 310 provided that:

> "Oil shall not be stored or retained in earthen reservoirs, or in open receptacles."

b. Division Rule 313 provided that:

"Wells producing oil shall be operated in such a manner as will reduce as much as practicable the formation of emulsions and basic sediments. These substances and tank bottoms shall not be allowed to pollute fresh waters or cause surface damage." **(See Transcript page 53, lines 2-17)**

c. The EBC is attempting in this case to apply its "clean-up" guidelines adopted by the Division in 1993. **(See Transcript page 23, line 5-6)**

d. At all relevant times, the Division did not have rules or regulations concerning the registration, the installation or closer of tank batteries and their associated pits; **(See Transcript page 39, lines 6-12)**

e. It is no longer possible to determine when or how this material was placed in these pits; **(See Transcript page 43, lines 8-13)**

f. A review of Division files fails to disclose the exact location of pits and tank batteries; **(See Transcript page 39, lines 13-24 and page 68, lines 14-16)**

g. The EBC is no longer able to determine who caused this contamination. **(See Transcript page 69, lines 1-3)**

h. On October 28, 1988 the Division approved the plugging and abandonment of the Humble State Well No 3 and approved the site "clean-up". **(See Transcript page 42, lines 2-4)**

i. Rule 310 only precludes oil from being stored or retained in earthen pits but does not preclude the occurrence of hydrocarbons in these pits. The EBC appears to have abandoned its claim that Rule 310 was violated. **(See Transcript page 50, lines 19-23)**

j. Rule 313 only requires the operator of the facility to reduce as much as practicable the formation of "tank bottoms". **(See Transcript page 56 & 57)**

k. Maralo, while operator, operated this facility in accordance with Division's Rules 310 and 313; its operations were consistent with industry practices accepted by the Division during this period; and it properly disposed of "tank bottoms" associated with the Humble State Well No. 3. **(See Transcript page 54, lines 4-25)**

CHLORIDES:

(10) The EBC contends that the presence of hydrocarbons and the absence significant levels of chlorides in 3 unlined surface pits indicates that oil was stored in these pits rather than produced water. **(See Transcript page 37, lines 8-9 and lines 18-22)** but admitted that there is no evidence that Maralo ever placed any oil in any of these pits for any reason. **(See Transcript page 79, lines 10-13)**

(11) Maralo contends that these pits were only used by a prior operator for disposal of produced water that by necessity contains some hydrocarbons. **(See Transcript page 93 lines 13-25)**

(12) Maralo contends that produced water from the Humble State Well No. 3 had a lower level of chlorides than usual produced water. **(See Transcript page 92 lines 15-25 and Page 93, lines 1-5)**

(13) The Division should find that EBC has failed to sustain its "burden of proof" by failing to introduce substantial evidence to prove that Maralo did not comply with Division Rule 310.

TANK BOTTOMS:

(14) The EBC speculates that the hydrocarbon levels in the 2 pits associated with the tank batteries are the result of the improper dismissal of tank bottoms in violation of Division Rule 313. **(See Transcript page 15, lines 8-14 and page 47, lines 3-9)** but cannot tell when this was done. **(See Transcript page 38, lines 23-25, page 36, lines 24-25 and page 37, lines 1-10)**

(15) Maralo contends that the EBC failed to demonstrate that Maralo ever utilized any surface disposal pits. **(See Page 92, lines 11-14; and page 93, lines 6-12)**

(16) Maralo contends that the EBC failed to demonstrate that the levels of hydrocarbons in the 2 surface disposal pits which were tested are in excess of the level that would result from the customary industry practices for the use of these tanks. **(See Transcript page 76-78)**

(17) The Division should find that EBC has failed to sustain its "burden of proof" by failing to introduce substantial evidence to prove that Maralo did not comply with Division Rule 313.

RESPONSIBLE PERSON:

(18) The EBC contends that Maralo is the "responsible person" and should be ordered to remediate this soil contamination. (**See Transcript page 42, lines 15-18)**

(19) Maralo contends that while operator it operated the Humble State Well No. 3 in accordance with Division rules then applicable and therefore is not the operator of the facility responsible for the remediation of any soil contamination.

(20) The Division should find that:

a. Maralo ceased all operations on the Humble State Site No. 3, Unit A, Section 36, T25S, R36E, Lea County, New Mexico, in 1988, plugged the well and abandoned the site all in accordance with the Division's rules. Prior to abandonment, Maralo operated the site in accordance with all New Mexico laws and administrative regulations. The Division initiated this proceeding in 2003, fifteen years after Maralo abandoned the site, contending Maralo violated the **New Mexico Administrative Code Title 19 Section 15.5.310A (2000)** ("Rule 313") and **Section 15.5.310A (2000)** ("Rule 310A") based upon conduct that by a prior operator occurred as far back as the 40s.

b. the EBC is attempting to require Maralo to clean this alleged soil contamination in accordance with the Division's surface impoundment closure guidelines which were adopted by the Division after Maralo abandoned this site.

c. The Division should deny the EBC's application because it is an impermissible attempt to apply its rules retroactively. The Division is, in effect, punishing Maralo for conduct that was legal and in accordance with all applicable Division rules and regulations at the time it was committed. This violates Maralo's constitutional right to due process.

d. Maralo is not a responsible person for the soil contamination at this facility and should not be required to remediate the soil within Unit A of this section.

IT IS THEREFORE ORDERED THAT:

(1) The application of the Division's Environmental Bureau Chief should be denied.

(2) The Division retains jurisdiction of this matter in order to enter such additional order as may be determine necessary.

Done at Santa Fe, New Mexico on the day and year hereinabove designed.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

LORI WROTENBERY
Director

KELLAHIN AND KELLAHIN

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FAX TRANSMITTAL FORM

To

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Agency:
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Fax: 476-[illegible]

From

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- ☐ Urgent
- ☐ For Review
- ☐ Please Comment
- ☐ Please Reply

Date sent: 11-17-03
Time sent: 12:30 pm
Number of pages including cover page:

-4-

Re: NMOCD Case 13142

Dear Mr. Catanach:

Attached is Mario's pre-hearing statement

Copied to Notice List:

Gail MacQuesten, Esq, (OCD) 505-468-4362

Rick G. Strange, Esq, 432-684-3168

David Sandoval, Esq.
Bill Robins, III, Esq. 505-986-0632

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STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISON FOR THE PURPOSE OF CONSIDERING:

CASE NO. 13142

APPLICATION OF THE NEW MEXICO OIL CONSERVATION DIVISION FOR AN ORDER REQUIRING MARALO, LLC TO REMEDIATE HYDROCARBON CONTAMINATION AT AN ABANDONED WELL AND BATTERY SITE, LEA COUNTY, NEW MEXICO

PRE-HEARING STATEMENT

This pre-hearing statement is submitted by Maralo, LLC as required by the New Mexico Oil Conservation Division.

APPEARANCES OF THE PARTIES

APPLICANT

Oil Conversation Division

ATTORNEY

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OPPONENT

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STATEMENT OF THE CASE

OPPONENT:

The Division is attempting to require Maralo, LCC to remediate alleged soil contamination alleging that "clean-up" should be accomplished in accordance with the Division's current surface impoundment closures guidelines adopted by the Division in February, 1993 more than 5 years after Maralo plugged the well and abandoned this site.

The Division lacks authority to require Maralo, LLC to conduct the proposed remediation activities because it is impermissibly applying rules retroactively. For example, the Oil Conservation District is attempting to punish Maralo, LLC for conduct that was legal at the time it occurred, by using rules outlawing that conduct, which were adopted after the fact. This violates Maralo, LLC's constitutional due process rights, and violates the Constitution's Ex Post Facto provision. Maralo, LLC denies that the commission has jurisdiction or legislative authority to order Maralo, LLC to remediate property that was abandoned in 1988. Maralo, LLC also denies that it is otherwise liable for the charges filed against it.

PROPOSED EVIDENCE

OPPONENT

WITNESSES	EST. TIME	EST. EXHIBITS
Bill Hunt (operations)	45 minutes	Well File Excerpts
Philip Smith (operations)	30 minutes	Well File Excerpts Correspondence with OCD
Rob Elam (consultant)	45 minutes	

PROCEDURAL MATTERS

Maralo's motion to dismiss.

W. Thomas Kellahin
KELLAHIN & KELLAHIN

Maralo's Response

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

APPLICATION OF THE NEW MEXICO OIL CONSERVATION DIVISION, THROUGH THE ENVIRONMENTAL BUREAU CHIEF, FOR AN ORDER REQUIRING MARALO, LLC TO REMEDIATE HYDROCARBON CONTAMINATION AT AN ABANDONED WELL AND BATTERY SITE; (Jay Anthony Complaint) LEA COUNTY, NEW MEXICO

CASE 13142

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OCT 28 2003
Oil Conservation Division

MARALO, LLC'S REPLY TO THE NEW MEXICO OIL CONSERVATION DIVISION'S AND ANTHONY'S RESPONSE IN OPPOSITION TO MARALO LLC'S MOTION TO DISMISS

Maralo, LLC ("Maralo") submits this reply brief in response to the New Mexico Oil Conservation Division ("OCD") and Anthony's Response to Maralo, LLC's Motion to Dismiss the OCD's Application for an order requiring remediation of hydrocarbon contamination and in support of Maralo, LLC's Motion to Dismiss and shows as follows:

INTRODUCTION

Maralo submitted a Motion to Dismiss the OCD's application for remediation because it is an attempt to enforce Oil Conservation Division Rule 310 retroactively and to punish Maralo even though it did nothing in violation of the rule.

storage or retention of oil in earthen reservoirs or open receptacles. Not arguing other rule!

The OCD claims that the rule's present form was written in 1950 and 1935. This is incorrect. The OCD is ignoring the distinct and critical differences in the language of the rule over time. Furthermore, in the OCD's Response, they insinuate that Maralo has existing and continuing contamination on the land. It is impossible for Maralo to have continued contaminating the land when it is no longer the operator, has not operated the property for almost 20 years, and has no present connections to the Humble Oil Well.

what critical difference?

The OCD claims that they are not applying the rule retroactively but prospectively. This is incorrect. "A statute or regulation is considered retroactive if it impairs vested rights acquired under prior law or requires new obligations, imposes new duties, or affixes new disabilities to past transactions." *Howell v. Heim*, 882 F.2d 541 (N.M. 1994). OCD's action follows the definition of a retroactive law. It is obvious that the Division is ignoring the United States Constitution, New Mexico Constitution, and case law, for all three frown upon the enforcement of laws retroactively because it is a deprivation of an entity's due process rights. Every action Maralo took on the property was legal and consistent with applicable rules and regulations at the time. The alleged violations are not the result of Maralo's actions, but rather changes in the language of OCD's rules.

In Anthony's Response, he claims that the OCD has unlimited power as an administrative agency and ignores the fact that all administrative agencies, both federal and state, are limited by the statutes that created them. Without limits on administrative agencies, the constitutional principles of a democratic society would fail, for a central overbearing governmental entity would be created.

Anthony claims that New Mexico case law allows statutes to be applied retroactively. In some instances that is correct – but if, and only if, the enabling statute clearly allows retroactive enforcement. Unlike the OCD's enabling statute, the statutes cited by Anthony clearly allowed for retroactive enforcement. When analyzing a law to see if it may be retroactively applied, the analysis must be closely tailored to the specific statute, rule, or regulation's granting power. It is not a general rule that New Mexico enforces all statutes retroactively. That would be a clear violation of both the United

States Constitution and the New Mexico Constitution since each prohibits ex post facto laws and retroactive application and enforcement of laws.

SUMMARY OF THE ARGUMENT

1. Maralo was not in violation of OCD Rule 310 when operating the Humble Oil Well on the Anthony property.
2. The division is retroactively applying Rule 310 to Maralo.
3. Retroactive application of these rules violate federal constitutional law and New Mexico constitutional and state law.

ARGUMENT

Maralo did not violate Rule 310 while operating the Humble Well. Maralo plugged and abandoned the Humble Well years ago, - well before this application was sought. Moreover, Maralo ceased using open pits for disposal purposes long before the no pit law was enacted. Prior to that law, when Maralo did use open pits, they were never used to store oil. It is important to understand that before the no pit order, it was legal to use surface disposal pits. For example, the 1935 and 1950 versions of Rule 310 did not ban or regulate the use of pits for salt water disposal. See Exhibit "A". They simply prohibited the storage of oil. Maralo did not use the pits to store oil. Using them for other purposes, such as salt water disposal, reserve pits, and overflow pits and was legal under the 1935 and 1950 rules. Maralo, thus, did not violate Rule 310 when the pits were actually in use.

Pits not used for oil. But - we have a pit w/ oil in it.

Since Maralo did not violate Rule 310 or any other OCD rules while operating the Humble Well, the enforcement of the current version Rule 310 against Maralo for prior conduct is retroactive enforcement of an administrative rule. It is against both federal

constitutional law and New Mexico constitutional law to retroactively enforce Rule 310 against Maralo. In *Howell v. Heim*, the court addressed the problem of retroactive application of administrative agency rules and regulations. 118 N.M. at 506. The Court stated that the right to enact and enforce the rules and regulations of an administrative agency must be found in the enabling statute. *Id.* The enabling statute also limits the administrative agency according to the *Howell* court. *Id.* Finally, the Court stated that just because a fact situation arises where it would be best to apply retroactive powers; those powers do not automatically arise from that fact situation. *Id.*

In *Howell*, the court found that an administrative agency was enforcing its rule prospectively because the issue was whether the individual could continue receiving benefits. This case does not support the OCD's contention that it is prospectively applying Rule 310, the OCD is not regulating Maralo's future behavior, but is punishing it for past conduct. The OCD claims that any time a property condition exists on a rule's effective date, and even though that condition results solely from events occurring prior to that day, that a statute is not being applied retroactively. This is a misinterpretation of the case law.

In *Gasden Federation of Teachers v. The Board of Education of the Gadsden Independent School District*, the New Mexico Appellate court differentiates and explains what the *Howell* Court meant when they stated that a statute or rule is not retroactively construed if the condition exists when the rule was enacted. 1996 NMCA 69, 13-20. In the case of *Howell*, the petitioner was seeking future benefits and actions that were no longer going to exist because of a rule terminating the benefits. See generally *Howell*, 118 N.M. 500. This was a prospective rule for it limited a future action and did not

punish or take away a right in the past. In *Gasden*, a rule was being enforced retroactively for it affected the rights under a past contract. This affected a past action and an existing contract right that had been taken away and was not concerning a future action. 1996 NMCA 69.

Maralo's actions were all in the past. Maralo ceased all operations on this well many years ago and had ceased all pit use prior to the enactment of the current version of Rule 310. Since no activity occurred after the enactment of the Rule, any enforcement of Rule 310 is punishing Maralo retroactively for an action that was legal at the time it occurred.

Retroactive enforcement is simply not favored and in New Mexico, there is a presumption against any retroactive enforcement of a statute, rule, or regulation. See *Bowen v. Georgetown University Hospital*, 488 U.S. 204 (1988 at 208); *Green v. United States*, 378 U.S. 149, 160 (1964); *Kaiser Aluminum and Chemical Corporation v. Bonjorno*, 494 U.S. 827, 837 (1990); *Coleman v. United Engineers and Constructors, Incorporated*, 878 P.2d 996, 1001 (N.M. 1994); *Gadsden Federation of Teachers v. The Board of Education of the Gadsden Independent School District*, 1996 122 N.M.C.A. 69, 13.

Unless the OCD can prove its enabling statute clearly supports retroactive enforcement, it is discouraged. See *Coleman*, 878 P. 2d at 1001. The statute upon which Rule 310 comes from is silent regarding retroactive application of Rule 310. See discussion in Maralo's Brief in Support of Maralo, LLC's Motion to Dismiss. Silence does not equal permission to retroactively apply Rule 310. In interpreting a statute's language to see if it applies retroactively, you must first look at the words of the statute

and then secondly the legislative history. You cannot presume or assume that silence regarding retroactivity in a statute means that it can be applied retroactively. In fact, the presumption is reversed. There is actually a presumption that when a statute is silent, the statute must be enforced prospectively unless there is clear evidence regarding legislative history that would suggest that its retroactive application was intended. See Coleman, 878 P.2d at 1001.

Both the Division and Anthony argue that the prohibition of retroactive application of the rules hinders and curtails the OCD's powers as an administration agency. This does not justify retroactive enforcement because the OCD as an administrative agency is not unlimited in its grant of power. The Court in *Public Service Company of New Mexico v. New Mexico Environmental Improvement Board* clearly sets out the boundaries of an administrative body in New Mexico by stating, "administrative bodies are the creatures of statutes. As such, they have no common law or inherent powers and connect only as to those matters that are within the scope of the authority delegated to them." 89 N.M. 223, 226 (N.M. Ct. App. 1976) quoting *Maxwell Land Grant Company v. Jones*, 213 P. 1034 (1923).

Anthony argues that this case sets out that New Mexico allows great power to be given to its administrative agencies. However, he failed to read the full body of the case, for the Court goes on to state that an administrative agency is permitted to accomplish the legislative intent or policy but their limitation is that an administrative agency is not allowed to amend or enlarge its authority under the guise of making rules and regulations. *Id.* at 227. It shows that the court does uphold the boundaries that are in place on administrative agencies and will not allow them to extend their statutory boundaries

further. Thus, OCD is bound under the New Mexico statutes that set forth its powers. Those powers are set out more clearly and can be seen in the Brief in Support of Maralo, LLC's Motion to Dismiss Maralo, LLC from Remediation of Hydrocarbon Contamination. As Maralo set out in the brief retroactivity would definitely be outside of the boundaries of the statute.

As noted, rules such as Rule 310 may only be retroactively enforced if the legislature clearly provides the OCD this authority. See *Coleman,* 878 P.2d at 1001. Both the Division and Anthony argue that this presumption does not exist and that case law has stated that any environmental statute can be enforced retroactively. Anthony specifically cites CERCLA as a statute that has been given retroactive enforcement. However, CERCLA was intended by the United States Congress to be applied retroactively and courts have consistently found that to be true. See *Franklin County Convention Facility Authority v. American Premier Underwriters, Incorporated*, 240 F.3d 534 (6th Cir. 2000). But it does not follow that just because CERCLA, a federal statute, could be retroactively applied that every statute in every state can be considered retroactively enforceable. The New Mexico case law cited by both the OCD and Anthony contain statutes, which unlike the OCD's authority, specifically allow retroactive enforcement.

Finally, the OCD and Anthony argue that public policy demands the retroactive application of Rule 310 to Maralo; however, by making this statement, both are admitting that they are using Maralo simply to make an example of them. This public policy argument goes against the United States Constitution, the New Mexico Constitution, and case law. Allowing an agency to take on the broadest power possible just to set an example also goes against the constitutional division of the powers.

Maralo is not questioning the authority of OCD to make rules and regulations to and to enact the rules and regulations that they have made. Those rules cannot be applied retroactively or else the OCD will violate both U.S. Constitutional and State Constitutional laws.

CONCLUSION AND PRAYER

Maralo did not violate any of the versions of Rule 310 that were in place when Maralo operated the Humble Well. The OCD and Anthony can provide no evidence to the contrary. Further, the OCD and Anthony can show no evidence that Maralo is still polluting or creating pollution on this date. Without such evidence, no remedial plan is required. Further, the OCD has no power to enforce Rule 310 retroactively. By doing so, they are violating the United States Constitutional law and the State law. This application is an attempt to punish Maralo and is not based in any law or fact that the OCD or Anthony has produced and therefore the application should be dismissed. Maralo prays further for general relief.

Respectfully submitted,

By: _____
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of
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ATTORNEY FOR MARALO, LLC

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document was forwarded on the 27th day of October, 2003, to the following counsel of record:

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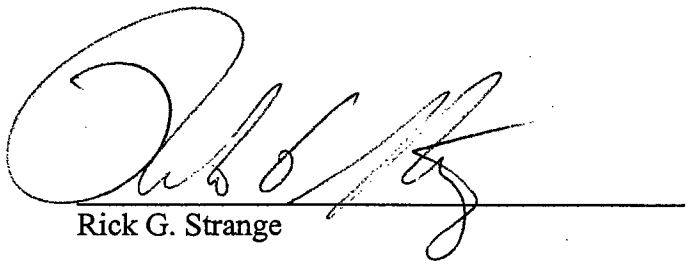

Rick G. Strange

EXHIBIT "A"

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OCT 28 2003
Oil Conservation Division

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARINGS CALLED BY THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

CASE NO. 189
ORDER NO. 850

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and Archives
10-3-03

RULES AND REGULATIONS

ORDER OF THE COMMISSION

BY THE COMMISSION:

After due notice and hearings in Santa Fe, New Mexico, on September 7, 1949, and November 1, 1949, the Commission finds that certain rules, regulations and orders should be adopted and others repealed.

IT IS THEREFORE ORDERED:

1. All rules, regulations and orders heretofore issued by the Commission are repealed and rescinded, effective January 1, 1950, except the following orders which are of a special nature and are not of statewide application, they being:

a. All orders heretofore issued granting permission for specific unorthodox locations.

b. Orders relating to approval of unit agreements No. 570, 583, 603, 602, 628, 629, 648, 655, 656, 676, 677, 684, 706, 717, 731, 737, 755, 759, 772, 774, 786, 794, 796, 836.

c. Orders relating to Carbon Black Plants No. 650, 651, 724, 806.

d. Orders relating to spacing in the Fulcher Basin Pool No. 541, 647, 748, 815.

e. Orders relating to specific five (5) spot locations No. 733, 819, 826, 821, 828, 844.

f. Order No. 799 relating to spacing in the Blanco Pool.

g. Orders relating to specified pressure maintenance projects as follows:
   (1) Loco Hills Pressure Maintenance Association, 339, 484, 498, 540, 562.
   (2) Maljamar Cooperative Repressuring Agreement, 485, 495, 736, 793.
   (3) Grayburg Unit Association, 659, 791, 802.
   (4) Culbertson-Irwin Pressure Maintenance Project, 388.
   (5) Langlie Unitized Pressuring Project, 340.

h. Orders relating to pooling of interests in specified leases, No. 739, 780.

i. Order No. 795 relating to a specific tank battery.

j. Orders relating to dual completions on specified wells, No. 740, 750, 801, 810, 816, 829, 838.

k. Order No. 831 rescinding the bonus discovery allowable.

l. Order No. 779 relating to 80-acre spacing in the Crossroads Pool.

m. Section 2 of Order No. 835, relating to gas-oil ratios.

n. Order 846, establishing 80-acre spacing in Bagley-Hightower Pool.

o. Order 33, relating to the proration plan for Monument Pool, Lea County, New Mexico.

p. Order 398, relating to proration plan for Hobbs Pool.

q. Orders No. 66 and 67, relating to carbon dioxide.

2. This order shall not affect in any way the validity of any statewide proration order heretofore issued.

3. An exception from the rules and regulations hereby adopted is granted until March 31, 1950, as to all presently existing oil and gas wells that have been in the past and are presently operated or the products thereof utilized in a manner differing from the requirements herein, but in compliance with former rules and regulations. If during said period the operator files with the Commission an application for a permanent exception for such well from the requirements of these rules and regulations, the temporary exception herein granted shall continue in force until the Commission has acted on such application.

4. The following rules and regulations are hereby adopted, effective January 1, 1950.

DONE at Santa Fe, New Mexico, on this 9th day of December, 1949.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

THOMAS J. MABRY, CHAIRMAN

GUY SHEPARD, MEMBER

R. R. SPURRIER, SECRETARY

I certify that this is a true copy of the original document in the custody of the State of New Mexico Records Center and Archives.
DATE 10-3-03

w Mexico Oil Conservation Commission, Rules and Regulations,
fective Jan. 1, 1950

RULE 306. VENTED CASINGHEAD GAS

Pending arrangement for disposition for some useful purpose, all vented casinghead gas shall be burned, and the estimated volume reported on Form C-115.

RULE 307. USE OF VACUUM PUMPS

Vacuum pumps or other devices shall not be used for the purpose of creating a partial vacuum in any stratum containing oil or gas.

RULE 308. SALT OR SULPHUR WATER

Operators shall report monthly on Form C-115, the amount or percentage of salt or sulphur water produced with the oil by each well making 2% or more water.

RULE 309. CENTRAL TANK BATTERIES

Oil shall not be transported from a lease until it has been received and measured in tanks located on the lease. At the option of the operator, common tankage may be used to receive the production from as many as 8 units of the same basic lease, provided adequate tankage and other equipment is installed so that the production from each well can be accurately determined at reasonable intervals.

RULE 310. OIL TANKS AND FIRE WALLS

Oil shall not be stored or retained in earthen reservoirs, or in open receptacles. Dikes or fire walls shall not be required except such fire walls must be erected and kept around all permanent oil tanks, or battery of tanks that are within the corporate limits of any city, town, or village, or where such tanks are closer than 150 feet to any producing oil or gas well or 500 feet to any highway or inhabited dwelling or closer than 1000 feet to any school or church; or where such tanks are so located as to be deemed an objectionable hazard within the discretion of the Commission. Where fire walls are required, fire walls shall form a reservoir having a capacity one-third larger than the capacity of the enclosed tank or tanks.

RULE 311. TANK CLEANING PERMIT

No tank bottom shall be removed from any tank used for the storage of crude petroleum oil unless and until application for tank-cleaning permit is approved by Agent of the Commission. To obtain approval, owner shall submit Commission's Form C-117 reporting an accurate gauge of the contents of the tank and the amount of merchantable oil determinable from a representative sample of the tank bottom by the standard centrifugal test as prescribed by the American Petroleum Institute's code for measuring, sampling, and testing crude oil. Number 25, Section 5. The amount of merchantable oil shall be shown as a separate item on Commission Form C-115, and shall be charged against the allowable of the unit or units producing into such tank or pit where such merchantable oil accumulated. Nothing contained in this rule shall apply to the use of tank bottoms on the originating lease where owner retains custody and control of the tank bottom or to the treating of tank bottoms by operator where the merchantable oil recovered is disposed of through a duly authorized transporter and is reported on Commission Form C-115. Nothing contained in this Rule shall apply to reclaiming of pipe line break oil or the treating of tank bottoms at a pipe line station, crude oil storage terminal or refinery or to the treating by a gasoline plant operator of oil and other catchings collected in traps and drips in the gas gathering lines connected to gasoline plants and in scrubbers at such plants.

RULE 312. TREATING PLANT

No treating plant shall operate except in conformity with the following provisions:

(a) Before construction of a treating plant and upon written application for treating plant permit stating in detail the location, type, and capacity of the plant contemplated and method of processing proposed, the Commission in not less than 20 days will set such application for hearing to determine whether the proposed plant and method of processing will actually and efficiently process, treat and reclaim tank bottom emulsion and other waste oils, and whether there is need for such a plant at the proposed location thereof. Before actual operations are begun, the permittee shall file with the Commission a surety bond of performance satisfactory to the Commission and payable in the amount of $25,000.00 to the Commission of the State of New Mexico.

(b) Such permit, if granted, shall be valid for 1 year, sha
Commission at any time after hearing is had on 10 days' notic
operator to an approved Certificate of Compliance and Authori
Form C-110, for the total amount of products secured from

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processed. Any operating treating plant shall, on or before the 15th day of each calendar month, file at the nearest office of the Commission, a monthly report on Commission Form C-118, which report when fully completed and approved by an authorized agent of the Commission, may be used to support a Commission Form C-110 for the net oil on hand at the end of the reported period. In no event shall Commission Form C-110 be issued for moving the products of a treating plant without supporting Commission Form C-118 being completed and approved.

(c) None of the provisions of this rule are applicable to the recovery of wash-in oil, creek oil, or pit oil where such oil is picked up and returned to the lease on which produced or where such oil is disposed of by owner to an authorized transporter and accounted for on Commission Form C-110. Before any person other than owner shall pick up, reclaim or salvage wash-in oil, creek oil, or pit oil, a permit to do so shall be obtained from owner or operator of lease and from the duly authorized agent of the Commission. Application for permit shall state the name and location of the lease, the number of well or wells from which the oil was produced, or the source of such oil and the name of the owner, operator or manager.

RULE 313. EMULSION, BASIC SEDIMENTS, AND TANK BOTTOMS

Wells producing oil shall be operated in such a manner as will reduce as much as practicable the formation of emulsion and B. S. These substances and tank bottoms shall not be allowed to pollute streams or cause surface damage. If tank bottoms are removed to surface pits, the pits shall be fenced and the fence shall be kept in good repair.

I certify that this is a true copy of the original document
In the custody of the State of New Mexico Records
Center and Archives
DATE 10-3-03

Center and Archives
DATE Melissa Salazar 10-2-03

OIL CONSERVATION COMMISSION OF NEW MEXICO

ORDER NO. 4

GENERAL RULES AND REGULATIONS GOVERNING THE CONSERVATION OF OIL AND GAS IN NEW MEXICO

INTRODUCTION

Pursuant to power delegated by an Act of the Twelfth Regular Session of the Legislature of the State of New Mexico, Chapter 72, Laws of 1935, especially the power delegated by Sections 9 and 10 thereof, the Oil Conservation Commission of the State of New Mexico, hereinafter designated as the "Commission", hereby and herein makes and promulgates the following general rules and regulations which are found by the Commission, after notice and hearing as required by law, held at Santa Fe, New Mexico, June 28th, 1935, to be reasonably necessary to prevent present and imminent waste of oil and gas, as defined by law, and otherwise to carry out the purposes of said Act. These rules and regulations shall become effective August 12, 1935.

RULE 1. SIGNS ON WELLS

ry well shall be identified by a sign, posted on the derrick le, otherwise on a substantial post not more than twenty ı such well, and such signs shall be of durable construction lettering thereon shall be kept in a legible condition and large enough to be legible under normal conditions at a of fifty feet. The wells on each lease or property shall ered consecutively beginning with No. 1, unless some other of numbering was adopted by the owner prior to the of these rules and regulations. Each sign shall show the of the well, the name of the lease (which shall be different lease), the name of the lessee, owner or operator, and the by quarter, section, township and range.

RULE 2. GENERAL SPACING RULES

rules for the spacing of oil and gas wells are as follows:

"Wildcat" wells shall not be drilled closer than 330 ny lease or property line or less than 660 feet from any ll. "Wildcat" wells, according to the meaning used herein, shall be those which are located not less than two miles from any commercial or potentially commercial oil or gas well, and that outside the boundaries of proven oil or gas fields or areas that n be designated by the Commission. Plugged and abandoned w shall not be considered in applying this rule.

The Commission may, after notice and hearing, grant excepti to this rule, provided such exceptions will create neither waste hazards conducive to waste. Such exceptions may be granted w surface conditions render it impracticable without unreasona expense to drill a well at a location in conformity with this r or when a separately owned tract is so small or so shaped tha location in conformity with this rule is impossible.

(b) The foregoing rule with reference to "Wildcat" w shall also apply to all other wells, unless and until the Commiss after notice and hearing, adopts special rules for the spacing wells in proven oil or gas fields or in areas that the Commis may designate.

RULE 3. WELL RECORD

During the drilling of every well, the owner, opera contractor, driller, or other person responsible for the conduc drilling operations, shall keep at the well a detailed and accu record of the well, reduced to writing from day to day, which s be accessible to the Commission and its agents at all reason times. A copy of the record shall be furnished to the Commis at its request, but shall be kept confidential, if the operato requests in writing, for a period not to exceed ninety days a the completion of the well, provided that the report or data the when pertinent, may be introduced in evidence in any public hea before the Commission or any Court, regardless of the request the report be kept confidential.

If so ordered by the Commission, samples of drill cuttings s be kept in the State by the owner of the well and shal accessible to the Commission and its agents at all reasor times.

RULE 4. DEVIATION TESTS

Whenever any well is drilled or deepened, tests to deter the deviation from the vertical shall be taken at intervals o more than 500 feet. Directional surveys may be required by Commission whenever in its judgment the location of the bo of the well is in doubt.

RULE 5. PIT FOR SHALE DRILL CUTTINGS REQUIRE

During the drilling of any well, all clay and soft shale cuttings shall be accumulated in an adequate pit provided b drilling is commenced, in order to assure a supply of p material for mud-laden fluid to confine oil, gas or water to native strata.

Oil and Gas Conservation Law, Circular No. 1
Agency Historic Rules Coll.

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RULE 6. STRATA TO BE SEALED OFF

Before any oil or gas well is completed as a producer, all oil, gas and water strata above the producing horizon shall be sealed or separated in order to prevent their contents from passing into other strata.

RULE 7. SHOOTING AND CHEMICAL TREATING OF WELLS

Wells shall not be shot or chemically treated until the permission of the Commission is obtained. Each well shall be shot or treated in such manner as will not cause injury to the sand, or result in water entering the oil or gas sand, and necessary precautions shall be taken to prevent injury to the casing. If shooting or chemical treating results in irreparable injury to the well or to the oil or gas sand, the well shall be properly plugged and abandoned. (See Rule 42.)

RULE 8. WATER SHUT-OFFS

All water shall be shut off and excluded by a method approved by the Commission from the various oil and gas bearing strata which are penetrated. Water shut-offs shall ordinarily be made by cementing casing or landing casing with or without the use of mud-laden fluid. Drilling shall not be resumed following the landing or cementing of each string of casing until proof is obtained satisfactory to the Commission of a proper oil and gas and water shut-off.

RULE 9. MUD-LADEN FLUID

Mud-laden fluid is a term used herein to designate any mixture of water and finely divided or colloidal material that remains in suspension for a long time. The mud employed shall have suitable physical and chemical properties to accomplish adequately the purpose for which such mud is used.

RULE 10. USE OF MUD-LADEN FLUID IN SETTING CASING

In order to seal off any oil, gas or water stratum during drilling, the owner shall, if the Commission so requires, run the casing and seat it in mud-laden fluid, which fluid shall fill the hole outside the casing to the top, where the level of said fluid shall be maintained.

RULE 11. PULLING OUTSIDE STRINGS OF CASING

In pulling any outside strings of casing from any oil or gas well, the space outside the casing left in the hole shall be kept and left full of mud-laden fluid of adequate specific gravity to seal off all fresh and salt water strata and any strata bearing oil or gas not producing.

Oil and Gas Conservation Law, Circular No, 1
Agency Historic Rules Coll,

RULE 12. ABANDONING WELLS

Before a well is abandoned, it shall be plugged in a ma
which will confine permanently all oil, gas and water in the sep
strata originally containing them. This operation shall be ac
plished by the use of mud-laden fluid, cement and plugs, used s
or in combination as may be approved by the Commis
The exact location of abandoned wells shall be shown by a
marker at least four inches in diameter set in concrete,
extending at least four feet above mean ground level.

RULE 13. BLOW-OUT PREVENTION

In drilling in areas where high pressures are likely to
all proper and necessary precautions shall be taken for keepin
well under control, including the use of blow-out preventers
high pressure fittings attached to properly anchored and cem
casing strings.

RULE 14. CASING REQUIREMENTS FOR OIL AND GAS PRODUCTION

Oil wells shall be completed with an oil string of c
which shall be properly cemented at a sufficient depth adequ
to protect the oil-bearing stratum. Gas-producing wells sha
cased in a similar manner.

RULE 15. OIL TANKS AND FIRE WALLS

Oil shall not be stored or retained in earthen reservoirs,
open receptacles. All lease, stock and oil storage tanks sha
protected by a proper fire wall, which wall shall form a rese
having a capacity one-third larger than the capacity of the en
tank or tanks. Such tanks shall not be erected, enclose
maintained closer than 150 feet to the nearest producing well.

RULE 16. EMULSION, B. S., AND WASTE OIL

Wells producing oil shall be operated in such manner a
reduce as much as practicable the formation of ulsio
B. S. These substances and waste oil shall not be allow
pollute streams or cause surface damage.

RULE 17. USE OF VACUUM PUMPS

Vacuum pumps or other devices shall not be used f
purpose of creating a partial vacuum in any stratum cont
oil or gas.

RULE 18. PROTECTION OF FRESH AND ARTESIAN WA

All fresh waters and waters of present or probable future
for domestic, commercial or stock purposes shall be confi
their respective strata and shall be adequately protected by m

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OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

APPLICATION OF THE NEW MEXICO OIL CONSERVATION DIVISION, THROUGH THE ENVIRONMENTAL BUREAU CHIEF, FOR AN ORDER REQUIRING MARALO, L.L.C. TO REMEDIATE HYDROCARBON CONTAMINATION AT AN ABANDONED WELL AND BATTERY SITE; LEA COUNTY, NEW MEXICO

ANTHONY'S RESPONSE IN OPPOSITION TO MARALO, L.L.C.'S MOTION TO DISMISS

COMES NOW, Jay Anthony, by and through counsel, and sets forth his opposition to dismissal as follows:

I. INTRODUCTION

Jay Anthony is the surface owner of contaminated land in Lea County that is the subject of this remediation proceeding (the "Property"). Maralo, LLC ("Maralo") was the operator of the Humble State Well No. 3, the associated tank battery and pits located on the Property. An earlier investigation by the Oil Conservation Division ("OCD") found that the surface around the former tank battery is contaminated with highly weathered asphaltic type oil and that several backfill pits remain in existence. The pits were apparently used by Maralo for the disposal of emulsions, basic sediments and tank bottoms. The contamination was found to be result of Maralo's violation of OCD Rules 310 and 313.

Pursuant to Rule 313, the OCD ordered Maralo to submit a work plan to remedy the surface pollution. Maralo refused.

Maralo has now filed its Motion to Dismiss on the unsupportable basis that the OCD is without legal authority to require the remediation of existing contamination caused by past conduct.

Its request for dismissal is based on a faulty premise that the OCD is attempting to retroactively apply the Rules that have been violated by Maralo.

Maralo's Motion presents a direct attack on the OCD's very power and authority to perform its statutory functions. It presents an important question, the resolution of which will have a major impact on the OCD's ability to remedy pollution in New Mexico. The OCD must take a strong stand here, deny Maralo's dismissal motion, and clearly signal its intent to the public and the oil and gas industry that it will not be stifled in its attempts to address and correct existing contamination.

II.
SUMMARY OF ARGUMENT

1. The conduct prohibited by Rules 310 and 313 was illegal during Maralo's operation of the Humble Well. As such, whether the Rules should apply retroactively is a question that is not even before the Hearing Officer.
2. The rule against retroactive application is a mere presumption that can be rebutted by a showing of legislative interest or consistency with a statutory purpose. Even if the OCD was seeking to retroactively apply Rules 310 and 313 it is within its power and authority to do so.
3. Maralo fails to show a due process violation.

III.
ARGUMENT

A. The OCD Has Broad Power to Promulgate Rules and Regulations.

There is no dispute that "[a]dministrative bodies are creatures of statute and can act only on those matters which are within the scope of authority delegated to them." *In re*

Proposed Revocation of the Food and Drink Purveyor's Permit, 102 N.M. 63, 691 P.2d 64 (Ct. App. 1984). An "agency's authority is not limited to the express power granted by statute, but also includes those powers that arise from the statutory language by fair and necessary implication." *Howell v. Heim,* 118 N.M. 500, 504, 882 P.2d 541, 545 (1994). Further, the "authority granted to an administrative agency should be construed so as to permit the fullest accomplishment of the legislative intent or policy." *Public Service Co. v. New Mexico Environmental Improvement Board,* 89 N.M. 223, 549 P.2d 638 (Ct. App. 1976). New Mexico thus allows much power to its administrative agencies.

The primary restriction on an agency's power is merely that it may not "amend or enlarge its authority under the guise of making rules and regulations." *Public Service Co.,* 89 N.M. at 228, 549 P.2d at 643. Maralo's attack on the OCD's authority is narrowly focused in this regard. That the OCD properly promulgated Rules 310 and 313 is not challenged. Neither does Maralo argue that the substantive coverage of Rules 310 and 313 is outside the scope of the OCD's regulatory authority. As such, the procedural and substantive validity of Rules 310 and 313 is not at issue.

Instead, Maralo merely argues that the OCD cannot apply its Rules retroactively. The argument appears to be a wholesale attack and not limited to Rules 310 and 313. Maralo's argument is that the OCD is completely without authority to promulgate any retroactive regulation whatsoever. This Response will show that retroactivity is not even an issue here since the conduct prohibited by Rules 310 and 313 was in fact illegal at the time that Maralo operated the well. Further, even if the OCD was attempting to apply these

Rules retroactively, it is fully within its power to do so.

B. There is no Retroactivity Here.

As was clearly shown by Staff's comprehensive archival research, the question of whether an OCD Rule may be properly applied retroactively is not even at issue. Staff has shown that the substantive coverage of both Rules 310 and 313 has been in place for decades and certainly during Maralo's operation which caused the contamination sought to be remediated.

The question of retroactivity is in actuality nothing more than a red herring. New Mexico has long and consistently recognized that a statute does not apply retroactively merely because some of the facts and conditions which are dealt with existed prior to the enactment. *Howell*, 118 N.M. at 506; see also, *Lucero v. Board of Regents of Northern New Mexico State School*, 91 N.M. 770, 581 P.2d 458 (1978) (allowing a statute providing tenure rights to teachers after their third consecutive year of employment to operate, even though plaintiff's years of consecutive service occurred prior to the statute's enactment); *State v. Mears*, 79 N.M. 715, 449 P.2d 85 (Ct. App. 1968) (allowing a statute to operate which provided credit for time spent in jail prior to conviction, even though defendant had been jailed prior to the statute's enactment, because defendant was convicted after the statute became effective).

Anthony commends Staff for their research and incorporates the arguments set forth in their Response. As such, rather than reiterate those arguments, Anthony will focus the remainder of this Response on showing that even if Rules 310 and 313 were newly promulgated, that the OCD would be entirely within its powers to apply them retroactively to correct existing contamination regardless of

when the conduct causing the contamination may have occurred.

C. *The Rule Against Retroactivity is Merely a Presumption.*

"New Mexico law **presumes** a statute to operate prospectively unless a clear intention on the part of the legislature exists to give a statute retroactive effect." *Coleman v. United Engineers & Constructors, Inc.*, 118 N.M. 47, 52 (1994) (emphasis added).

> The very statement of this proposition demonstrates (by the use of the word 'presumes') that it is a rule or canon of statutory construction **not an inflexible determinant of legislative intent.**

Swink v. Fingade, 115 N.M. 275, 283 (1993) (alterations in original) (emphasis added).

Maralo seeks to cement this mere "presumption" into a wholesale restraint on the OCD's rulemaking power. A studied analysis, however, reveals that the OCD is well within its powers to apply Rules 310 and 313 to Maralo and to the consequences of its conduct, regardless of when the conduct may have occurred.

In determining whether a statute or regulation may be properly applied retroactively, New Mexico law calls for a three-pronged inquiry as follows:

> The prospective application of a newly engaged act to [a preexisting and ongoing transaction] must ... be determined by [1] the words of the statute, [2] the legislature's intent in enacting the statute, and [3] by the public policy considerations which are evident from the statute.

Swink, 115 N.M. at 284.[1]

1. *Words of the Statute and Legislative Intent.*

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[1] This is similar to the balancing test enunciated by the D.C. Circuit in *Wholesale and Department Store Union v. Hurb*, 466 F.2d 380, 390 (D.C. Cir. 1972), quoted in *U.S. v. Harragansett Improvement Co.*, 571 F.Supp. 688, 696 (R.I.D.C. 1983).

Because legislative intent is primarily ascertained by considering the express language in a statute, the analysis under the first two prongs of the inquiry is necessarily intertwined. "When the wording of a statue is clear and unambiguous" a court "will give effect to the wording of the statute." *Meyers v. Western Auto*, 132 N.M. 675, 54 P.3d 79 (Ct. App. 2002).

New Mexico's Oil and Gas Act, NMSA §§70-2-1 et. seq., states that the OCD "is authorized to make rules, regulations and orders for the purpose and with respect to the subject matter stated in this subsection." §70-2-12B. The Act is silent, however, about whether the OCD has power to retroactively apply its rules and regulations. Maralo takes this silence as evidence of legislative intent against retroactive rulemaking power. Contrary to the conclusion sought by Maralo, legislative silence as to whether a statute or regulation can apply retroactively is not determinative. In fact, there is an abundance of authority for retroactive application even in the face of silence. See, e.g., *Howell*, 118 N.M. 500 (regulation applied retroactively in spite of a lack of express statutory power to enact retroactive regulations); accord, *State v. Mears*, 79 N.M. 715; *Lucero*, 91 N.M. 770. More analogously, the Comprehensive Environmental Response, Compensation and Liability Act of 1970 ("CERCLA"), with obviously similar statutory purposes of addressing pollution caused in the past, has consistently been held to apply retroactively even when Congress failed to specifically say so in the statute. *Franklin County Convention Facilities Authority v. American Premier Underwriters, Inc.*, 240 F.3d 534, 550-52 (6th Cir. 2000).

In contrast to Maralo's desire for an express statutory grant of retroactive power, the "words of the statute" analysis instead focuses on the entire substance of the statute and whether its purpose would be furthered by retroactive application of the regulation in question.

In light of the foregoing, a careful review of the Oil and Gas Act is in order. Section 70-2-12 enumerates the OCD's powers. Among those powers are several which clearly contemplate that future regulation will have an effect on prior regulation and past conduct. See e.g., §§70-2-12 (11) and (12) ("to determine whether a particular well or pool is a gas or oil well or a gas or oil pool, as the case may be, *and from time to time to classify and reclassify* wells and pools accordingly; to determine the limits of any pool producing crude petroleum oil or natural gas or both *from time to time redetermine* the limits"); §§70-2-12 (1), (2) and (15) ("to require dry or abandoned wells to be plugged in a way to confine the crude petroleum oil, natural gas or water in the strata in which it is found and *to prevent it* from escaping into other strata; *to prevent* crude petroleum oil, natural gas or water from escaping from strata in which it is found into other strata; to regulate the disposition of water produced or used in connection with the drilling for or producing oil or gas or both and to direct surface or subsurface disposal of the water in a manner *that will afford reasonable protection against contamination* of fresh water supplies designated by the state engineer"). (emphasis added).

The clear import of this statutory language is that the OCD is charged with an ongoing mission to regulate an industry and is empowered to address changing concerns. An obvious legislative concern and purpose of the Oil and Gas Act is addressing contamination, whether it be by prevention or remediation. If Maralo had its way and the OCD was indeed powerless to promulgate retroactive rules and regulations the very purpose of the Act would be frustrated and impossible to accomplish.

2. Public Policy.

The third prong of the retroactivity analysis involves consideration of public policy. This is a critically important factor in situations such as this where the conduct of a regulated industry may have

environmental consequences that will affect not only private landowners, but the public in general. The above analysis has relevance here as well. The OCD has been given authority to protect New Mexico's environment from the consequences of oil and gas drilling. This is a legitimate and important concern and duty of the OCD. It cannot be taken lightly.

Maralo seeks to undermine this mandate by arguing that the only Rules of concern and application to it, are those that were in effect at the time. That simply is not correct. First, as is well-stated by Staff, the fact that contamination remains on the Property strongly suggests that Maralo's operation was actually not in compliance. In addition, Maralo should not expect immunity from further regulation. As was stated by the court in *Colo. Dept. Of Public Health and Environment v. Bethell*, 60 P.3d 779, 785 (Colo. App. 2002):

> As a participant in a regulated industry, defendant should have recognized the risk of further regulation. Further, the public health risk from improper disposal of solid waste and the long-term threat to the environment outweigh defendant's financial interest.
>
> Thus, we reject defendant's contention that the regulations are retrospective.

Id. (citations omitted). This is consistent with the Sixth Circuit's analysis of CERCLA to the effect that, "legislation readjusting rights and burdens is not unlawful solely because its upsets otherwise settled expectations. This is true even though the effect of the legislation is to impose a new duty or liability based on past acts." *Franklin County*, 240 F.3d at 551.

New Mexico's public policy clearly outweighs any expectation by Maralo that it no longer should be liable for the lingering consequences of its operation.

D. There is No Due Process Violation Here

At the end of its dismissal motion, Maralo baldly concludes that the application of the Rules 310 and 313 would be in violation of its due process rights. Maralo fails, however, to conduct a specific due process analysis. It failure to do so is likely due to the utter weakness of the argument.

"When determining whether a statute or regulation violates due process [a court must] first decide what level of constitutional scrutiny to apply." *Howell*, 118 N.M. at 505, 882 P.2d at 546. That determination depends on what type of right is involved.

Maralo's alleged right is merely based on its generalized claim that it operated the well in compliance with existing law. This is purely an economic interest. As was noted by the Sixth Circuit Court of Appeals in holding that retroactive application of CERCLA did not violate due process:

> Legislative acts adjusting the burdens and benefits of economic life carry a presumption of constitutionality, and the burden of proving that the legislature acted in an arbitrary and irrational way is on the party complaining of the violation.

Franklin County, 240 F.3d at 550. As such, retroactive application "need only be rationally related to a legitimate state interest."[2] *Howell*, 118 N.M. at 505, 882, P.2d at 546.

Clearly, addressing existing pollution amounts to a legitimate state interest sufficient to comply with due process. The Sixth Circuit's analysis again provides guidance with the following language:

> Cleaning abandoned and inactive hazardous waste disposal sites is a legitimate legislative purpose which is furthered by imposing liability for response costs upon those parties that created and profited from those sites.

---

[2] This is in contrast with legislation that effects fundamental rights. "When government deprives persons of fundamental rights, it must demonstrate that the law promotes a compelling or overriding government interest." *Howell*, 118 N.M. at 505.

Franklin County, 240 F.3d at 552. The application of Rules 310 and 313 to Maralo does not amount to a violation of Maralo's due process rights.

IV.
CONCLUSION

This Response has shown that Maralo's thinly argued Motion is unsupportable. Remediation may properly proceed.

Respectfully submitted,

HEARD ROBINS, CLOUD, LUBEL & GREENWOOD, L.L.P.

By: _____

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CERTIFICATE OF SERVICE

I hereby certify that I have caused a true and correct copy of the foregoing *Anthony's Response In Opposition to Maralo, L.L.C.'s Motion To Dismiss*, to be served by U.S. Mail on this 14th day of October, 2003 to the following counsel of record:

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Oil Conservation Division

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

APPLICATION OF THE NEW MEXICO OIL CONSERVATION DIVISION, THROUGH THE ENVIRONMENTAL BUREAU CHIEF, FOR AN ORDER REQUIRING MARALO, LLC TO REMEDIATE HYDROCARBON CONTAMINATION AT AN ABANDONED WELL AND BATTERY SITE; LEA COUNTY, NEW MEXICO.

CASE NO. 13142

THE NEW MEXICO OIL CONSERVATION DIVISION'S RESPONSE TO MARALO, LLC'S MOTION TO DISMISS

The Oil Conservation Division (the "Division") respectfully asks the hearing examiner to deny the motion filed by Maralo, LLC ("Maralo") to dismiss it from the remediation of hydrocarbon contamination at Humble State Site No. 3. Maralo's argument that the Division is applying its rules retroactively is based on a misunderstanding of the facts: the rules Maralo says were enacted in 1982 have in fact been in place since 1935, years before the acts causing the contamination took place. Maralo's argument is also based on a misunderstanding of the law: even if the facts were as described by Maralo, those facts would not constitute an impermissible retroactive application of the law. In requesting that Maralo clean up the contaminated area, the Division is not "punishing " past conduct, but is requiring remediation of current, ongoing contamination.

Factual Background

This action concerns an abandoned oil and gas production facility located at the Humble State Site No. 3 in Lea County, New Mexico. All the equipment has been

removed, but the site was not remediated. There are the remains of pits, with asphaltic-type oil present at the surface of the pits. It appears they were used for containment of emulsions, basic sediments and tank bottoms. Laboratory analyses of samples of contaminated soils from the site contain up to 25,400 parts per million (ppm) of total petroleum hydrocarbons (TPH); up to 0.1.79 ppm of benzene; up to 0.432 ppm of ethylbenzene; and up to 0.921 ppm of xylene.

Maralo's predecessor, Ralph Lowe, filed a notice of intent to drill the site in 1945. Maralo became operator of the site in 1974. Maralo filed its plug and abandon report in 1989.

The Division's Application requests an order requiring Maralo to submit a work plan and remediate the area, based on the violation of Division Rules 313 and 310A. The current version of division Rule 313 (19.15.5.313 NMAC) provides, in relevant part:

> Wells producing oil shall be operated in such a manner as will reduce as much as practicable the formation of emulsion and basic sediments. These substances and tank bottoms shall not be allowed to pollute fresh waters or cause surface damage.

The current version of division Rule 310A (19.15.5.310A NMAC) provides, in relevant part: "Oil shall not be stored or retained in earthen reservoirs, or in open receptacles."

Rules 313 and 310A have been in place since the Oil Conservation Commission adopted the current rule structure in 1950. See Exhibit A, attached, a certified copy of Order No. 850, Case No. 189, adopting the 1950 version of the rules. Although both rules have been amended in the past half-century, the relevant language was present in the 1950 version of the rules. Exhibit B, attached, is a certified copy of Rules 310 and 313 as they appeared in 1950. The original 1950 version of Rule 310 contains the relevant language: "Oil shall not be stored or retained in earthen reservoirs, or in open

receptacles." And the original 1950 version of Rule 313 contains the relevant language regarding surface damage: "Wells producing oil shall be operated in such a manner as will reduce as much as practicable the formation of emulsion and B.S. These substances and tank bottoms shall not be allowed to pollute streams or cause surface damage." The 1950 version of the rules can be found at the Historical Services Division of the State Records and Archives Center in box serial No. 8898, Location 24-A-8.

The relevant language was even present in the rules adopted in 1935 after the formation of the Oil Conservation Commission, under an earlier numbering system. Exhibit C, attached, is a certified copy of the first four pages of Oil Conservation Commission Order No. 4, adopted in 1935. Rule 15 of the 1935 version provides, in part, "Oil shall not be stored or retained in earthen reservoirs, or in open receptacles." Rule 16 of the 1935 version states "Wells producing oil shall be operated in such manner as will reduce as much as practicable the formation of emulsion and B.S. These substances and waste oil shall not be allowed to pollute streams or cause surface damage." When the Commission adopted the 1950 version of the rules, Rule 15 became Rule 310, and Rule 16 became Rule 313. The 1935 version of the rules can be found at the Historical Services Division of the State Records and Archives Center in box serial No. 12888, Location 59-L-4.

Argument

Maralo summarizes its argument in its conclusion, where it states that due process "is violated when the Division enacts a rule and then seeks to enforce it retroactively by punishing a company for conduct that was completely legal and in accordance with all

applicable rules at the time it was committed." Brief in Support of Maralo, LLC's Motion, at page 6.

No factual support exists for Maralo's argument. The rule prohibiting storage or retention of oil in earthen reservoirs or open receptacles and the rule prohibiting emulsion and basic sediments from causing surface damage have been in place since 1935, years before operations began at the site.[1] Obviously, the site was not operated in accordance with these rules because it bears the scars of open pits that still contain asphaltic material, and the surface is contaminated with petroleum hydrocarbons, benzene, ethylbenzene and xylene.

Because Maralo does not have the facts to support its theory, it is not necessary for the hearing examiner to reach the question of whether Maralo's legal theory is correct. It is important, however, for the Division to clarify its position on this issue because it affects the ability of the Division or any agency to remediate existing conditions.

The Division is not "punishing" past conduct. It is requiring Maralo to remediate existing contamination. Although the contamination may be the result of past actions, it is a current threat and that contamination will continue to be a threat until the site is remediated. If the legislature passed a statute today requiring remediation, or if the Division enacted a rule today requiring remediation, application of that statute or rule to existing contamination would not be a "retroactive" application of the law. As the New Mexico Supreme Court has recognized, "a statute or rule ' "is not retroactively construed when applied to a condition existing on its effective date even though the condition

[1] Although Maralo's motion seeks relief on the ground that the Division retroactively applied Rule 310A, its brief in support of the motion mentions both Rule 310A and Rule 313. This Response addresses both rules, although only Rule 310A is at issue in this motion.

results from events which occurred prior to the date." ' " *Howell v. Heim*, 118 N.M. 500, 506, 882 P.2d 541 (1994), quoting with approval from *Philadelphia v. Phillips*, 179 Pa.Super. 87, 116 A.2d 243, 247 (1955) quoting *Burger v. Unemployment Compensation Bd. Of Review*, 168 Pa.Super. 89, 77 A.2d 737, 739 (1951). Maralo's interpretation of the law of retroactivity would prevent the legislature or regulatory agencies from ever remedying existing problems. In the context of environmental cleanup, the result would be that all existing contamination would be "grandfathered" in, with no remediation required.

Conclusion

Maralo's motion to dismiss is not supported by the facts or the law. The Division respectfully requests that the hearing examiner deny Maralo's motion.

RESPECTFULLY SUBMITTED,
this 7th day of October by

Gail MacQuesten
Assistant General Counsel
Energy, Minerals and Natural Resources Department of the State of New Mexico
1220 S. St. Francis Drive
Santa Fe, NM 87505
(505)-476-3451

Attorney for The New Mexico Oil Conservation Division

Certificate of Service

I certify that I mailed a copy of this pleading, by first class mail, to

W. Thomas Kellahin
Kellahin & Kellahin
P.O. Box 2265
Santa Fe, NM 87504
Attorney for Maralo, LLC

Rick G. Strange
Cotton, Bledsoe, Tighe & Dawson
P.O. Box 2776
Midland, TX 79702,
Attorney for Maralo, LLC

David Sandoval
Heard, Robins, Cloud, Lubel & Greenwood, LLP
300 Paseo de Peralta, Suite 200
Santa Fe, NM 87501
Attorney for Jay Anthony

this 15th day of October, 2003.

Gail MacQuesten

I certify that this is a true copy of the original document in the custody of the State of New Mexico Records Center and Archives.
DATE 10-3-03

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARINGS CALLED BY THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

CASE NO. 189
ORDER NO. 850

RULES AND REGULATIONS

ORDER OF THE COMMISSION

BY THE COMMISSION:

After due notice and hearings in Santa Fe, New Mexico, on September 7, 1949, and November 1, 1949, the Commission finds that certain rules, regulations and orders should be adopted and others repealed.

IT IS THEREFORE ORDERED:

1. All rules, regulations and orders heretofore issued by the Commission are repealed and rescinded, effective January 1, 1950, except the following orders which are of a special nature and are not of statewide application, they being:

a. All orders heretofore issued granting permission for specific unorthodox locations.

b. Orders relating to approval of unit agreements No. 570, 583, 603, 602, 628, 629, 648, 655, 656, 676, 677, 684, 706, 717, 731, 737, 755, 759, 772, 774, 786, 794, 796, 836.

c. Orders relating to Carbon Black Plants No. 650, 651, 724, 806.

d. Orders relating to spacing in the Fulcher Basin Pool No. 541, 647, 748, 815.

e. Orders relating to specific five (5) spot locations No. 733, 819, 826, 821, 828, 844.

f. Order No. 799 relating to spacing in the Blanco Pool.

g. Orders relating to specified pressure maintenance projects as follows:
   (1) Loco Hills Pressure Maintenance Association, 339, 484, 498, 540, 562.
   (2) Maljamar Cooperative Repressuring Agreement, 485, 495, 736, 793.
   (3) Grayburg Unit Association, 659, 791, 802.
   (4) Culbertson-Irwin Pressure Maintenance Project, 388.
   (5) Langlie Unitized Pressuring Project, 340.

h. Orders relating to pooling of interests in specified leases, No. 739, 780.

i. Order No. 795 relating to a specific tank battery.

j. Orders relating to dual completions on specified wells, No. 740, 750, 801, 810, 816, 829, 838.

k. Order No. 831 rescinding the bonus discovery allowable.

l. Order No. 779 relating to 80-acre spacing in the Crossroads Pool.

m. Section 2 of Order No. 835, relating to gas-oil ratios.

n. Order 846, establishing 80-acre spacing in Bagley-Hightower Pool.

o. Order 33, relating to the proration plan for Monument Pool, Lea County, New Mexico.

p. Order 398, relating to proration plan for Hobbs Pool.

q. Orders No. 66 and 67, relating to carbon dioxide.

2. This order shall not affect in any way the validity of any statewide proration order heretofore issued.

OCD Exhibit A
Case No. 13142
October 23, 2003

3. An exception from the rules and regulations hereby adopted is granted until March 31, 1950, as to all presently existing oil and gas wells that have been in the past and are presently operated or the products thereof utilized in a manner differing from the requirements herein, but in compliance with former rules and regulations. If during said period the operator of any such well files with the Commission an application for a permanent exception for such well from the requirements of these rules and regulations, the temporary exception herein granted shall continue in force until the Commission has acted on such application.

4. The following rules and regulations are hereby adopted, effective January 1, 1950.

DONE at Santa Fe, New Mexico, on this 9th day of December, 1949.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

THOMAS J. MABRY, CHAIRMAN

GUY SHEPARD, MEMBER

R. R. SPURRIER, SECRETARY

I certify that this is a true copy of the original document
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Center and Archives.
DATE Melissa Salazar 10-3-03

New Mexico Oil Conservation Commission, Rules and Regulations, Effective Jan. 1, 1950

RULE 306. VENTED CASINGHEAD GAS

Pending arrangement for disposition for some useful purpose, all vented casinghead gas shall be burned, and the estimated volume reported on Form C-115.

RULE 307. USE OF VACUUM PUMPS

Vacuum pumps or other devices shall not be used for the purpose of creating a partial vacuum in any stratum containing oil or gas.

RULE 308. SALT OR SULPHUR WATER

Operators shall report monthly on Form C-115, the amount or percentage of salt or sulphur water produced with the oil by each well making 2% or more water.

RULE 309. CENTRAL TANK BATTERIES

Oil shall not be transported from a lease until it has been received and measured in tanks located on the lease. At the option of the operator, common tankage may be used to receive the production from as many as 8 units of the same basic lease, provided adequate tankage and other equipment is installed so that the production from each well can be accurately determined at reasonable intervals.

RULE 310. OIL TANKS AND FIRE WALLS

Oil shall not be stored or retained in earthen reservoirs, or in open receptacles. Dikes or fire walls shall not be required except such fire walls must be erected and kept around all permanent oil tanks, or battery of tanks that are within the corporate limits of any city, town, or village, or where such tanks are closer than 150 feet to any producing oil or gas well or 500 feet to any highway or inhabited dwelling or closer than 1000 feet to any school or church; or where such tanks are so located as to be deemed an objectionable hazard within the discretion of the Commission. Where fire walls are required, fire walls shall form a reservoir having a capacity one-third larger than the capacity of the enclosed tank or tanks.

RULE 311. TANK CLEANING PERMIT

No tank bottom shall be removed from any tank used for the storage of crude petroleum oil unless and until application for tank-cleaning permit is approved by Agent of the Commission. To obtain approval, owner shall submit Commission's Form C-117 reporting an accurate gauge of the contents of the tank and the amount of merchantable oil determinable from a representative sample of the tank bottom by the standard centrifugal test as prescribed by the American Petroleum Institute's code for measuring, sampling, and testing crude oil. Number 25, Section 5. The amount of merchantable oil shall be shown as a separate item on Commission Form C-115, and shall be charged against the allowable of the unit or units producing into such tank or pit where such merchantable oil accumulated. Nothing contained in this rule shall apply to the use of tank bottoms on the originating lease where owner retains custody and control of the tank bottom or to the treating of tank bottoms by operator where the merchantable oil recovered is disposed of through a duly authorized transporter and is reported on Commission Form C-115. Nothing contained in this Rule shall apply to reclaiming of pipe line break oil or the treating of tank bottoms at a pipe line station, crude oil storage terminal or refinery or to the treating by a gasoline plant operator of oil and other catchings collected in traps and drips in the gas gathering lines connected to gasoline plants and in scrubbers at such plants.

RULE 312. TREATING PLANT

No treating plant shall operate except in conformity with the following provisions:

(a) Before construction of a treating plant and upon written application for treating plant permit stating in detail the location, type, and capacity of the plant contemplated and method of processing proposed, the Commission in not less than 20 days will set such application for hearing to determine whether the proposed plant and method of processing will actually and efficiently process, treat and reclaim tank bottom emulsion and other waste oils, and whether there is need for such a plant at the proposed location thereof. Before actual operations are begun, the permittee shall file with the Commission a surety bond of performance satisfactory to the Commission and payable in the amount of $25,000.00 to the Commission of the State of New Mexico.

(b) Such permit, if granted, shall be valid for 1 year, sha[illegible] Commission at any time after hearing is had on 10 days' notic[illegible] operator to an approved Certificate of Compliance and Authori[illegible] Form C-110, for the total amount of products secured from

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OCD Exhibit B
Case No. 13142
October 23, 2003

processed. Any operating treating plant shall, on or before the 15th day of each calendar month, file at the nearest office of the Commission, a monthly report on Commission Form C-118, which report when fully completed and approved by an authorized agent of the Commission, may be used to support a Commission Form C-110 for the net oil on hand at the end of the reported period. In no event shall Commission Form C-110 be issued for moving the products of a treating plant without supporting Commission Form C-118 being completed and approved.

(c) None of the provisions of this rule are applicable to the recovery of wash-in oil, creek oil, or pit oil where such oil is picked up and returned to the lease on which produced or where such oil is disposed of by owner to an authorized transporter and accounted for on Commission Form C-110. Before any person other than owner shall pick up, reclaim or salvage wash-in oil, creek oil, or pit oil, a permit to do so shall be obtained from owner or operator of lease and from the duly authorized agent of the Commission. Application for permit shall state the name and location of the lease, the number of well or wells from which the oil was produced, or the source of such oil and the name of the owner, operator or manager.

RULE 313. EMULSION, BASIC SEDIMENTS, AND TANK BOTTOMS

Wells producing oil shall be operated in such a manner as will reduce as much as practicable the formation of emulsion and B. S. These substances and tank bottoms shall not be allowed to pollute streams or cause surface damage. If tank bottoms are removed to surface pits, the pits shall be fenced and the fence shall be kept in good repair.

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DATE 10-3-03

Center and Archives.
DATE Melissa Dalgo 10-3-03

OIL CONSERVATION COMMISSION OF NEW MEXICO

ORDER NO. 4

GENERAL RULES AND REGULATIONS GOVERNING THE CONSERVATION OF OIL AND GAS IN NEW MEXICO

INTRODUCTION

Pursuant to power delegated by an Act of the Twelfth Regular Session of the Legislature of the State of New Mexico, Chapter 72, Laws of 1935, especially the power delegated by Sections 9 and 10 thereof, the Oil Conservation Commission of the State of New Mexico, hereinafter designated as the "Commission", hereby and herein makes and promulgates the following general rules and regulations which are found by the Commission, after notice and hearing as required by law, held at Santa Fe, New Mexico, June 28th, 1935, to be reasonably necessary to prevent present and imminent waste of oil and gas, as defined by law, and otherwise to carry out the purposes of said Act. These rules and regulations shall become effective August 12, 1935.

RULE 1. SIGNS ON WELLS

ry well shall be identified by a sign, posted on the derrick le, otherwise on a substantial post not more than twenty a such well, and such signs shall be of durable construction lettering thereon shall be kept in a legible condition and large enough to be legible under normal conditions at a of fifty feet. The wells on each lease or property shall ered consecutively beginning with No. 1, unless some other of numbering was adopted by the owner prior to the of these rules and regulations. Each sign shall show the of the well, the name of the lease (which shall be different lease), the name of the lessee, owner or operator, and the by quarter, section, township and range.

RULE 2. GENERAL SPACING RULES

rules for the spacing of oil and gas wells are as follows:

"Wildcat" wells shall not be drilled closer than 330 ny lease or property line or less than 660 feet from any ell. "Wildcat" wells, according to the meaning used herein, shall be those which are located not less than two miles from any

OCD Exhibit
Case No. 13142
October 23, 2003

Oil and Gas Conservation Law, Circular No. 1
Agency Historic Rules Coll.

commercial or potentially commercial oil or gas well, and that are outside the boundaries of proven oil or gas fields or areas that may be designated by the Commission. Plugged and abandoned wells shall not be considered in applying this rule.

The Commission may, after notice and hearing, grant exceptions to this rule, provided such exceptions will create neither waste nor hazards conducive to waste. Such exceptions may be granted when surface conditions render it impracticable without unreasonable expense to drill a well at a location in conformity with this rule, or when a separately owned tract is so small or so shaped that a location in conformity with this rule is impossible.

(b) The foregoing rule with reference to "Wildcat" wells shall also apply to all other wells, unless and until the Commission, after notice and hearing, adopts special rules for the spacing of wells in proven oil or gas fields or in areas that the Commission may designate.

RULE 3. WELL RECORD

During the drilling of every well, the owner, operator, contractor, driller, or other person responsible for the conduct of drilling operations, shall keep at the well a detailed and accurate record of the well, reduced to writing from day to day, which shall be accessible to the Commission and its agents at all reasonable times. A copy of the record shall be furnished to the Commission at its request, but shall be kept confidential, if the operator so requests in writing, for a period not to exceed ninety days after the completion of the well, provided that the report or data therein, when pertinent, may be introduced in evidence in any public hearing before the Commission or any Court, regardless of the request that the report be kept confidential.

If so ordered by the Commission, samples of drill cuttings shall be kept in the State by the owner of the well and shall be accessible to the Commission and its agents at all reasonable times.

RULE 4. DEVIATION TESTS

Whenever any well is drilled or deepened, tests to determine the deviation from the vertical shall be taken at intervals of not more than 500 feet. Directional surveys may be required by the Commission whenever in its judgment the location of the bottom of the well is in doubt.

RULE 5. PIT FOR SHALE DRILL CUTTINGS REQUIRED

During the drilling of any well, all clay and soft shale drill cuttings shall be accumulated in an adequate pit provided before drilling is commenced, in order to assure a supply of proper material for mud-laden fluid to confine oil, gas or water to their native strata.

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DATE 10-3-03

RULE 6. STRATA TO BE SEALED OFF

Before any oil or gas well is completed as a producer, all oil, gas and water strata above the producing horizon shall be sealed or separated in order to prevent their contents from passing into other strata.

RULE 7. SHOOTING AND CHEMICAL TREATING OF WELLS

Wells shall not be shot or chemically treated until the permission of the Commission is obtained. Each well shall be shot or treated in such manner as will not cause injury to the sand, or result in water entering the oil or gas sand, and necessary precautions shall be taken to prevent injury to the casing. If shooting or chemical treating results in irreparable injury to the well or to the oil or gas sand, the well shall be properly plugged and abandoned. (See Rule 42.)

RULE 8. WATER SHUT-OFFS

All water shall be shut off and excluded by a method approved by the Commission from the various oil and gas bearing strata which are penetrated. Water shut-offs shall ordinarily be made by cementing casing or landing casing with or without the use of mud-laden fluid. Drilling shall not be resumed following the landing or cementing of each string of casing until proof is obtained satisfactory to the Commission of a proper oil and gas and water shut-off.

RULE 9. MUD-LADEN FLUID

Mud-laden fluid is a term used herein to designate any mixture of water and finely divided or colloidal material that remains in suspension for a long time. The mud employed shall have suitable physical and chemical properties to accomplish adequately the purpose for which such mud is used.

RULE 10. USE OF MUD-LADEN FLUID IN SETTING CASING

In order to seal off any oil, gas or water stratum during drilling, the owner shall, if the Commission so requires, run the casing and seat it in mud-laden fluid, which fluid shall fill the hole outside the casing to the top, where the level of said fluid shall be maintained.

RULE 11. PULLING OUTSIDE STRINGS OF CASING

In pulling any outside strings of casing from any oil or gas well, the space outside the casing left in the hole shall be kept and left full of mud-laden fluid of adequate specific gravity to seal off all fresh and salt water strata and any strata bearing oil or gas not producing.

Oil and Gas Conservation Law, Circular No. 1
Agency Historic Rules Coll.

RULE 12. ABANDONING WELLS

Before a well is abandoned, it shall be plugged in a manner which will confine permanently all oil, gas and water in the separate strata originally containing them. This operation shall be accomplished by the use of mud-laden fluid, cement and plugs, used singly or in combination as may be approved by the Commission. The exact location of abandoned wells shall be shown by a steel marker at least four inches in diameter set in concrete, and extending at least four feet above mean ground level.

RULE 13. BLOW-OUT PREVENTION

In drilling in areas where high pressures are likely to exist, all proper and necessary precautions shall be taken for keeping the well under control, including the use of blow-out preventers and high pressure fittings attached to properly anchored and cemented casing strings.

RULE 14. CASING REQUIREMENTS FOR OIL AND GAS PRODUCTION

Oil wells shall be completed with an oil string of casing which shall be properly cemented at a sufficient depth adequately to protect the oil-bearing stratum. Gas-producing wells shall be cased in a similar manner.

RULE 15. OIL TANKS AND FIRE WALLS

Oil shall not be stored or retained in earthen reservoirs, or in open receptacles. All lease, stock and oil storage tanks shall be protected by a proper fire wall, which wall shall form a reservoir having a capacity one-third larger than the capacity of the enclosed tank or tanks. Such tanks shall not be erected, enclosed or maintained closer than 150 feet to the nearest producing well.

RULE 16. EMULSION, B. S., AND WASTE OIL

Wells producing oil shall be operated in such manner as to reduce as much as practicable the formation of emulsion and B. S. These substances and waste oil shall not be allowed to pollute streams or cause surface damage.

RULE 17. USE OF VACUUM PUMPS

Vacuum pumps or other devices shall not be used for the purpose of creating a partial vacuum in any stratum containing oil or gas.

RULE 18. PROTECTION OF FRESH AND ARTESIAN WATERS

All fresh waters and waters of present or probable future value for domestic, commercial or stock purposes shall be confined to their respective strata and shall be adequately protected by methods

KELLAHIN & KELLAHIN
Attorney at Law

W.S. WPD 9/16/03

W. Thomas Kellahin
New Mexico Board of Legal Specialization Recognized Specialist in the area of natural resources-oil and gas law

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kellahin@earthlink.net

September 16, 2003

VIA FACSIMILE
476-3462

Ms. Lori Wrotenbery, Director
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: CORRECTED REQUEST FOR CONTINUANCE
NMOCD Case 13142
Application of the Division
for an order requiring Maralo, Inc.
to remediate hydrocarbon contamination
at an abandoned well and battery site.
Jay Anthony site, Lea County, New Mexico

Dear Ms. Wrotenbery:

This letter confirms that my letter dated August 29, 2003 should have stated that the referenced case was to be continued from the September 4th docket to the October 23, 2003 docket.

Very truly yours,

W. Thomas Kellahin

Cfx: William C. Olson, OCD
Gail MacQuesten, Esq.
Attorney for the OCD
Rick Strange, Esq.
Attorney for Maralo, Inc.

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

September 9, 2003

David Sandoval
Heard, Robins, Cloud, Lubel & Greenwood, LLP
300 Paseo de Peralta, Suite 200
Santa Fe, NM 87501

Re: Application of the New Mexico Oil Conservation Division, Through the Environmental Bureau Chief, For An Order Requiring Maralo, LLC to Remediate Hydrocarbon Contamination at an Abandoned Well and Battery Site; Lea County, New Mexico

Dear Mr. Sandoval,

Enclosed is a copy of Maralo's motion to dismiss the above action, with the supporting brief. The motion and brief do not show a filing or service date. They were hand-delivered to me this afternoon, and division administrator Florene Davidson confirmed that the division also received the motion and brief today.

Please call me at 476-3451 once you have had a chance to review the motion and brief.

Sincerely,

Gail MacQuesten
Assistant General Counsel
Oil Conservation Division

HEARD, ROBINS, CLOUD,
LUBEL & GREENWOOD, LLP
ATTORNEYS AT LAW
300 PASEO DE PERALTA, SUITE 200
SANTA FE, NEW MEXICO 87501
TELEPHONE: (505) 986-0600
FAX: (505) 986-0632

DAVID SANDOVAL
LICENSED IN COLORADO, NEW MEXICO AND TEXAS

E-MAIL: dsandoval@heardrobins.com

September 3, 2003

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EMNRD-LEGAL

Gail MacQuesten
Assistant General Counsel
Energy, Minerals and Natural
Resources Department of the
State of New Mexico
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Application of the New Mexico Oil Conservation Division, Through the Environmental Bureau Chief, For An Order Requiring Maralo, LLC to Remediate Hydrocarbon Contamination at an Abandoned Well and Battery Site; Lea County, New Mexico.

Dear Ms. MacQuesten:

As I mentioned in our telephone conversation of today, this law firm represents Jay Anthony, the owner of the land upon which the above-described abandoned well and battery site is located. Thank you for advising us that the September 4, 2003 OCD hearing was continued to October 9, 2003. We are interested in the foregoing action and welcome an opportunity to participate.

Thank you also for agreeing to provide us a copy of Maralo's motion to dismiss. We will call to discuss once we have received and reviewed it.

Sincerely,

David Sandoval

DS/lab

KELLAHIN & KELLAHIN
Attorney at Law

W. Thomas Kellahin
New Mexico Board of Legal Specialization Recognized Specialist in the area of Natural resources-oil and gas law

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Facsimile 505-982-2047
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August 29, 2003

VIA FACSIMILE

Ms. Lori Wrotenbery, Director
Oil Conservation Division
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505

RECEIVED
SEP · 9 2003
Oil Conservation Division

Re: **REQUEST FOR CONTINUANCE**
NMOCD Case No. 13142
Division application for order requiring Maralo, Inc. to remediate hydrocarbon contamination at an abandoned well and battery site at Jay Anthony site, Lea County, New Mexico.

Dear Ms. Wrotenbery:

Subject to the approval of the Hearing Examiner, counsel for Maralo, the Division, and having obtained the concurrence of Mr. Anthony, request that the hearing of this case be continued to the October 9, 2003 docket.

Very truly yours,

W. Thomas Kellahin

cfx: William C. Olson, OCD
Gail MacQuesten, Esq.for NMOCD
Jay Anthony complainant
Rick Strange, Esq, attorney for Maralo, Inc.

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

APPLICATION OF THE NEW MEXICO OIL CONSERVATION DIVISION, THROUGH THE ENVIRONMENTAL BUREAU CHIEF FOR AN ORDER REQUIRING MARALO, LLC TO REMEDIATE HYDROCARBON CONTAMINATION AT AN ABANDONED WELL AND BATTERY SITE; (Jay Anthony Complaint) LEA COUNTY, NEW MEXICO

CASE 13142

MOTION TO DISMISS MARALO, LLC FROM REMEDIATION OF HYDROCARBON CONTAMINATION

MARALO, LLC ("Maralo") files this Motion to Dismiss the Division's application for an order of remediation of hydrocarbon contamination and would show as follows:

I.

The Division is attempting to require Maralo, LCC to remediate alleged soil contamination alleging that "clean-up" should be accomplished in accordance with Division's current surface impoundment closure guidelines adopted by the Division in February, 1993. The Division does not claim that the alleged soil contamination has caused any fresh water pollution or does it pose a risk to fresh water.

II.

Maralo ceased all operations on the Humble State Site No. 3, Unit A, Section 36, T25S, R36E, Lea County, New Mexico, in 1988 and plugged the well and abandoned the site all in accordance with the Division rules applicable at that time.

III.

Maralo operated the site, specifically all open receptacles, in accordance with New Mexico laws as written at the time of operation.

IV.

The Rule upon which this proceeding is based, **New Mexico Administrative Code title 19 section 15.5.310A (2000)** ("19.15.5.310A"), was originally adopted in 1982; Maralo did not operate an open pit on the Humble State Site No. 3 after the rule became effective. Consequently, Rule 19.15.5.310A is being enforced retroactively to the Humble State Site No. 3.

V.

Retroactive enforcement of Rule 19.15.5.310A is only permitted if there is clear legislative intent that such application was permitted by the enabling statute. ***Coleman v. United Engineers and Constructors, Inc.*, 878 P.2d 996 (N.M. 1994)**.

VI.

Under **New Mexico Statutes Annotated Section 70-2-12 (2003)**, the legislature granted power to the Oil Conservation Commission to regulate methods and devices of storage for oil and gas; to do all acts necessary to restore and remediate well sites using the oil and gas reclamation fund in accordance with provision of the *Oil and Gas Act of 1978* and the *Procurement Code of 1978*; to regulate the disposition of nondomestic wastes resulting from oil and gas exploration; and to regulate the disposition of nondomestic waste resulting form the oil field service industry.

VII.

This statute gives the Oil Conservation Commission authority to create rules such as 19.15.5.310A, but does not clearly state an intention that rule 19.15.5.310A be enforced retroactively.

VII.

Therefore, the Oil Conservation Commission cannot retroactively enforce rule 19.15.5.310A to apply to open receptacles that were in compliance with all New Mexico rules and regulations at the time of their operation.

VIII.

Hence, Maralo has not violated rule 19.15.5.310A and thus is not responsible for the cleanup of the site.

WHEREFORE, Maralo moves that the Division grant this motion and thereby dismiss Maralo from the remediation of the hydrocarbon contamination due to open pits on Humble State Site No. 3.

Respectfully submitted,

By: _____approved and authorized by telephone ___
Rick G. Strange, Esq.
COTTON, BLEDSOE, TIGHE & DAWSON
A Professional Corporation
P. O. Box 2776
Midland, Texas 79702
(432) 684-5782
(432) 682-3672 (Fax)

By: _____
W. Thomas Kellahin, Esq.
Kellahin & Kellahin
P. O. Box 2265
Santa Fe, New Mexico 87504
(505) 982-4285
(505) 98202047 (Fax)
ATTORNEYS FOR MARALO, LLC

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

APPLICATION OF THE NEW MEXICO OIL CONSERVATION DIVISION, THROUGH THE ENVIRONMENTAL BUREAU CHIEF, FOR AN ORDER REQUIRING MARALO, LLC TO REMEDIATE HYDROCARBON CONTAMINATION AT AN ABANDONED WELL AND BATTERY SITE; (Jay Anthony Complaint) LEA COUNTY, NEW MEXICO

CASE 13142

BRIEF IN SUPPORT OF MARALO, LLC'S MOTION TO DISMISS MARALO, LLC FROM REMEDIATION OF HYDROCARBON CONTAMINATION

Maralo, LLC ("Maralo") submits this brief in support of its motion to dismiss the New Mexico Oil Conversation Division's ("OCD") application for an order of remediation of hydrocarbon contamination and would show as follows:

BACKGROUND

Maralo ceased all operations on the Humble State Site No. 3, Unit A, Section 36, T25S, R36E, Lea County, New Mexico, in 1988, plugged the well and abandoned the site all in accordance with the Division's rules. Prior to abandonment, Maralo operated the site, including all open receptacles, in accordance with all New Mexico laws and administrative regulations. The Division initiated this proceeding in 2003, fifteen years after Maralo abandoned the site, contending Maralo violated the **New Mexico Administrative Code Title 19 Section 15.5.310A (2000)** ("Rule 313") and **Section 15.5.310A (2000)** ("Rule 310A") based upon conduct that occurred as far back as the 40s.

The Division's application is an impermissible attempt to apply its rules retroactively because the Division is, in effect, punishing Maralo for conduct that was legal and in accordance with all applicable Division rules and regulations at the time it was committed. This violates Maralo's constitutional rights to due process.

DIVISION JURISDICTION

The Oil Conservation Commission and the OCD of the Energy, Minerals, and Natural Resources Department have concurrent jurisdiction for matters such as the conservation of oil or gas and the prevention of waste. ***New Mexico Statutes Annotated Section 70-2-6 and 7 (2003)***. The OCD's enumerated power is to regulate the methods and devices employed for storage; to control the oil and gas reclamation fund and do all acts necessary to properly plug and abandon oil and gas wells and to restore and remediate; and to regulate the disposition of nondomestic wastes resulting from the oil and gas industry. ***Id. at 70-2-12 (2003)***.

OCD RULES

The OCD alleges two rule violations by Maralo. First, Rule 313 states wells should be produced in such a manner as will reduce as much as practicable the formation of emulsion and basic sediments. Secondly, Rule 310A which states, "Oil shall not be stored or retained in earthen reservoirs, or in open receptacles." The Division is attempting to require Maralo to clean this alleged soil contamination in accordance with the Division's surface impoundment closure guideline adopted by the Division after Maralo abandoned this site.

ARGUMENT

Maralo did not violate Rule 310A while operating the Humble Well, and the Division has never contended otherwise. Rather, it is attempting to retroactively enforce the current "clean-up" guidelines to the abandoned Maralo site by alleging soil contamination. Maralo believes there is no dispute that any pits on this site were at all times operated in accordance with all applicable New Mexico statutes, rules and regulations. Rule 310 was originally adopted in 1982. Maralo ceased using any open pits before then. Consequently, Maralo is liable today if, and only if, conduct that was legal in the 40s, 50s, 60s and 70s, can be subsequently be made illegal in the 80s and a valid remediation order issued in 2003. This is unconstitutional. Both federal and New Mexico law prohibit retroactive application of laws and administrative rules and regulations unless the Legislature clearly authorizes retroactive application. *See* ***Bowen v. Georgetown University Hosp.***, 488 U.S. 204 (1988) and ***Coleman v. United Eng'r and Constructors, Inc.***, 878 P.2d 996 (N.M. 1994).

The Supreme Court of the United States has repeatedly stated, "retroactivity is not favored in the law." ***Bowen*, 488 U.S. at 208**; ***Green v. United States*, 378 U.S. 149, 160 (1964)**; and ***Kaiser Aluminum and Chem. Corp. v. Bonjorno*, 494 U.S. 827, 837 (1990)**. In ***Bowen,*** the United States Supreme Court explained the meaning of "not favored in the law." ***Id.*** The court stated that congressional enactments and administrative rules should not have retroactive effect unless their language requires this result. ***Id.*** The court went further and held that, even when a statute's language gives it retroactive effect, courts should be reluctant to apply laws retroactively. ***Id.***

The New Mexico Constitution too addresses the issue of retroactive application of laws in ***Article II. Section 19***. It states, "no ex post fact law, bill or attainder nor law impairing the obligation of contracts shall be enacted by the legislature." ***Id.***

Appellate courts have consistently recognized New Mexico's presumption against retroactive enforcement of a statute or regulation. For example, in ***Coleman v. United Engineers and Constructors, Inc.***, 878 P.2d 996, 1001 (N.M. 1994), the court had to decide whether to apply a statute retroactively to the Plaintiff's claims. The court stated that in New Mexico there is a presumption that a statue operates prospectively unless a clear intention from the legislature exists enabling retroactive application of a statute. ***Id.*** at 1001.

The United States Constitution, the New Mexico Constitution and applicable case law all make clear that retroactive application of regulations such as the Division's rules are not favored and will be allowed if, and only if, the underlying statute clearly permits retroactive application. The New Mexico enabling statutes, upon which the OCD draws its authority to enact rules such as 310A and 313, do not expressly give the Division the authority to impose its rules retroactively.

The OCD's powers are enumerated in ***New Mexico Statutes Annotated section 70-2-12 (2003)***. Four subsections address the issues of waste, conservation and storage of oil and gas. First, in subsection 13 the OCD is granted the power "to regulate the methods and devices employed for storage in this state of oil and natural gas or any product of either, including subsurface storage." ***Id.*** Second, in subsection 18 the OCD is given the power "to spend the oil and gas reclamation fund and do all acts necessary and proper to plug dry and abandoned oil and gas wells and to restore and remediate

abandoned well sites and associated production facilities in accordance with the provision of the Oil and Gas Act [Chapter 70, Article 2 NMSA 1978]...." ***Id.*** Neither subsection authorizes retroactive rule application.

The last two sections of New Mexico Annotated Statutes section 70-2-12 also do not allow the Division to apply rules retroactively. In subsection 21, the OCD is given the power "to regulate the disposition of nondomestic wastes resulting from the exploration, development, production or storage of crude oil or natural gas to protect public health and the environment." Finally in subsection 22, the OCD is given the power "to regulate the disposition of nondomestic wastes resulting from the oil field service industry, the transportation of crude oil or natural gas, the treatment of natural gas or the refinement of crude oil to protect public health and the environment including administering the Water Quality Act...." ***Id.***

Clearly, the OCD has the authority to enact rules such as 310A and 313. Once enacted, those rules are applicable to operators within the state. Just as clearly, however, the enabling statute provides absolutely no authority for retroactive application of these rules. To pass constitutional muster, such intent must be clearly stated within the legislation. The enabling statutes do not provide even a hint that retroactive application is permissible. Consequently, the Division's attempt to do so in this case violates Maralo's constitutional rights under both the United States and New Mexico Constitutions.

CONCLUSION

Both the United States and New Mexico Constitutions give companies such as Maralo a guaranty that it will be afforded due process. That important right is violated when the Division enacts a rule and then seeks to enforce it retroactively by punishing a company for conduct that was completely legal and in accordance with all applicable rules at the time it was committed. Because the Division's enabling statute does not clearly give the Division the authority to retroactively enforce a rule, its attempt to do so in this case is improper and unconstitutional. Maralo, therefore, respectfully prays that this application be dismissed. Maralo prays further for general relief.

Respectfully submitted,

By:____approved by telephonically_____
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ATTORNEYS FOR MARALO, LLC

RECEIVED
AUG 11 2003
Oil Conservation Division

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

APPLICATION OF THE NEW MEXICO OIL CONSERVATION DIVISION, THROUGH THE ENVIRONMENTAL BUREAU CHIEF, FOR AN ORDER REQUIRING MARALO, LLC TO REMEDIATE HYDROCARBON CONTAMINATION AT AN ABANDONED WELL AND BATTERY SITE; LEA COUNTY, NEW MEXICO.

CASE NO. 13142

APPLICATION FOR ORDER DIRECTING REMEDIATION

1. Maralo, LLC ("Maralo") was the operator of the Humble State Well No. 3 (API No. 30-025-09831) and associated tank battery and pits, located in Unit A, Section 36, Township 25 South, Range 36 East, Lea County, New Mexico.

2. On October 6, 1999, Mr. Jay Anthony, a surface owner, filed a complaint with the Oil Conservation Division ("the Division") concerning oil-contaminated soil on his property related to the former Humble State #3 tank battery. A Division investigation determined that the surface of the land around the former tank battery is contaminated with highly weathered asphaltic type oil and that several backfilled pits remain at the site. Asphaltic type oil is present at the surface of each pit. The pits appear to have been used for the disposal of emulsions, basic sediments and tank bottoms. Laboratory analyses of samples of contaminated soils from the site contain up to 25,400 parts per million (ppm) of total petroleum hydrocarbons (TPH); up to 0.179 ppm of benzene; up to 0.432 ppm of ethylbenzene; and, up to 0.921 ppm of xylene.

3. On April 11, 2001, the Division's Environmental Bureau notified Maralo that it would require an abatement plan pursuant to OCD Rule 19 [19.15.1.19 NMAC] to remedy fresh water contamination believed to exist at the referenced site.

4. By letter dated April 22, 2003, the Division notified Maralo that it was rescinding the requirement of an abatement plan because the Division had determined that there was insufficient evidence of water pollution to impose such a requirement at this time. The Division further notified Maralo, however, that Maralo should submit a work plan to remedy surface pollution resulting from tank bottoms at the referenced site in violation of OCD Rule 313 [19.15.5.313 NMAC].

5. By letter dated July 16, 2003 from legal counsel, Maralo declined to submit the required work plan, asserting that the Division has no legal authority for this requirement.

6. Division Rule 313 [19.15.5.313 NMAC] provides, in relevant part as follows:

> Wells producing oil shall be operated in such a manner as will reduce as much as practicable the formation of emulsion and basic sediments. These substances and tank bottoms shall not be allowed to pollute fresh waters or cause surface damage.

7. Division Rule 310.A [19.15.5.310.A NMAC] provides, in relevant part as follows:

> Oil shall not be stored or retained in earthen reservoirs, or in open receptacles.

8. The investigation conducted by the Division indicates that the surface contamination at the Humble State No. 3 site resulted from Maralo's violation of Rules 313 and 310.A.

WHEREFORE, the Environmental Bureau Chief of the Division hereby applies to the Director to enter an order:

A. Directing Maralo to submit a work plan to remedy hydrocarbon contamination existing at the Humble State No. 3 site.

B. Upon approval of said work plan, to faithfully perform the same, and to fully remediate all hydrocarbon contamination at or proceeding from the said site.

C. For such other and further relief as the Division deems just and proper under the circumstances.

RESPECTFULLY SUBMITTED,

Gail MacQuesten
Assistant General Counsel
Energy, Minerals and Natural Resources Department of the State of New Mexico
1220 S. St. Francis Drive
Santa Fe, NM 87505
(505) 476-3451

Attorney for The New Mexico Oil Conservation Division

Case No. 13142 : Application of the New Mexico Oil Conservation Division for an Order Requiring Maralo, LLC to Remediate Hydrocarbon Contamination at an Abandoned Well and Battery Site; Lea County, New Mexico. The Applicant seeks an order requiring Maralo, LLC to remediate contamination at the Humble State Well No. 3 site, located in Unit A, Sec. 36, T 25S, R36 E, Lea County, New Mexico.

COTTON, BLEDSOE, TIGHE & DAWSON

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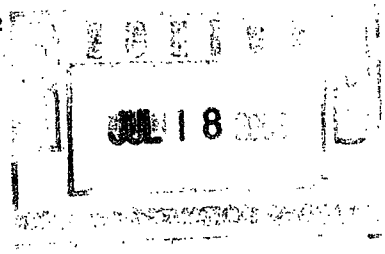

July 16, 2003

Mr. David K. Brooks
Assistant General Counsel
New Mexico Energy, Minerals and Natural
Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Humble State #3 Tank Battery Site
Lea County, New Mexico

Dear Mr. Brooks:

Thank you for your letter dated July 9th. I have reviewed that with my client and provide this response.

Your letter references Rule 313 and indicates this rule was originally adopted in 1950. That rule has been amended, as recently as May 15, 2000. We ceased operations on this lease in 1988. Any subsequent changes to the rule would not apply to us. I do not have the exact text of the rule as it existed in 1988, but even looking at its most current version, I fail to see where this provides your agency with the authority to order us to remediate a site that has not been used for 15 years. Accordingly, we must respectfully decline your request to submit a work plan. If you have any legal authority allowing your agency to retroactively impose this proposed requirement, I would appreciate the opportunity to review the same.

Very truly yours,

COTTON, BLEDSOE, TIGHE & DAWSON

By: Rick G. Strange

RGS/sm

RSTRANGE\004802\000050\374718.1

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

July 9, 2003

Mr. Rick G. Strange
Cotton, Bledsoe, Tighe & Dawson
500 W. Illinois, Suite 300
Midland, TX 79701-4337

Re: Maralo LLC
Humble State #3 Tank Battery Site
Lea County, New Mexico

Dear Mr. Strange:

On April 11, 2001, the Division notified Maralo LLC that it would require an abatement plan pursuant to OCD Rule 19 [19.15.1.19 NMAC] to remedy fresh water contamination believed to exist at the referenced site. By letter dated April 23, 2001, you, on behalf of Maralo, advised us of your contention that Rule 19 is inapplicable because it was adopted subsequent to Maralo's abandonment of the facility.

By letter dated April 22, 2003, the Division notified Maralo that we were rescinding the requirement of an abatement plan because we had determined that there was insufficient evidence of water pollution to impose such a requirement at this time. The Division further notified Maralo, however, that we were requiring a work plan to remedy surface pollution resulting from tank bottoms at the referenced site.

Maralo responded by letter of May 5, 2003 referencing your letter of April 23, 2001.

Although OCD does not agree with your position regarding the application of Rule 19, our rescinding the abatement plan requirement moots that issue. Rule 313 [19.15.5.313 NMAC], which is the basis for the demand set forth in our letter of April 22, 2003, was originally adopted in 1950.

We accordingly reiterate our requirement of a work plan to address the surface contamination issues. The plan should be filed not later than August 15, 2003.

Please contact me at 505-476-3450 if you have questions or wish to discuss this matter further.

Very truly yours,

David K. Brooks
Assistant General Counsel

cc. William C. Olson
OCD Senior Hydrologist

LLC

CERTIFIED MAIL
RETURN RECEIPT NO. 7001 1140 0002 4294 9923

May 5, 2003

RECEIVED

MAY 0 8 2003

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Mr. Roger C. Anderson
New Mexico Energy, Minerals and
Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Humble State #3 Tank Battery Site
Lea County, New Mexico

Dear Mr. Anderson:

Maralo, LLC is in receipt of your letter dated April 22, 2003, wherein you advise that the OCD is rescinding the April 11, 2001 abatement plan requirement although you request a work plan be submitted to eliminate surface damage at the captioned site.

We call your attention to letter dated April 23, 2001 from our attorney, Mr. Rick G. Strange with the Cotton, Bledsoe, Tighe & Dawson firm (copy enclosed), wherein he clearly states that Rule 19 is inapplicable.

Because we have had no response to our previous correspondence (4/23/01) and due to the significant passage of time, we believe you agree with our position on Rule 19, but if you have information that requires further review or discussion, I am certain Mr. Strange would be willing to discuss it further with your legal counsel.

Yours very truly,

Joe C. Pulido, CPL
Manager

JCP/sg
Enclosure

cc: Mr. Rick G. Strange
Cotton, Bledsoe, Tighe & Dawson

Maralo, LLC / P.O. Box 832 / Midland, Texas 79702-0832 / (915) 684-7441
Fax (915) 684-9836

1R176

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APR 25 2001

OIL CONSERVATION DIVISION

April 23, 2001

Mr. Roger Anderson
New Mexico Energy, Minerals and
Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Abatement Plan AP-26, Humble State #3 Tank Battery Site
Jal, New Mexico

Dear Mr. Anderson:

Maralo, LLC has asked us to respond to your letter dated April 11, 2001. In that letter, you ask us to submit a plan to investigate the extent of contamination at the site of the former Maralo Humble State #3 Tank Battery Site located in Unit A, Section 36, Township 25 South, Range 36 East. In your correspondence, you indicate that Maralo is required to submit to the OCD by June 11, 2001 a Stage 1 investigation proposal pursuant to OCD Rule 19.E.1 and 19.E.3. As you are no doubt aware, Rule 19 of the New Mexico Oil and Gas Regulations was promulgated in February 1997. Maralo's wells in that area were plugged in 1988 and the battery was remediated in 1993. We have had no operations on the site since. Rule 19, therefore, is inapplicable, and any attempt to apply it retroactively now would, in my opinion, be unconstitutional. If you disagree, I would be happy to review any information you have or to discuss this matter with your legal counsel. If we have not heard from you within a reasonable period of time, we will assume that you agree with our assessment and will close our file.

Very truly yours,

COTTON, BLEDSOE, TIGHE & DAWSON

By:
Rick G. Strange

RGS/sm

BEFORE EXAMINER
OIL CONSERVATION DIVISION
EXHIBIT NO. 8
CASE NO. 13142

Mid: RSTRANGE\004802\000050\284434.1

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

April 22, 2003

Mr. Joe Pulido, Manager
Maralo, LLC
P.O. Box 832
Midland, Texas 79702-0832

RE: HUMBLE STATE #3 TANK BATTERY SITE
JAL, NEW MEXICO

Dear Mr. Pulido:

On April 11, 2001, the New Mexico Oil Conservation Division (OCD) informed Maralo, LLC (Maralo) that OCD investigations at the former Maralo Humble State #3 Tank Battery, located in Unit A, Section 36, Township 25 South, Range 36 East, have shown that ground water directly underlying Maralo's former Humble State #3 Tank Battery site is contaminated with chlorides and total dissolved solids (TDS) in concentrations in excess of the New Mexico Water Quality Control Commission standards. On that date, the OCD required that Maralo submit a Stage 1 Investigation Proposal to investigate and, if necessary, remediate ground water pollution at the site of the former tank battery. Subsequent soil investigations conducted by the OCD and recent investigations by the land owner, Mr. Jay Anthony, have not found appreciable concentrations of chlorides in soils at the site. Therefore, the OCD is rescinding the April 11, 2001 abatement plan requirement.

However, site inspections have shown that several backfilled pits remain at the surface of the site. Asphaltic type oil is present at the surface of each pit. These pits appear to have been used for disposal of emulsions, basic sediments and tank bottoms. According to 19.15.5.313 NMAC, "these substances and tank bottoms shall not be allowed to pollute fresh waters or cause surface damage". Since these pits are causing surface damage, the OCD requires that Maralo submit a work plan to eliminate surface damage at the site. The work plan shall be submitted to the OCD Santa Fe Office by May 22, 2003 with a copy provided to the OCD Hobbs District Office. If you have any questions, please contact Bill Olson at (505) 476-3491.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

xc: Chris Williams, OCD Hobbs District Office
Jay Anthony

Jay Anthony Ranch

North sample taken on north side of road approximately 43 yards north of on-site water well.
The GPS coordinates of the north sample is 32 deg-05 min-26.815 sec N 105 deg-12 min-52.275 sec W

The water well location is 32-05-25.6 N 103-12-52.09 W

The second sample was taken in one of the SW pits GPS 32-05-24.8 N 103-12-54.7 W

9/16/02

J. ANTHONY RANCH
OLD MARALO SITE
SAMPLING - SOIL

#1 32° 05' 26.815" N
103° 12' 52.275" W

WATER WELL
32° 05' 25.600" N
103° 12' 52.090" W

[redacted]

11-30-01

8:15 AM I + W calibrated [illegible]

9 AM [illegible] - [illegible] calibrated
well #2

10:15 AM well #1 casing
324 psi - gauge

3-19-02 [illegible], FEM + WP

320-6989

632-4168

EPI-[illegible]

5-[illegible]-02 9:15 AM
GROUNDWATER ≈ 190'
PIC #1 N AREA - LOOKING (N)
PIC #2 N AREA - LOOKING (S)
SAMPLE LOCATION GPS
43 YARD N of [illegible] WELL

(NA) N AREA - 2'

15-17' CL ≈ 300 Kg/mg PP

NA
2' - 929
4-6 - 9:47
6-8 10 AM
10-12 10:17 AM
15-17 10:42 AM
20-22 11:25 AM
25-27 12:20 PM
Cl⁻ 320 Kg/mg

BL
2'

SWA Pic # 3-(# 4 LOOK
5' 1338 Cl⁻ 320 p
10' 1359 32° 05' 24.8
15' 1413 103° 12' 54.7
20' 1453
27'-28' 1557
Cl⁻ 480 ppm

TraceAnalysis, Inc. 6701 [redacted]erdeen Ave., Suite 9 Lubbock, T[redacted]9424-1515 (806) 794-1296

Summary Report

Wayne Price
OCD
1220 S. Saint Francis Dr.
Santa Fe, NM 87505

Report Date: June 5, 2002

Order ID Number: A02051716

Project Number: N/A
Project Name: Maralo
Project Location: Jay Anotheny Ranch

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
197262	North Area-2'	Soil	5/16/02	9:29	5/17/02
197263	North Area-4'-6'	Soil	5/16/02	9:49	5/17/02
197264	North Area-6-8'	Soil	5/16/02	10:00	5/17/02
197265	North Area-10-12'	Soil	5/16/02	10:17	5/17/02
197266	North Area-15'-17'	Soil	5/16/02	10:42	5/17/02
197267	North Area-20-22'	Soil	5/16/02	11:25	5/17/02
197268	North Area-25-27'	Soil	5/16/02	12:20	5/17/02
197269	SW Area 5'	Soil	5/16/02	13:38	5/17/02
197270	SW Area 10'	Soil	5/16/02	13:59	5/17/02
197271	SW Area 15'	Soil	5/16/02	14:13	5/17/02
197272	SW Area 20'	Soil	5/16/02	14:53	5/17/02
197273	SW Area 27'-28'	Soil	5/16/02	15:57	5/17/02

0 This report consists of a total of 3 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX					TPH
Sample - Field Code	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	M,P,O-Xylene (ppm)	Total BTEX (ppm)	TRPHC (ppm)
197262 - North Area-2'	<0.010	<0.010	<0.010	<0.010	<0.010	9040
197263 - North Area-4'-6'	<0.010	<0.010	<0.010	0.016	0.016	8710
197264 - North Area-6-8'	<0.050	<0.050	<0.050	0.277	0.277	10900
197265 - North Area-10-12'	<0.100	<0.100	0.22	0.583	0.803	12900
197266 - North Area-15'-17'	0.0937	<0.050	0.305	0.96	1.36	14900
197267 - North Area-20-22'	0.0723	<0.050	0.151	0.576	0.799	12700
197268 - North Area-25-27'	<0.100	<0.100	0.274	0.921	1.20	12600
197269 - SW Area 5'	0.111	<0.050	0.402	0.741	1.25	18800
197270 - SW Area 10'	0.179	<0.100	0.38	0.792	1.35	25400
197271 - SW Area 15'	0.12	<0.100	0.432	0.672	1.22	13100
197272 - SW Area 20'	<0.010	<0.010	0.038	0.0155	0.0535	56.8
197273 - SW Area 27'-28'	<0.010	<0.010	<0.010	<0.010	<0.010	143

Continued on next page ...

Sample 197262 continued ...

Param	Flag	Result	Units

Sample: 197262 - North Area-2'

Param	Flag	Result	Units
Chloride		2.66	mg/Kg

Sample: 197263 - North Area-4'-6'

Param	Flag	Result	Units
Chloride		3.12	mg/Kg

Sample: 197264 - North Area-6-8'

Param	Flag	Result	Units
Chloride		7.56	mg/Kg

Sample: 197265 - North Area-10-12'

Param	Flag	Result	Units
Chloride		5.87	mg/Kg

Sample: 197266 - North Area-15'-17'

Param	Flag	Result	Units
Chloride		3.37	mg/Kg

Sample: 197267 - North Area-20-22'

Param	Flag	Result	Units
Chloride		18.1	mg/Kg

Sample: 197268 - North Area-25-27'

Param	Flag	Result	Units
Chloride		66.9	mg/Kg

Sample: 197269 - SW Area 5'

Param	Flag	Result	Units
Chloride		54.1	mg/Kg

Sample: 197270 - SW Area 10'

Param	Flag	Result	Units
Chloride		5.83	mg/Kg

Sample: 197271 - SW Area 15'

Param	Flag	Result	Units
Chloride		<10.0	mg/Kg

Sample: 197272 - SW Area 20'

Param	Flag	Result	Units
Chloride		10.2	mg/Kg

Sample: 197273 - SW Area 27'-28'

Param	Flag	Result	Units
Chloride		10.3	mg/Kg

TRACEANALYSIS, INC.

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Analytical and Quality Control Report

Wayne Price
OCD
1220 S. Saint Francis Dr.
Santa Fe, NM 87505

Report Date: June 5, 2002

Order ID Number: A02051716

Project Number: N/A
Project Name: Maralo
Project Location: Jay Anotheny Ranch

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
197262	North Area-2'	Soil	5/16/02	9:29	5/17/02
197263	North Area-4'-6'	Soil	5/16/02	9:49	5/17/02
197264	North Area-6-8'	Soil	5/16/02	10:00	5/17/02
197265	North Area-10-12'	Soil	5/16/02	10:17	5/17/02
197266	North Area-15'-17'	Soil	5/16/02	10:42	5/17/02
197267	North Area-20-22'	Soil	5/16/02	11:25	5/17/02
197268	North Area-25-27'	Soil	5/16/02	12:20	5/17/02
197269	SW Area 5'	Soil	5/16/02	13:38	5/17/02
197270	SW Area 10'	Soil	5/16/02	13:59	5/17/02
197271	SW Area 15'	Soil	5/16/02	14:13	5/17/02
197272	SW Area 20'	Soil	5/16/02	14:53	5/17/02
197273	SW Area 27'-28'	Soil	5/16/02	15:57	5/17/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.
The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 18 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 197262 - North Area-2'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20528	Date Analyzed:	5/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19598	Date Prepared:	5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		<0.010	mg/Kg	10	0.001
Total BTEX		<0.010	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.846	mg/Kg	10	1	84	70 - 130
4-BFB		0.708	mg/Kg	10	1	70	70 - 130

Sample: 197262 - North Area-2'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC20761	Date Analyzed:	6/5/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB19790	Date Prepared:	6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		2.66	mg/Kg	2	1

Sample: 197262 - North Area-2'

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC20561	Date Analyzed:	5/24/02
Analyst:	KM	Preparation Method:	N/A	Prep Batch:	PB19623	Date Prepared:	5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		9040	mg/Kg	100	10

Sample: 197263 - North Area-4'-6'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20519	Date Analyzed:	5/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19591	Date Prepared:	5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		0.016	mg/Kg	10	0.001
Total BTEX		0.016	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.897	mg/Kg	10	1	89	70 - 130
4-BFB		0.749	mg/Kg	10	1	74	70 - 130

Sample: 197263 - North Area-4'-6'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		3.12	mg/Kg	2	1

Sample: 197263 - North Area-4'-6'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC20561 Date Analyzed: 5/24/02
Analyst: KM Preparation Method: N/A Prep Batch: PB19623 Date Prepared: 5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		8710	mg/Kg	100	10

Sample: 197264 - North Area-6-8'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20528 Date Analyzed: 5/17/02
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19598 Date Prepared: 5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.050	mg/Kg	50	0.001
Toluene		<0.050	mg/Kg	50	0.001
Ethylbenzene		<0.050	mg/Kg	50	0.001
M,P,O-Xylene		0.277	mg/Kg	50	0.001
Total BTEX		0.277	mg/Kg	50	0.001
Test Comments	[1]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.747	mg/Kg	50	1	74	70 - 130

Sample: 197264 - North Area-6-8'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		7.56	mg/Kg	5	1

[1]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of 0.0318 which is lower than the RDL but greater than the MDL of 0.01183.

Sample: 197264 - North Area-6-8'

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC20561	Date Analyzed:	5/24/02
Analyst:	KM	Preparation Method:	N/A	Prep Batch:	PB19623	Date Prepared:	5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		10900	mg/Kg	30	10

Sample: 197265 - North Area-10-12'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20528	Date Analyzed:	5/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19598	Date Prepared:	5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.100	mg/Kg	100	0.001
Toluene		<0.100	mg/Kg	100	0.001
Ethylbenzene		0.22	mg/Kg	100	0.001
M,P,O-Xylene		0.583	mg/Kg	100	0.001
Total BTEX		0.803	mg/Kg	100	0.001
Test Comments	[2]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.963	mg/Kg	100	1	96	70 - 130
4-BFB	[3]	2.24	mg/Kg	50	1	224	70 - 130

Sample: 197265 - North Area-10-12'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC20761	Date Analyzed:	6/5/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB19790	Date Prepared:	6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		5.87	mg/Kg	5	1

Sample: 197265 - North Area-10-12'

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC20561	Date Analyzed:	5/24/02
Analyst:	KM	Preparation Method:	N/A	Prep Batch:	PB19623	Date Prepared:	5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		12900	mg/Kg	30	10

Sample: 197266 - North Area-15'-17'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20528	Date Analyzed:	5/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19598	Date Prepared:	5/17/02

[2]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of 0.0202 which is lower than the RDL but greater than the MDL of 0.0237.

[3]High surrogate recovery due to peak interference.

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.0937	mg/Kg	50	0.001
Toluene		<0.050	mg/Kg	50	0.001
Ethylbenzene		0.305	mg/Kg	50	0.001
M,P,O-Xylene		0.96	mg/Kg	50	0.001
Total BTEX		1.36	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.9	mg/Kg	50	1	90	70 - 130
4-BFB	[4]	3.32	mg/Kg	100	1	332	70 - 130

Sample: 197266 - North Area-15'-17'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride	.	3.37	mg/Kg	2	1

Sample: 197266 - North Area-15'-17'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC20561 Date Analyzed: 5/24/02
Analyst: KM Preparation Method: N/A Prep Batch: PB19623 Date Prepared: 5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		14900	mg/Kg	30	10

Sample: 197267 - North Area-20-22'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20528 Date Analyzed: 5/17/02
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19598 Date Prepared: 5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.0723	mg/Kg	50	0.001
Toluene		<0.050	mg/Kg	50	0.001
Ethylbenzene		0.151	mg/Kg	50	0.001
M,P,O-Xylene		0.576	mg/Kg	50	0.001
Total BTEX		0.799	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[5]	0.506	mg/Kg	50	1	50	70 - 130
4-BFB	[6]	2.59	mg/Kg	50	1	259	70 - 130

[4]High surrogate recovery due to peak interference.
[5]Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[6]High surrogate recovery due to peak interference.

Sample: 197267 - North Area-20-22'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		18.1	mg/Kg	2	1

Sample: 197267 - North Area-20-22'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC20561 Date Analyzed: 5/24/02
Analyst: KM Preparation Method: N/A Prep Batch: PB19623 Date Prepared: 5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		12700	mg/Kg	30	10

Sample: 197268 - North Area-25-27'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20528 Date Analyzed: 5/17/02
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19598 Date Prepared: 5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.100	mg/Kg	100	0.001
Toluene		<0.100	mg/Kg	100	0.001
Ethylbenzene		0.274	mg/Kg	100	0.001
M,P,O-Xylene		0.921	mg/Kg	100	0.001
Total BTEX		1.20	mg/Kg	100	0.001
Test Comments	[7]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[8]	0.557	mg/Kg	100	1	55	70 - 130
4-BFB	[9]	3.19	mg/Kg	50	1	319	70 - 130

Sample: 197268 - North Area-25-27'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		66.9	mg/Kg	5	1

Sample: 197268 - North Area-25-27'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC20561 Date Analyzed: 5/24/02
Analyst: KM Preparation Method: N/A Prep Batch: PB19623 Date Prepared: 5/19/02

[7]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of 0.0801 which is lower than the RDL but greater than the MDL of 0.02366.
[8]Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[9]High surrogate recovery due to peak interference.

Param	Flag	Result	Units	Dilution	RDL
TRPHC		12600	mg/Kg	30	10

Sample: 197269 - SW Area 5'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20528	Date Analyzed:	5/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19598	Date Prepared:	5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.111	mg/Kg	50	0.001
Toluene		<0.050	mg/Kg	50	0.001
Ethylbenzene		0.402	mg/Kg	50	0.001
M,P,O-Xylene		0.741	mg/Kg	50	0.001
Total BTEX		1.25	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[10]	0.381	mg/Kg	50	1	38	70 - 130
4-BFB	[11]	3.07	mg/Kg	100	1	307	70 - 130

Sample: 197269 - SW Area 5'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC20761	Date Analyzed:	6/5/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB19790	Date Prepared:	6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		54.1	mg/Kg	50	1

Sample: 197269 - SW Area 5'

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC20561	Date Analyzed:	5/24/02
Analyst:	KM	Preparation Method:	N/A	Prep Batch:	PB19623	Date Prepared:	5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		18800	mg/Kg	30	10

Sample: 197270 - SW Area 10'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20528	Date Analyzed:	5/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19598	Date Prepared:	5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.179	mg/Kg	100	0.001
Toluene		<0.100	mg/Kg	100	0.001
Ethylbenzene		0.38	mg/Kg	100	0.001
M,P,O-Xylene		0.792	mg/Kg	100	0.001
Total BTEX		1.35	mg/Kg	100	0.001

[10] *Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.*
[11] High surrogate recovery due to peak interference.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[12]	0.463	mg/Kg	100	1	46	70 - 130
4-BFB	[13]	3.09	mg/Kg	50	1	309	70 - 130

Sample: 197270 - SW Area 10'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		5.83	mg/Kg	5	1

Sample: 197270 - SW Area 10'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC20562 Date Analyzed: 5/24/02
Analyst: KM Preparation Method: N/A Prep Batch: PB19623 Date Prepared: 5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		25400	mg/Kg	30	10

Sample: 197271 - SW Area 15'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20528 Date Analyzed: 5/17/02
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19598 Date Prepared: 5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.12	mg/Kg	100	0.001
Toluene		<0.100	mg/Kg	100	0.001
Ethylbenzene		0.432	mg/Kg	100	0.001
M,P,O-Xylene		0.672	mg/Kg	100	0.001
Total BTEX		1.22	mg/Kg	100	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[14]	0.661	mg/Kg	100	1	66	70 - 130
4-BFB	[15]	2.33	mg/Kg	100	1	233	70 - 130

Sample: 197271 - SW Area 15'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		<10.0	mg/Kg	10	1

[12]Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[13]High surrogate recovery due to peak interference.
[14]Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[15]High surrogate recovery due to peak interference.

Sample: 197271 - SW Area 15'

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC20562	Date Analyzed:	5/24/02
Analyst:	KM	Preparation Method:	N/A	Prep Batch:	PB19623	Date Prepared:	5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		13100	mg/Kg	30	10

Sample: 197272 - SW Area 20'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20528	Date Analyzed:	5/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19598	Date Prepared:	5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		0.038	mg/Kg	10	0.001
M,P,O-Xylene		0.0155	mg/Kg	10	0.001
Total BTEX		0.0535	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[16]	0.405	mg/Kg	10	1	40	70 - 130
4-BFB	[17]	0.368	mg/Kg	100	1	36	70 - 130

Sample: 197272 - SW Area 20'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC20760	Date Analyzed:	6/5/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB19791	Date Prepared:	6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		10.2	mg/Kg	10	1

Sample: 197272 - SW Area 20'

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC20562	Date Analyzed:	5/24/02
Analyst:	KM	Preparation Method:	N/A	Prep Batch:	PB19623	Date Prepared:	5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		56.8	mg/Kg	1	10

Sample: 197273 - SW Area 27'-28'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20528	Date Analyzed:	5/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19598	Date Prepared:	5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001

Continued ...

[16] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[17] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

... Continued Sample: 197273 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		<0.010	mg/Kg	10	0.001
Total BTEX		<0.010	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[18]	0.562	mg/Kg	10	1	56	70 - 130
4-BFB	[19]	0.477	mg/Kg	10	1	47	70 - 130

Sample: 197273 - SW Area 27'-28'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20760 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19791 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		10.3	mg/Kg	10	1

Sample: 197273 - SW Area 27'-28'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC20562 Date Analyzed: 5/24/02
Analyst: KM Preparation Method: N/A Prep Batch: PB19623 Date Prepared: 5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		143	mg/Kg	1	10

[18] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[19] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

Quality Control Report
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QCBatch: QC20519

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.010	mg/Kg	0.001
Toluene		<0.010	mg/Kg	0.001
Ethylbenzene		<0.010	mg/Kg	0.001
M,P,O-Xylene		<0.010	mg/Kg	0.001
Total BTEX		<0.010	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.923	mg/Kg	10	1	92	70 - 130
4-BFB		0.835	mg/Kg	10	1	83	70 - 130

Method Blank

QCBatch: QC20528

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.010	mg/Kg	0.001
Toluene		<0.010	mg/Kg	0.001
Ethylbenzene		<0.010	mg/Kg	0.001
M,P,O-Xylene		<0.010	mg/Kg	0.001
Total BTEX		<0.010	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.948	mg/Kg	10	1	94	70 - 130
4-BFB		0.812	mg/Kg	10	1	81	70 - 130

Method Blank

QCBatch: QC20561

Param	Flag	Results	Units	Reporting Limit
TRPHC		<25.0	mg/Kg	10

Method Blank

QCBatch: QC20562

Param	Flag	Results	Units	Reporting Limit
TRPHC		<25.0	mg/Kg	10

Method Blank

QCBatch: QC20760

Param	Flag	Results	Units	Reporting Limit
Chloride		12.82	mg/Kg	1

Method Blank

QCBatch: QC20761

Param	Flag	Results	Units	Reporting Limit
Chloride		<12.82	mg/Kg	1

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC20519

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.966	0.958	mg/Kg	10	1	<0.010	96	0	70 - 130	20
Benzene	0.966	0.966	mg/Kg	10	1	<0.010	96	0	70 - 130	20
Toluene	0.958	0.957	mg/Kg	10	1	<0.010	95	0	70 - 130	20
Ethylbenzene	0.932	0.945	mg/Kg	10	1	<0.010	93	1	70 - 130	20
M,P,O-Xylene	2.91	2.83	mg/Kg	10	3	<0.010	97	2	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.924	0.925	mg/Kg	10	1	92	92	70 - 130
4-BFB	0.889	0.816	mg/Kg	10	1	88	81	70 - 130

Laboratory Control Spikes

QCBatch: QC20528

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.873	0.87	mg/Kg	10	1	<0.010	87	0	70 - 130	20
Benzene	0.988	0.975	mg/Kg	10	1	<0.010	98	1	70 - 130	20
Toluene	0.968	0.906	mg/Kg	120	1	<0.010	96	6	70 - 130	20
Ethylbenzene	0.96	0.916	mg/Kg	10	1	<0.010	96	4	70 - 130	20
M,P,O-Xylene	3.02	2.9	mg/Kg	10	3	<0.010	100	4	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.903	0.89	mg/Kg	10	1	90	89	70 - 130
4-BFB	0.882	0.934	mg/Kg	10	1	88	93	70 - 130

Laboratory Control Spikes

QCBatch: QC20561

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
TRPHC	268	305	mg/Kg	1	250	<25.0	107	12	74 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC20562

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
TRPHC	268	305	mg/Kg	1	250	<25.0	107	12	74 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC20760

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	[20] 24.02	[21] 23.88	mg/Kg	1	12.50	12.82	192	0	90 - 110	20
Sulfate	[22] 25.58	[23] 25.59	mg/Kg	1	12.50	14.34	204	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC20761

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	[24] 24.02	[25] 23.9	mg/Kg	1	12.50	<12.82	192	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC20519

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Benzene	0.868	0.839	mg/Kg	10	1	<0.010	86	3	70 - 130	20

Continued ...

[20]The Soil blank should be subracted from the spikes; giving a %EA of 90
[21]The Soil blank should be subracted from the spikes; giving a %EA of 90
[22]The Soil blank should be subracted from the spikes; giving a %EA of 90
[23]The Soil blank should be subracted from the spikes; giving a %EA of 90
[24]The Soil blank should be subracted from the spikes; giving a %EA of 90
[25]The Soil blank should be subracted from the spikes; giving a %EA of 90

... Continued

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Toluene	0.839	0.854	mg/Kg	10	1	<0.010	83	1	70 - 130	20
Ethylbenzene	0.857	0.849	mg/Kg	10	1	<0.010	85	0	70 - 130	20
M,P,O-Xylene	2.74	2.69	mg/Kg	10	3	0.016	90	1	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.834	[26] 0.549	mg/Kg	10	1	83	54	70 - 130
4-BFB	[27] 0.682	[28] 0.475	mg/Kg	10	1	68	47	70 - 130

Matrix Spikes

QCBatch: QC20528

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Benzene	0.938	0.936	mg/Kg	10	1	<0.010	93	0	70 - 130	20
Toluene	0.92	0.915	mg/Kg	10	1	<0.010	92	0	70 - 130	20
Ethylbenzene	0.908	0.92	mg/Kg	10	1	<0.010	90	1	70 - 130	20
M,P,O-Xylene	2.92	2.76	mg/Kg	10	3	<0.010	97	5	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.781	0.88	mg/Kg	10	1	78	88	70 - 130
4-BFB	0.714	0.725	mg/Kg	10	1	71	72	70 - 130

Matrix Spikes

QCBatch: QC20561

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
TRPHC	40200	40500	mg/Kg	1	250	44300	-1640	-7	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC20562

[26] Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.
[27] Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.
[28] Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
TRPHC	399	337	mg/Kg	1	250	143	102	27	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC20760

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	30400	30377	mg/Kg	1	12500	19500	87	0	35 - 144	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC20761

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	589.14	590.11	mg/Kg	1	625	54.1	85	0	35 - 144	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC20519

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0979	97	85 - 115	5/17/02
Benzene		mg/L	0.10	0.0905	90	85 - 115	5/17/02
Toluene		mg/L	0.10	0.0926	92	85 - 115	5/17/02
Ethylbenzene		mg/L	0.10	0.0865	86	85 - 115	5/17/02
M,P,O-Xylene		mg/L	*0.30*	*0.279*	93	*85 - 115*	5/17/02

ICV (1)

QCBatch: QC20519

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0942	94	85 - 115	5/17/02
Benzene		mg/L	0.10	0.0965	96	85 - 115	5/17/02
Toluene		mg/L	0.10	0.0958	95	85 - 115	5/17/02
Ethylbenzene		mg/L	0.10	0.0899	89	85 - 115	5/17/02

Continued ...

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
M,P,O-Xylene		mg/L	0.30	0.293	97	85 - 115	5/17/02

CCV (1)

QCBatch: QC20528

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0925	92	85 - 115	5/17/02
Benzene		mg/L	0.10	0.0939	93	85 - 115	5/17/02
Toluene		mg/L	0.10	0.0936	93	85 - 115	5/17/02
Ethylbenzene		mg/L	0.10	0.091	91	85 - 115	5/17/02
M,P,O-Xylene		mg/L	0.30	0.285	95	85 - 115	5/17/02

CCV (2)

QCBatch: QC20528

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0895	89	85 - 115	5/17/02
Benzene		mg/L	0.10	0.0952	95	85 - 115	5/17/02
Toluene		mg/L	0.10	0.0892	89	85 - 115	5/17/02
Ethylbenzene		mg/L	0.10	0.093	93	85 - 115	5/17/02
M,P,O-Xylene		mg/L	0.30	0.293	97	85 - 115	5/17/02

ICV (1)

QCBatch: QC20528

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0871	87	85 - 115	5/17/02
Benzene		mg/L	0.10	0.0929	92	85 - 115	5/17/02
Toluene		mg/L	0.10	0.0965	96	85 - 115	5/17/02
Ethylbenzene		mg/L	0.10	0.0961	96	85 - 115	5/17/02
M,P,O-Xylene		mg/L	0.30	0.307	102	85 - 115	5/17/02

CCV (1)

QCBatch: QC20561

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	109	109	80 - 120	5/24/02

CCV (2) QCBatch: QC20561

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	107	107	80 - 120	5/24/02

ICV (1) QCBatch: QC20561

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	111	111	80 - 120	5/24/02

CCV (1) QCBatch: QC20562

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	109	109	80 - 120	5/24/02

CCV (2) QCBatch: QC20562

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	107	107	80 - 120	5/24/02

ICV (1) QCBatch: QC20562

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	111	111	80 - 120	5/24/02

CCV (1) QCBatch: QC20760

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.19	89	90 - 110	6/5/02
Sulfate		mg/L	12.50	11.25	90	90 - 110	6/5/02

ICV (1) QCBatch: QC20760

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.19	89	90 - 110	6/5/02
Sulfate		mg/L	12.50	11.38	91	90 - 110	6/5/02

CCV (1) QCBatch: QC20761

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.19	89	90 - 110	6/5/02

ICV (1) QCBatch: QC20761

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.59	92	90 - 110	6/5/02

19726 2-68

6701 Aberdeen Avenue, Ste. 9
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Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0205171 6

Company Name: NM OCD
Phone #: 505-476-3487
Address: (Street, City, Zip) 1220 S SAINT FRANCIS DR. SANTA FE NM 87505
Fax #:
Contact Person: WAYNE PRICE
Invoice to: (If different from above)
Project #:
Project Name: MARALO
Project Location: JAY ANOTHENY RANCH - 32° 5' 25.60" N / 103° 12' 52.09" W
Sampler Signature:

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CHLORIDES	Turn Around Time if different from standard	Hold
19726 2	NORTH AREA - 2'	1	4oz		X							X		5/16/02	0929	X	X	X												X		
63	" " 4'-6'	1	"		X							X		"	0949	X	X	X												X		
64	" " 6-8'	1	"		X							X		"	1000	X	X	X												X		
65	" " 10-12'	1	"		X							X		"	1017	X	X	X												X		
66	" " 15-17'	1	"		X							X		"	1042	X	X	X												X		
67	" " 20-22'	1	"		X							X		"	1125	X	X	X												X		
68	" " 25-27'	1	"		X							X		"	1220	X	X	X												X		

Relinquished by: WAYNE PRICE Date: 5/16/02 Time: 5:20 PM
Received by: Date: Time:
Relinquished by: Date: Time:
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Date: Time: 5-17-02 10:00

LAB USE ONLY

Intact Y / N
Headspace Y / N
Temp 2 °
Log-in Review

REMARKS: 6/6F/P

☐ Check If Special Reporting Limits Are Needed

Carrier # Bus 902 87X 0354

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TraceAnalysis, Inc.

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Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0205171[illegible]

Company Name: NMOCD Phone #: 505-476-3487

Address: (Street, City, Zip) 1220 S. SAINT FRANCIS SANTA FE NM 87505 Fax #:

Contact Person: WAYNE PRICE

Invoice to: (If different from above)

Project #: Project Name: MARALO

Project Location: JAY ANOTHENY RANCH- Sampler Signature: [signature]

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1 TX1005 (TPH 418.1 circled)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CHLORIDES	Turn Around Time if different from standard	Hold
197269	SW AREA 5'	1	4oz.		X							X		5/16/02	1338		X	X													X		
70	" " 10'	1	"		X							X		"	1359		X	X													X		
71	" " 15'	1	"		X							X		"	1413		X	X													X		
72	" " 20'	1	"		X							X		"	1453		X	X													X		
73	" " ~~25'~~ 27'-28'	1	"		X							X		"	1557		X	X													X		
	~~SOUTH AREA 5'~~	~~1~~	~~"~~		~~X~~							~~X~~		~~"~~			~~X~~	~~X~~													~~X~~		
	~~" " 10'~~	~~1~~	~~"~~		~~X~~							~~X~~		~~"~~			~~X~~	~~X~~													~~X~~		
	~~" " 15'~~	~~1~~	~~"~~		~~X~~							~~X~~		~~"~~			~~X~~	~~X~~													~~X~~		
	~~" " 20' 27'-28'~~	~~1~~	~~"~~		~~X~~							~~X~~		~~"~~			~~X~~	~~X~~													~~X~~		
	~~" " 25'~~	~~1~~	~~"~~		~~X~~							~~X~~		~~"~~																			

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
WAYNE PRICE	5/16/02	5:20PM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			[signature]	5-17-02	10:00

LAB USE ONLY

Intact (Y) / N
Headspace Y / N
Temp 2 °
Log-in Review [initials]

REMARKS:

☐ Check If Special Reporting Limits Are Needed

Carrier # Bus 902 878 035 4

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

Summary Report

Wayne Price
OCD
1220 S. Saint Francis Dr.
Santa Fe, NM 87504

Report Date: July 5, 2001

Order ID Number: A01050432

Project Number: SEC36-255-36E
Project Name: J. Anthony Ranch
Project Location: SEC 36-255-36E

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
170563	0105021700	Soil	5/2/01	17:00	5/4/01
170564	0105021710	Soil	5/2/01	17:00	5/4/01
170565	0105021720	Soil	5/2/01	17:00	5/4/01
170566	0105021800	Soil	5/2/01	17:00	5/4/01
170567	0105021830	Soil	5/2/01	17:00	5/4/01
170568	0105021900	Soil	5/2/01	17:00	5/4/01

This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX					TPH
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	M,P,O-Xylene (mg/Kg)	Total BTEX (mg/Kg)	TRPHC (mg/Kg)
170563 - 0105021700	<0.013	<0.013	<0.013	0.685	0.685	35700
170564 - 0105021710	<0.013	<0.013	<0.013	<0.013	<0.013	7500
170565 - 0105021720	<0.013	<0.013	<0.013	<0.013	<0.013	23900
170566 - 0105021800	<0.013	<0.013	<0.013	<0.013	<0.013	<10.0
170567 - 0105021830	<0.025	<0.025	<0.025	<0.025	<0.025	20900
170568 - 0105021900	1.06	2	<0.1	<0.1	3.06	16500

Sample: 170563 - 0105021700

Param	Flag	Result	Units
CL		<10	mg/Kg

Sample: 170564 - 0105021710

Param	Flag	Result	Units
CL		<10	mg/Kg

Sample: 170565 - 0105021720

Param	Flag	Result	Units
CL		<10	mg/Kg

Sample: 170566 - 0105021800

Param	Flag	Result	Units
CL		<50	mg/Kg

Sample: 170567 - 0105021830

Param	Flag	Result	Units
CL		<50	mg/Kg

Sample: 170568 - 0105021900

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/Kg as CaCo3
Carbonate Alkalinity		<1.0	mg/Kg as CaCo3
Bicarbonate Alkalinity		138	mg/Kg as CaCo3
Total Alkalinity		138	mg/Kg as CaCo3
Specific Conductance		675	μMHOS/cm
Total Mercury		<0.19	mg/Kg
CL		<50	mg/Kg
Fluoride		9.11	mg/Kg
Nitrate-N		<5.0	mg/Kg
Sulfate		106	mg/Kg
Dissolved Calcium		14.3	mg/Kg
Dissolved Magnesium		8.30	mg/Kg
Dissolved Potassium		9.47	mg/Kg
Dissolved Sodium		38.8	mg/Kg
Total Dissolved Solids		27900	mg/Kg
Total Arsenic		<5	mg/Kg
Total Barium		14.8	mg/Kg
Total Cadmium		<2	mg/Kg
Total Chromium		<5	mg/Kg
Total Lead		<5	mg/Kg
Total Selenium		<5	mg/Kg
Total Silver		<1	mg/Kg
pH		8.7	s.u.

TRACEANALYSIS, INC.

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Analytical and Quality Control Report

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Report Date: July 5, 2001

Order ID Number: A01050432

Project Number: SEC36-255-36E
Project Name: J. Anthony Ranch
Project Location: SEC 36-255-36E

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
170563	0105021700	Soil	5/2/01	17:00	5/4/01
170564	0105021710	Soil	5/2/01	17:00	5/4/01
170565	0105021720	Soil	5/2/01	17:00	5/4/01
170566	0105021800	Soil	5/2/01	17:00	5/4/01
170567	0105021830	Soil	5/2/01	17:00	5/4/01
170568	0105021900	Soil	5/2/01	17:00	5/4/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

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Dr. Blair Leftwich, Director

Analytical Report

Sample: 170563 - 0105021700

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC11133	Date Analyzed:	5/11/01
Analyst:	JW	Preparation Method:	E 5030B	Prep Batch:	PB09536	Date Prepared:	5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.013	mg/Kg	13	0.001
Toluene		<0.013	mg/Kg	13	0.001
Ethylbenzene		<0.013	mg/Kg	13	0.001
M,P,O-Xylene		0.685	mg/Kg	13	0.001
Total BTEX		0.685	mg/Kg	13	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.11	mg/Kg	13	0.10	85	72 - 128
4-BFB		1.02	mg/Kg	13	0.10	78	72 - 128

Sample: 170563 - 0105021700

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC11235	Date Analyzed:	5/15/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB09622	Date Prepared:	5/9/01

Param	Flag	Result	Units	Dilution	RDL
CL		<10	mg/Kg	1	0.50

Sample: 170563 - 0105021700

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC11015	Date Analyzed:	5/8/01
Analyst:	JJ	Preparation Method:	N/A	Prep Batch:	PB09454	Date Prepared:	5/5/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		35700	mg/Kg	1	10

Sample: 170564 - 0105021710

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC11133	Date Analyzed:	5/11/01
Analyst:	JW	Preparation Method:	E 5030B	Prep Batch:	PB09536	Date Prepared:	5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.013	mg/Kg	13	0.001
Toluene		<0.013	mg/Kg	13	0.001
Ethylbenzene		<0.013	mg/Kg	13	0.001
M,P,O-Xylene		<0.013	mg/Kg	13	0.001
Total BTEX		<0.013	mg/Kg	13	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.36	mg/Kg	13	0.10	104	72 - 128
4-BFB		1.19	mg/Kg	13	0.10	91	72 - 128

Sample: 170564 - 0105021710

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC11235 Date Analyzed: 5/15/01
Analyst: JS Preparation Method: N/A Prep Batch: PB09622 Date Prepared: 5/9/01

Param	Flag	Result	Units	Dilution	RDL
CL		<10	mg/Kg	1	0.50

Sample: 170564 - 0105021710

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC11015 Date Analyzed: 5/8/01
Analyst: JJ Preparation Method: N/A Prep Batch: PB09454 Date Prepared: 5/5/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		7500	mg/Kg	1	10

Sample: 170565 - 0105021720

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC11133 Date Analyzed: 5/11/01
Analyst: JW Preparation Method: E 5030B Prep Batch: PB09536 Date Prepared: 5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.013	mg/Kg	13	0.001
Toluene		<0.013	mg/Kg	13	0.001
Ethylbenzene		<0.013	mg/Kg	13	0.001
M,P,O-Xylene		<0.013	mg/Kg	13	0.001
Total BTEX		<0.013	mg/Kg	13	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.26	mg/Kg	13	0.10	96	72 - 128
4-BFB		1.08	mg/Kg	13	0.10	83	72 - 128

Sample: 170565 - 0105021720

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC11235 Date Analyzed: 5/15/01
Analyst: JS Preparation Method: N/A Prep Batch: PB09622 Date Prepared: 5/9/01

Param	Flag	Result	Units	Dilution	RDL
CL		<10	mg/Kg	1	0.50

Sample: 170565 - 0105021720

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC11015 Date Analyzed: 5/8/01
Analyst: JJ Preparation Method: N/A Prep Batch: PB09454 Date Prepared: 5/5/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		23900	mg/Kg	1	10

Sample: 170566 - 0105021800

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC11133	Date Analyzed:	5/11/01
Analyst:	JW	Preparation Method:	E 5030B	Prep Batch:	PB09536	Date Prepared:	5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.013	mg/Kg	13	0.001
Toluene		<0.013	mg/Kg	13	0.001
Ethylbenzene		<0.013	mg/Kg	13	0.001
M,P,O-Xylene		<0.013	mg/Kg	13	0.001
Total BTEX		<0.013	mg/Kg	13	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.3	mg/Kg	13	0.10	100	72 - 128
4-BFB		1.16	mg/Kg	13	0.10	89	72 - 128

Sample: 170566 - 0105021800

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC11235	Date Analyzed:	5/15/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB09622	Date Prepared:	5/9/01

Param	Flag	Result	Units	Dilution	RDL
CL		<50	mg/Kg	5	0.50

Sample: 170566 - 0105021800

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC11015	Date Analyzed:	5/8/01
Analyst:	JJ	Preparation Method:	N/A	Prep Batch:	PB09454	Date Prepared:	5/5/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		<10.0	mg/Kg	1	10

Sample: 170567 - 0105021830

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC11133	Date Analyzed:	5/11/01
Analyst:	JW	Preparation Method:	E 5030B	Prep Batch:	PB09536	Date Prepared:	5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.025	mg/Kg	25	0.001
Toluene		<0.025	mg/Kg	25	0.001
Ethylbenzene		<0.025	mg/Kg	25	0.001
M,P,O-Xylene		<0.025	mg/Kg	25	0.001
Total BTEX		<0.025	mg/Kg	25	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		2.43	mg/Kg	25	0.10	97	72 - 128
4-BFB		2.55	mg/Kg	25	0.10	102	72 - 128

Sample: 170567 - 0105021830

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC11235 Date Analyzed: 5/15/01
Analyst: JS Preparation Method: N/A Prep Batch: PB09622 Date Prepared: 5/9/01

Param	Flag	Result	Units	Dilution	RDL
CL		<50	mg/Kg	5	0.50

Sample: 170567 - 0105021830

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC11015 Date Analyzed: 5/8/01
Analyst: JJ Preparation Method: N/A Prep Batch: PB09454 Date Prepared: 5/5/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		20900	mg/Kg	1	10

Sample: 170568 - 0105021900

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC11295 Date Analyzed: 5/17/01
Analyst: RS Preparation Method: N/A Prep Batch: PB09662 Date Prepared: 5/17/01

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/Kg as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/Kg as CaCo3	1	1
Bicarbonate Alkalinity		138	mg/Kg as CaCo3	1	1
Total Alkalinity		138	mg/Kg as CaCo3	1	1

Sample: 170568 - 0105021900

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC11133 Date Analyzed: 5/11/01
Analyst: JW Preparation Method: E 5030B Prep Batch: PB09536 Date Prepared: 5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		1.06	mg/Kg	100	0.001
Toluene		2	mg/Kg	100	0.001
Ethylbenzene		<0.1	mg/Kg	100	0.001
M,P,O-Xylene		<0.1	mg/Kg	100	0.001
Total BTEX		3.06	mg/Kg	100	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		9.63	mg/Kg	100	0.10	96	72 - 128
4-BFB		11.1	mg/Kg	100	0.10	111	72 - 128

Sample: 170568 - 0105021900

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC11189 Date Analyzed: 5/9/01
Analyst: JS Preparation Method: N/A Prep Batch: PB09552 Date Prepared: 5/9/01

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		675	μMHOS/cm	1	

Sample: 170568 - 0105021900

Analysis:	Hg, Total	Analytical Method:	S 7471A	QC Batch:	QC11082	Date Analyzed:	5/10/01
Analyst:	SSC	Preparation Method:	N/A	Prep Batch:	PB09503	Date Prepared:	5/10/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

Sample: 170568 - 0105021900

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC11178	Date Analyzed:	5/10/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB09567	Date Prepared:	5/9/01

Param	Flag	Result	Units	Dilution	RDL
CL		<50	mg/Kg	5	0.50
Fluoride		9.11	mg/Kg	5	0.20
Nitrate-N		<5.0	mg/Kg	5	0.20
Sulfate		106	mg/Kg	5	0.50

Sample: 170568 - 0105021900

Analysis:	Salts	Analytical Method:	S 6010B	QC Batch:	QC12373	Date Analyzed:	6/27/01
Analyst:	LB	Preparation Method:	E 3005 A	Prep Batch:	PB10481	Date Prepared:	6/27/01

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		14.3	mg/Kg	1	0.50
Dissolved Magnesium		8.30	mg/Kg	1	0.50
Dissolved Potassium		9.47	mg/Kg	1	0.50
Dissolved Sodium		38.8	mg/Kg	1	0.50

Sample: 170568 - 0105021900

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC11259	Date Analyzed:	5/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB09621	Date Prepared:	5/15/01

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		27900	mg/Kg	20	10

Sample: 170568 - 0105021900

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC11015	Date Analyzed:	5/8/01
Analyst:	JJ	Preparation Method:	N/A	Prep Batch:	PB09454	Date Prepared:	5/5/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		16500	mg/Kg	1	10

Sample: 170568 - 0105021900

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC11123	Date Analyzed:	5/12/01
Analyst:	RR	Preparation Method:	E 3010A	Prep Batch:	PB09414	Date Prepared:	5/7/01

Continued ...

... *Continued* Sample: 170568 Analysis: Total Metals

Param	Flag	Result	Units	Dilution	RDL
Total Arsenic		<5	mg/Kg	1	5
Total Barium		14.8	mg/Kg	1	5
Total Cadmium		<2	mg/Kg	1	2
Total Chromium		<5	mg/Kg	1	5
Total Lead		<5	mg/Kg	1	5
Total Selenium		<5	mg/Kg	1	5
Total Silver		<1	mg/Kg	1	1

Sample: 170568 - 0105021900

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC11251	Date Analyzed:	5/9/01
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB09627	Date Prepared:	5/9/01

Param	Flag	Result	Units	Dilution	RDL
pH		8.7	s.u.	1	1

Quality Control Report
Method Blank

Method Blank

QCBatch: QC11015

Param	Flag	Results	Units	Reporting Limit
TRPHC		<10.0	mg/Kg	10

Method Blank

QCBatch: QC11082

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.19	mg/Kg	0.19

Method Blank

QCBatch: QC11123

Param	Flag	Results	Units	Reporting Limit
Total Arsenic		<5	mg/Kg	5
Total Barium		<5	mg/Kg	5
Total Cadmium		<2	mg/Kg	2
Total Chromium		<5	mg/Kg	5
Total Lead		<5	mg/Kg	5
Total Selenium		<5	mg/Kg	5
Total Silver		<1	mg/Kg	1

Method Blank

QCBatch: QC11133

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.013	mg/Kg	0.001
Toluene		<0.013	mg/Kg	0.001
Ethylbenzene		<0.013	mg/Kg	0.001
M,P,O-Xylene		<0.013	mg/Kg	0.001
Total BTEX		<0.013	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.27	mg/Kg	13	0.10	97	72 - 128
4-BFB		1.11	mg/Kg	13	0.10	85	72 - 128

Method Blank

QCBatch: QC11178

Param	Flag	Results	Units	Reporting Limit
CL		2.91	mg/Kg	0.50
Fluoride		<1.0	mg/Kg	0.20
Nitrate-N		<1.0	mg/Kg	0.20
Sulfate		7.89	mg/Kg	0.50

Method Blank QCBatch: QC11189

Param	Flag	Results	Units	Reporting Limit
Specific Conductance		6.77	μMHOS/cm	

Method Blank QCBatch: QC11235

Param	Flag	Results	Units	Reporting Limit
CL		2.99	mg/Kg	0.50

Method Blank QCBatch: QC11259

Param	Flag	Results	Units	Reporting Limit
Total Dissolved Solids		<10	mg/Kg	10

Method Blank QCBatch: QC11295

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/Kg as CaCo3	1
Carbonate Alkalinity		<1.0	mg/Kg as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/Kg as CaCo3	1
Total Alkalinity		<4.0	mg/Kg as CaCo3	1

Method Blank QCBatch: QC12373

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.5	mg/L	0.50
Dissolved Magnesium		<0.5	mg/L	0.50
Dissolved Potassium		<0.5	mg/L	0.50
Dissolved Sodium		<0.5	mg/L	0.50

Quality Control Report
Duplicate Samples

Duplicate

QCBatch: QC11189

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance		2875	2870	μMHOS/cm	1	0	6.1

Duplicate

QCBatch: QC11251

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH		7.5	7.5	s.u.	1	0	0.85

Duplicate

QCBatch: QC11295

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/Kg as CaCo3	1	0	7
Carbonate Alkalinity		<1.0	<1.0	mg/Kg as CaCo3	1	0	7
Bicarbonate Alkalinity	[1]	22	16	mg/Kg as CaCo3	1	31	7
Total Alkalinity		22	16	mg/Kg as CaCo3	1	31	7

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC11015

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
TRPHC	276	252	mg/Kg	1	250	<10.0	110	9	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC11082

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	2.55	2.55	mg/Kg	1	2.50	<0.19	102	0	83 - 124	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC11123

[1] Sample RPD was above acceptable control limits

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Arsenic	60.60	61.20	mg/Kg	1	50	<5	121	0	80 - 120	20
Total Barium	110	111	mg/Kg	1	100	<5	110	0	80 - 120	20
Total Cadmium	27.3	27.40	mg/Kg	1	25	<2	109	0	80 - 120	20
Total Chromium	11	11	mg/Kg	1	10	<5	110	0	80 - 120	20
Total Lead	55.4	55.1	mg/Kg	1	50	<5	110	0	80 - 120	20
Total Selenium	48.50	48.3	mg/Kg	1	50	<5	97	0	80 - 120	20
Total Silver	[2] 4.57	4.64	mg/Kg	1	12.50	<1	36	1	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC11133

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	1.28	1.19	mg/Kg	13	0.10	<0.013	98	7	80 - 120	20
Benzene	1.33	1.29	mg/Kg	13	0.10	<0.013	102	3	80 - 120	20
Toluene	1.25	1.23	mg/Kg	13	0.10	<0.013	96	1	80 - 120	20
Ethylbenzene	1.22	1.2	mg/Kg	13	0.10	<0.013	93	1	80 - 120	20
M,P,O-Xylene	3.7	3.62	mg/Kg	13	0.30	<0.013	94	2	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	1.3	1.25	mg/Kg	13	0.10	100	96	72 - 128
4-BFB	1.23	1.19	mg/Kg	13	0.10	94	91	72 - 128

Laboratory Control Spikes

QCBatch: QC11178

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Bromide	2.59	2.61	mg/Kg	1	2.50	<1.0	103	0	90 - 110	20
CL	[3] 14.16	[4] 14.21	mg/Kg	1	12.50	2.91	113	0	90 - 110	20
Fluoride	[5] 2.73	[6] 2.73	mg/Kg	1	2.50	<1.0	109	0	90 - 110	20
Nitrate-N	[7] 2.56	[8] 2.55	mg/Kg	1	2.50	<1.0	102	0	90 - 110	20
Sulfate	[9] 19.71	[10] 20.02	mg/Kg	1	12.50	7.89	157	1	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC11235

[2]Matrix spike and LCS recoveries were low on Ag due to the Ag falling out of solutions.
[3]Sample master doesn't subtract the blank from the spikes. The correct %EA = 90.
[4]Sample master doesn't subtract the blank from the spikes. The correct %EA = 90.
[5]Sample master doesn't subtract the blank from the spikes. The correct %EA = 109.
[6]Sample master doesn't subtract the blank from the spikes. The correct %EA = 109.
[7]Sample master doesn't subtract the blank from the spikes. The correct %EA = 102.
[8]Sample master doesn't subtract the blank from the spikes. The correct %EA = 102.
[9]Sample master doesn't subtract the blank from the spikes. The correct %EA = 95.
[10]Sample master doesn't subtract the blank from the spikes. The correct %EA = 97.

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	[11] 14.41	[12] 14.40	mg/Kg	1	12.50	2.99	115	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC12373

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	100	102	mg/L	1	100	<0.5	100	1	75 - 125	20
Dissolved Magnesium	95.9	99.3	mg/L	1	100	<0.5	95	3	75 - 125	20
Dissolved Potassium	97.4	99.4	mg/L	1	100	<0.5	97	2	75 - 125	20
Dissolved Sodium	94.9	99.1	mg/L	1	100	<0.5	94	4	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC11015

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
TRPHC	255	271	mg/Kg	1	250	<10.0	102	6	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC11082

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	2.43	2.55	mg/Kg	1	2.50	<0.19	97	4	83 - 124	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC11123

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Arsenic	57.5	58.3	mg/Kg	1	50	<5	115	1	75 - 125	20
Total Barium	211	196	mg/Kg	1	100	88.6	122	13	75 - 125	20
Total Cadmium	26.4	26.4	mg/Kg	1	25	<2	105	0	75 - 125	20

Continued ...

[11] Sample master doesn't subtract the blank from the spikes. The correct %EA = 91.
[12] Sample master doesn't subtract the blank from the spikes. The correct %EA = 91.

... Continued

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Chromium	[13] 24.3	[14] 23	mg/Kg	1	10	11	133	10	75 - 125	20
Total Lead	74.3	78.5	mg/Kg	1	50	29.3	90	8	75 - 125	20
Total Selenium	39	40.6	mg/Kg	1	50	<5	78	4	75 - 125	20
Total Silver	[15] 4.67	4.67	mg/Kg	1	12.50	<1	37	0	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC11133

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Benzene	0.744	0.968	mg/Kg	13	0.10	<0.013	57	177	80 - 120	20
Toluene	0.729	0.969	mg/Kg	13	0.10	<0.013	56	178	80 - 120	20
Ethylbenzene	0.682	0.918	mg/Kg	13	0.10	<0.013	52	178	80 - 120	20
M,P,O-Xylene	2	2.696	mg/Kg	13	0.30	<0.013	51	178	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.976	1.254	mg/Kg	13	0.10	75	96	72 - 128
4-BFB	1.05	1.261	mg/Kg	13	0.10	80	97	72 - 128

Matrix Spikes

QCBatch: QC11178

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	1435.61	1437.97	mg/Kg	1	625	863	91	0	70 - 115	20
Fluoride	[16] 122.26	[17] 126.20	mg/Kg	1	125	<5.0	97	3	77 - 111	20
Nitrate-N	[18] 126.15	[19] 127.18	mg/Kg	1	125	<5.0	100	0	80 - 112	20
Sulfate	[20] 675.59	[21] 682.15	mg/Kg	1	625	53.5	99	1	74 - 118	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC11235

[13]Poor spike recovery due to matrix difficulties. LCS/LCSD show analysis in control.
[14]Poor spike recovery due to matrix difficulties. LCS/LCSD show analysis in control.
[15]Matrix spike and LCS recoveries were low on Ag due to the Ag falling out of solutions.
[16]I spiked the * 50 dilution for 170574, but reported the *5 dilution. The correct %EA = 92.
[17]I spiked the * 50 dilution for 170574, but reported the *5 dilution.
[18]I spiked the * 50 dilution for 170574, but reported the *5 dilution.
[19]I spiked the * 50 dilution for 170574, but reported the *5 dilution.
[20]I spiked the * 50 dilution for 170574, but reported the *5 dilution. The correct %EA = 96.
[21]I spiked the * 50 dilution for 170574, but reported the *5 dilution.

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	773.57	771.37	mg/Kg	1	250	520	101	0	70 - 115	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC12373

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	111	109	mg/L	1	100	14.3	96	2	75 - 125	20
Dissolved Magnesium	99.6	97.6	mg/L	1	100	8.30	91	2	75 - 125	20
Dissolved Potassium	103	100	mg/L	1	100	9.47	93	3	75 - 125	20
Dissolved Sodium	132	127	mg/L	1	100	38.8	93	5	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC11015

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	98.1	98	75 - 125	5/8/01

CCV (2)

QCBatch: QC11015

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	104	104	75 - 125	5/8/01

ICV (1)

QCBatch: QC11015

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	98.6	98	75 - 125	5/8/01

CCV (1)

QCBatch: QC11082

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/Kg	0.005	0.00492	98	80 - 120	5/10/01

ICV (1)

QCBatch: QC11082

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/Kg	0.005	0.00513	102	80 - 120	5/10/01

CCV (1)

QCBatch: QC11123

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/L	1	1.07	107	90 - 110	5/12/01
Total Barium		mg/L	2	2.09	104	90 - 110	5/12/01
Total Cadmium		mg/L	0.50	0.531	106	90 - 110	5/12/01
Total Chromium		mg/L	0.20	0.209	104	90 - 110	5/12/01
Total Lead		mg/L	1	1.05	105	90 - 110	5/12/01
Total Selenium		mg/L	1	1.04	104	90 - 110	5/12/01
Total Silver		mg/L	0.25	0.251	100	90 - 110	5/12/01

ICV (1)

QCBatch: QC11123

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/L	1	1.03	103	90 - 110	5/12/01
Total Barium		mg/L	2	2	100	90 - 110	5/12/01
Total Cadmium		mg/L	0.50	0.501	100	90 - 110	5/12/01
Total Chromium		mg/L	0.20	0.20	100	90 - 110	5/12/01
Total Lead		mg/L	1	1	100	90 - 110	5/12/01
Total Selenium		mg/L	1	1	100	90 - 110	5/12/01
Total Silver		mg/L	0.25	0.249	99	90 - 110	5/12/01

CCV (1)

QCBatch: QC11133

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.106	106	85 - 115	5/11/01
Benzene		mg/Kg	0.10	0.103	103	85 - 115	5/11/01
Toluene		mg/Kg	0.10	0.0977	97	85 - 115	5/11/01
Ethylbenzene		mg/Kg	0.10	0.0921	92	85 - 115	5/11/01
M,P,O-Xylene		mg/Kg	0.30	0.272	90	85 - 115	5/11/01

CCV (2)

QCBatch: QC11133

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.0985	98	85 - 115	5/11/01
Benzene		mg/Kg	0.10	0.0988	98	85 - 115	5/11/01
Toluene		mg/Kg	0.10	0.0916	91	85 - 115	5/11/01
Ethylbenzene		mg/Kg	0.10	0.0884	88	85 - 115	5/11/01
M,P,O-Xylene		mg/Kg	0.30	0.265	88	85 - 115	5/11/01

ICV (1)

QCBatch: QC11133

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.102	102	85 - 115	5/11/01
Benzene		mg/Kg	0.10	0.103	103	85 - 115	5/11/01
Toluene		mg/Kg	0.10	0.0985	98	85 - 115	5/11/01
Ethylbenzene		mg/Kg	0.10	0.0972	97	85 - 115	5/11/01
M,P,O-Xylene		mg/Kg	0.30	0.29	96	85 - 115	5/11/01

CCV (1)

QCBatch: QC11178

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.61	104	90 - 110	5/10/01
CL		mg/L	12.50	11.71	93	90 - 110	5/10/01
Fluoride		mg/L	2.50	2.41	96	90 - 110	5/10/01
Nitrate-N		mg/L	2.50	2.43	97	90 - 110	5/10/01
Sulfate		mg/L	12.50	12.02	96	90 - 110	5/10/01

ICV (1)

QCBatch: QC11178

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.52	100	90 - 110	5/10/01
CL		mg/L	12.50	11.82	94	90 - 110	5/10/01
Fluoride		mg/L	2.50	2.56	102	90 - 110	5/10/01
Nitrate-N		mg/L	2.50	2.43	97	90 - 110	5/10/01
Sulfate		mg/L	12.50	12.24	97	90 - 110	5/10/01

CCV (1)

QCBatch: QC11189

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		µMHOS/cm	1412	1388	98	90 - 110	5/9/01

ICV (1) QCBatch: QC11189

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		µMHOS/cm	1411	1397	99	90 - 110	5/9/01

CCV (1) QCBatch: QC11235

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.96	95	90 - 110	5/15/01

ICV (1) QCBatch: QC11235

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	12.47	99	90 - 110	5/15/01

CCV (1) QCBatch: QC11251

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	-0.1 s.u. - +0.1 s.u.	5/9/01

ICV (1) QCBatch: QC11251

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	-0.1 s.u. - +0.1 s.u.	5/9/01

CCV (1) QCBatch: QC11295

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/Kg as CaCo3	0	<1.0	0	90 - 110	5/17/01
Carbonate Alkalinity		mg/Kg as CaCo3	0	236	0	90 - 110	5/17/01
Bicarbonate Alkalinity		mg/Kg as CaCo3	0	10	0	90 - 110	5/17/01
Total Alkalinity		mg/Kg as CaCo3	250	246	98	90 - 110	5/17/01

ICV (1)

QCBatch: QC11295

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/Kg as CaCo3	0	<1.0	0	90 - 110	5/17/01
Carbonate Alkalinity		mg/Kg as CaCo3	0	228	0	90 - 110	5/17/01
Bicarbonate Alkalinity		mg/Kg as CaCo3	0	18	0	90 - 110	5/17/01
Total Alkalinity		mg/Kg as CaCo3	250	246	98	90 - 110	5/17/01

CCV (1)

QCBatch: QC12373

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.4	101	90 - 110	6/27/01
Dissolved Magnesium		mg/L	25	24.9	99	90 - 110	6/27/01
Dissolved Potassium		mg/L	25	24.4	97	90 - 110	6/27/01
Dissolved Sodium		mg/L	25	24.5	98	90 - 110	6/27/01

ICV (1)

QCBatch: QC12373

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.2	100	95 - 105	6/27/01
Dissolved Magnesium		mg/L	25	25.4	101	95 - 105	6/27/01
Dissolved Potassium		mg/L	25	24.7	98	95 - 105	6/27/01
Dissolved Sodium		mg/L	25	24.8	99	95 - 105	6/27/01

170563-68

Page 1 of 1

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A01050432

Company Name: OIL CONSERVATION DIV Phone #: 505-476-3487

Address: (Street, City, Zip) 1220 S SAINT FRANCIS DR (SF) NM 87505 Fax #: SANTA FE

Contact Person: WAYNE PRICE

Invoice to: (If different from above)

Project #: Project Name: J ANTHONY RANCH

Project Location: SEC 36-25S-36E Sampler Signature: Wayne Price

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	NaHSO4	H2SO4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
170563	0105021700	1	40Z		X								X			
64	010502 1710	1	"		X								X			
65	010502 1720	1	"		X								X			
66	010502 1800	1	"		X								X			
67	010502 1830	1	"		X								X			
68	010502 1900	1	"		X								X			

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC-MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CHLORIDES	GEN CHEM			Turn Around Time if different from standard	Hold
	X	X												X	X	X				
	X	X												X	X	X				
	X	X												X	X	X				
	X	X												X	X	X				
	X	X												X	X	X				
	X	X		X										X	X	X				

Relinquished by: WAYNE PRICE Date: 5/3/01 Time: 10:15AM Received by: Date: Time:

Relinquished by: Date: Time: Received by: Date: Time:

Relinquished by: Date: Time: Received at Laboratory by: Mell Green Date: 5-4-01 Time: 10:00am

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

LAB USE ONLY

Intact Y / N

Headspace Y / N

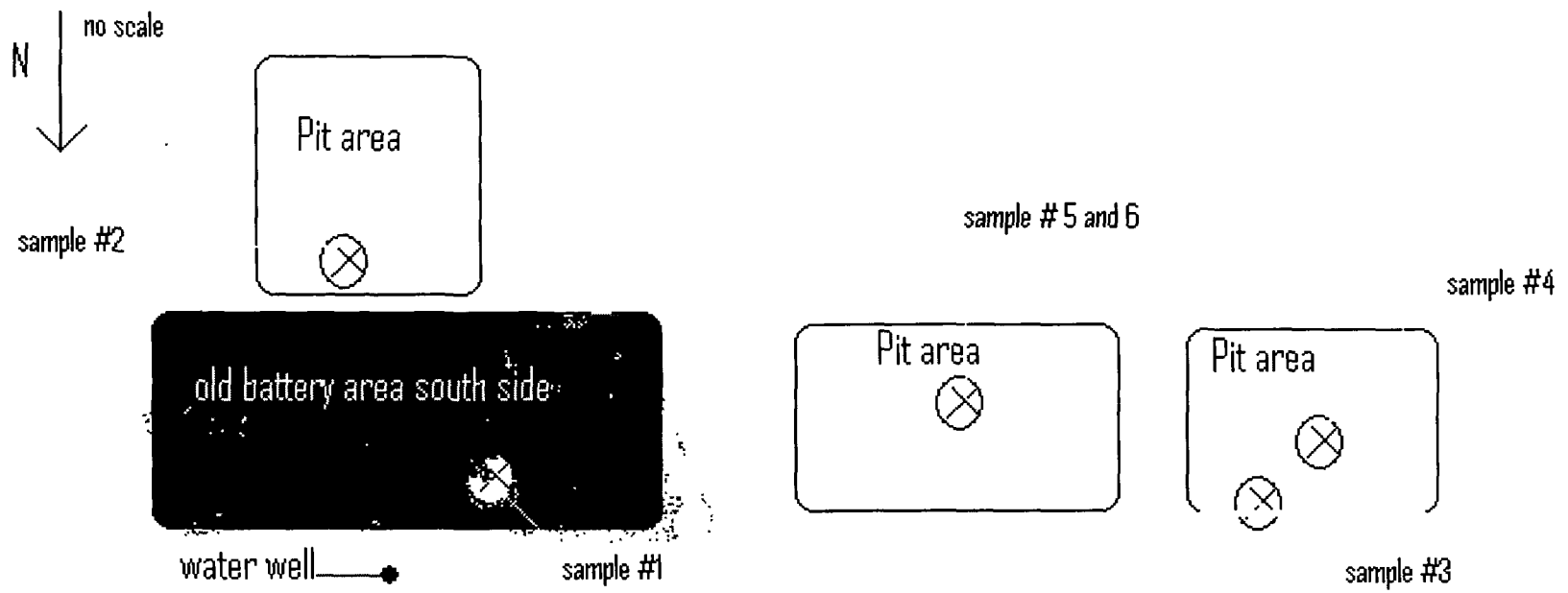
Temp 0 °

Log-in Review

Carrier # Bus 902 591 4139

REMARKS:

X DELETE 7/5/01



Jay Anthony Ranch- Humble State #3 Tank Battery Site Unit A-Sec 36-Ts25s-R36e

- COC attached- Project name: J Anthony Ranch Project Location: sec 36-25s-36e

- Sample #1 (0105021700) collected from 0-12" deep; located 45 feet SW of water well.
  Sample #2 (0105021710) collected from 0-12" deep; located 255 feet SSE of water well.
  Sample #3 (0105021720) surface sample; located 345 feet west and 51 feet south of water well.
  Sample #4 (0105021800) collected from 4 feet deep; located 363 feet west and 99 feet south of water well.
  Sample #5 (0105021830) collected from 3-4 feet deep; Sample #6 (0105021900) collected from 6-8 feet deep; located 237 feet west and 120 feet south of water

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

April 11, 2001

CERTIFIED MAIL
RETURN RECEIPT NO: 5051-4294

Mr. Joe Pulido
Maralo, LLC
P.O. Box 832
Midland, Texas 79702-0832

RE: ABATEMENT PLAN AP-26
HUMBLE STATE #3 TANK BATTERY SITE
JAL, NEW MEXICO

Dear Mr. Pulido:

The New Mexico Oil Conservation Division (OCD) has reviewed Maralo, LLC's (Maralo) December 15, 2000 correspondence titled "HUMBLE STATE #3 TANK BATTERY SITE, LEA COUNTY, NEW MEXICO". This document declines to submit a plan to investigate the extent of contamination at the site of the former Maralo Humble State #3 Tank Battery located in Unit A, Section 36, Township 25 South, Range 36 East as required in the OCD's November 22, 2000 correspondence with Maralo.

OCD investigations at the site have shown that ground water directly underlying Maralo's former Humble State #3 Tank Battery site is contaminated with chlorides and total dissolved solids (TDS) in concentrations in excess of the New Mexico Water Quality Control Commission standards. Chlorides and TDS are constituents of oilfield wastes and OCD inspections have shown that 3 unlined pits were used to dispose of oilfield wastes at the site. Therefore, the OCD requires that Maralo submit an abatement plan for the Humble State #3 Tank Battery site to investigate and, if necessary, remediate ground water pollution pursuant to OCD Rule 19.C.1. To initiate the abatement plan process, the OCD requires that Maralo submit to the OCD by June 11, 2001 a Stage 1 Investigation Proposal pursuant to OCD Rule 19.E.1. and 19.E.3. The Stage 1 Investigation Proposal shall be submitted to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office. Failure to submit an abatement plan will result in further enforcement actions.

If you have any questions, please contact Bill Olson at (505) 827-7154.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

xc: Chris Williams, OCD Hobbs District Office
Jay Anthony

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

November 22, 2000

Mr. Jay Anthony
P.O. Box 398
Jal, New Mexico 88252

RE: WATER WELL SAMPLE ANALYSES

Dear Mr. Anthony:

Enclosed you will find a copy of the laboratory analytical results of the water samples that the New Mexico Oil Conservation Division (OCD) obtained from your water well southwest of Jal, New Mexico on September 28, 2000. The sample analyses did not detect any petroleum hydrocarbon contaminants in the well water. However, elevated levels of chloride and total dissolved solids were found to be present in the water. Chloride was present at a concentration of 460 mg/l which is above the New Mexico Water Quality Control Commission (WQCC) drinking water standard of 250 mg/l. Total dissolved solids were found to be present at a concentration of 1400 mg/l which is above the WQCC standard of 1000 mg/l for drinking water. It is possible that these salts are a result of oilfield activities due to the proximity of this water well to adjacent former oilfield waste pits.

The OCD is continuing to investigate the possibility that your wells are contaminated as a result of adjacent oilfield disposal activities and the OCD will copy you on all correspondence that they send out regarding this matter. If you have any questions regarding the laboratory analyses of your water or the OCD's investigations, please feel free to call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

Enclosure

xc w/enclosure: Chris Williams, OCD Hobbs District Supervisor
Phillip Smith, Maralo, LLC

9/28/00 Jay Anthony - Maralowe Well

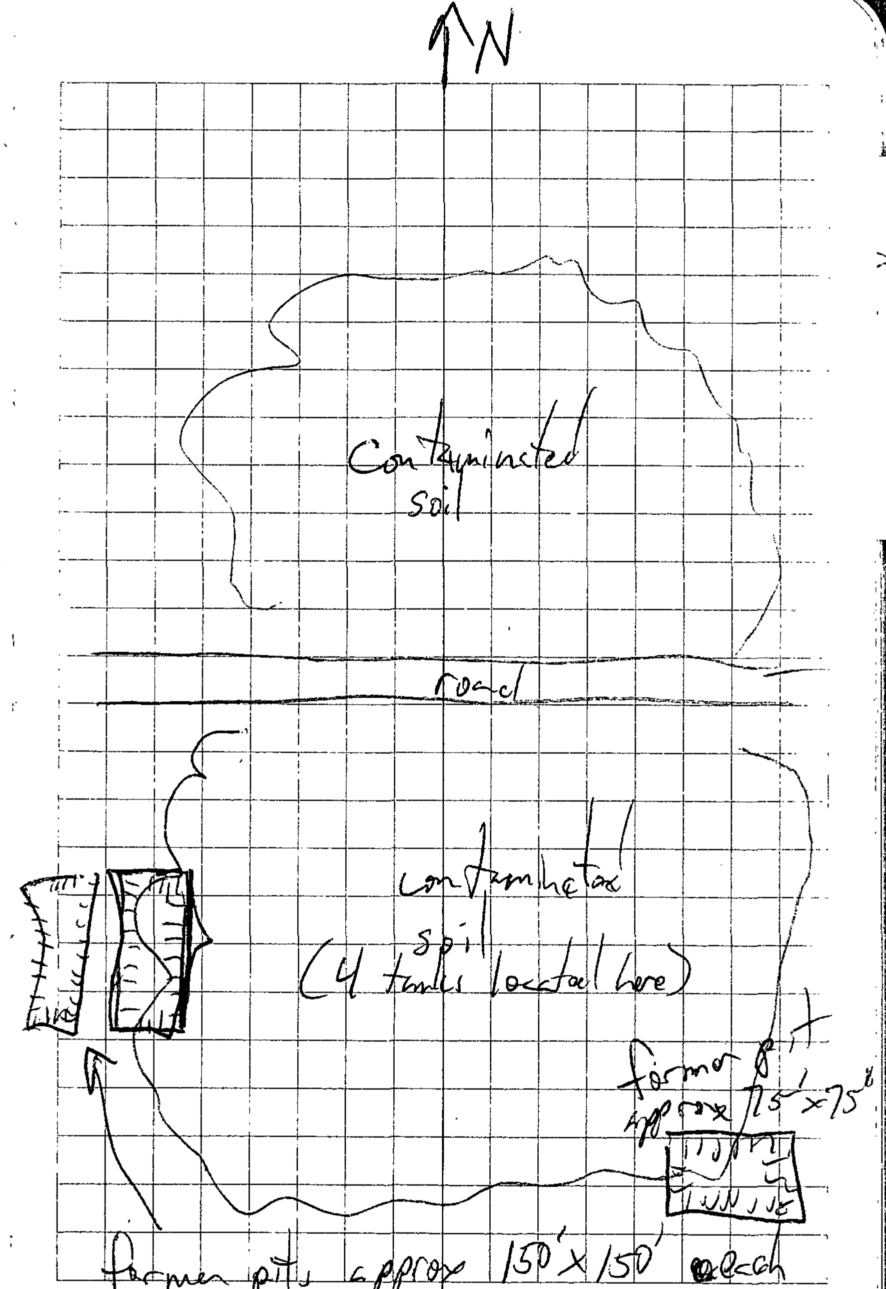
arrived at 0300 with Wayne Price
met with Mr. Anthony
Former Maralowe Humble State
tank battery

P.O. 398
Jal NM 88252

DTW = 193'
TD ≈ 250'

extensive oil contamination of
surface soils
area was disced
water well previously sampled by
Eddie Seay, contaminated
Sampled water well, submersible pump
let run for 5-10 min.
sample id = 0009281600

Samples = 8021
cations/anions
metals



former pits on site

3 pits,
1 - south of battery area
2 - west of battery area

pits appear to be closed
by filling with dirt

Battery operated from 1940's
to 1970

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

RECEIVED

OCT 23 2000

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Bill Olson
OCD
2040 S. Pacheco
Santa Fe, NM 87505

Report Date: October 18, 2000

Order ID Number: A00100222

Project Number: N/A
Project Name: Jay Anthony
Project Location: Maralo #2

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
154674	0009281600 Anthony	Water	9/28/00	16:00	9/30/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 16 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical and Quality Control Report

Sample: 154674 - 0009281600 Anthony

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC05424	Date Analyzed:	10/6/00
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB04729	Date Prepared:	10/6/00

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		298	mg/L as CaCo3	1	1
Total Alkalinity		298	mg/L as CaCo3	1	1

Sample: 154674 - 0009281600 Anthony

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC05603	Date Analyzed:	10/11/00
Analyst:	RC	Preparation Method:	5035	Prep Batch:	PB04891	Date Prepared:	10/11/00

Param	Flag	Result	Units	Dilution	RDL
MTBE		<0.001	mg/L	1	0.001
Benzene		<0.001	mg/L	1	0.001
Toluene		<0.001	mg/L	1	0.001
Ethylbenzene		<0.001	mg/L	1	0.001
M,P,O-Xylene		<0.001	mg/L	1	0.001
Total BTEX		<0.001	mg/L	1	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.055	mg/L	1	0.10	55	72 - 128
4-BFB		0.053	mg/L	1	0.10	53	72 - 128

Sample: 154674 - 0009281600 Anthony

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC05257	Date Analyzed:	10/2/00
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB04587	Date Prepared:	10/2/00

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		2300	uMHOS/cm	1	

Sample: 154674 - 0009281600 Anthony

Analysis:	Dissolved Metals	Analytical Method:	E 200.7	QC Batch:	QC05668	Date Analyzed:	10/4/00
Analyst:	RR	Preparation Method:	E 3005A	Prep Batch:	PB04956	Date Prepared:	10/2/00

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		112	mg/L	1	1
Dissolved Magnesium		91	mg/L	1	1
Dissolved Potassium		24	mg/L	1	1
Dissolved Sodium		297	mg/L	1	1

Sample: 154674 - 0009281600 Anthony

Analysis: Hg, Total Analytical Method: S 7470A QC Batch: QC05673 Date Analyzed: 10/13/00
Analyst: MS Preparation Method: N/A Prep Batch: PB04964 Date Prepared: 10/2/00

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 154674 - 0009281600 Anthony

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC05456 Date Analyzed: 10/2/00
Analyst: JS Preparation Method: N/A Prep Batch: PB04739 Date Prepared: 10/2/00

Param	Flag	Result	Units	Dilution	RDL
CL		460	mg/L	1	0.50
Fluoride		2.5	mg/L	1	0.20
Nitrate-N	[1]	<1.0	mg/L	1	0.20
Sulfate		250	mg/L	1	0.50

Sample: 154674 - 0009281600 Anthony

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC05422 Date Analyzed: 10/5/00
Analyst: RS Preparation Method: N/A Prep Batch: PB04731 Date Prepared: 10/4/00

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		1400	mg/L	1	10

Sample: 154674 - 0009281600 Anthony

Analysis: Total Metals Analytical Method: S 6010B QC Batch: QC05669 Date Analyzed: 10/6/00
Analyst: RR Preparation Method: E 3010A Prep Batch: PB04649 Date Prepared: 10/5/00

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		1.9	mg/L	1	0.50
Total Arsenic		<0.05	mg/L	1	0.05
Total Barium		<0.10	mg/L	1	0.10
Total Boron		0.61	mg/L	1	0.50
Total Cadmium		<0.01	mg/L	1	0.01
Total Chromium		<0.01	mg/L	1	0.01
Total Cobalt		<0.05	mg/L	1	0.05
Total Copper		<0.10	mg/L	1	0.10
Total Iron		1.8	mg/L	1	0.10
Total Lead		<0.01	mg/L	1	0.01
Total Manganese		0.42	mg/L	1	0.01
Total Molybdenum		<0.01	mg/L	1	0.01
Total Nickel		<0.01	mg/L	1	0.01
Total Selenium		<0.05	mg/L	1	0.05
Total Silver		<0.01	mg/L	1	0.01
Total Zinc		<0.10	mg/L	1	0.10

[1] Sample came in already out of holding time for NO3.

Sample: 154674 - 0009281600 Anthony

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC05321	Date Analyzed:	10/2/00
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB04641	Date Prepared:	10/2/00

Param	Flag	Result	Units	Dilution	RDL
pH	[2]	7.4	s.u.	1	1

Quality Control Report
Method Blank

Sample: Method Blank QCBatch: QC05257

Param	Flag	Results	Units	Reporting Limit
Specific Conductance		3.4	uMHOS/cm	

Sample: Method Blank QCBatch: QC05422

Param	Flag	Results	Units	Reporting Limit
Total Dissolved Solids		<10	mg/L	10

Sample: Method Blank QCBatch: QC05424

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	1
Total Alkalinity		<4.0	mg/L as CaCo3	1

Sample: Method Blank QCBatch: QC05456

Param	Flag	Results	Units	Reporting Limit
CL		<0.5	mg/L	0.50
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.5	mg/L	0.20
Sulfate		<0.5	mg/L	0.50

[2]The sample was received out of holding time.

Sample: Method Blank QCBatch: QC05603

Param	Flag	Results	Units	Reporting Limit
MTBE		<0.001	mg/L	0.001
Benzene		<0.001	mg/L	0.001
Toluene		<0.001	mg/L	0.001
Ethylbenzene		<0.001	mg/L	0.001
M,P,O-Xylene		<0.001	mg/L	0.001
Total BTEX		<0.001	mg/L	0.001

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
TFT		0.088	mg/L	0.10	88	72 - 128
4-BFB		0.092	mg/L	0.10	92	72 - 128

Sample: Method Blank QCBatch: QC05668

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<1.0	mg/L	1
Dissolved Magnesium		<1.0	mg/L	1
Dissolved Potassium		<1.0	mg/L	1
Dissolved Sodium		<1.0	mg/L	1

Sample: Method Blank QCBatch: QC05669

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.50	mg/L	0.50
Total Arsenic		<0.05	mg/L	0.05
Total Barium		<0.10	mg/L	0.10
Total Boron		<0.50	mg/L	0.50
Total Cadmium		<0.01	mg/L	0.01
Total Chromium		<0.01	mg/L	0.01
Total Cobalt		<0.05	mg/L	0.05
Total Copper		<0.10	mg/L	0.10
Total Iron		<0.10	mg/L	0.10
Total Lead		<0.01	mg/L	0.01
Total Manganese		<0.01	mg/L	0.01
Total Molybdenum		<0.01	mg/L	0.01
Total Nickel		<0.01	mg/L	0.01
Total Selenium		<0.05	mg/L	0.05
Total Silver		<0.01	mg/L	0.01
Total Zinc		<0.10	mg/L	0.10

Sample: Method Blank QCBatch: QC05673

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Sample: LCS QC Batch: QC05603

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		0.093	mg/L	1	0.10	<0.001	93		80 - 120	20
Benzene		0.092	mg/L	1	0.10	<0.001	92		80 - 120	20
Toluene		0.092	mg/L	1	0.10	<0.001	92		80 - 120	20
Ethylbenzene		0.093	mg/L	1	0.10	<0.001	93		80 - 120	20
M,P,O-Xylene		0.279	mg/L	1	0.30	<0.001	93		80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		0.089	mg/L	1	0.10	89	72 - 128
4-BFB		0.09	mg/L	1	0.10	90	72 - 128

Sample: LCSD QC Batch: QC05603

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
MTBE		0.102	mg/L	1	0.10	<0.001	102	9	80 - 120	20
Benzene		0.101	mg/L	1	0.10	<0.001	101	9	80 - 120	20
Toluene		0.101	mg/L	1	0.10	<0.001	101	9	80 - 120	20
Ethylbenzene		0.104	mg/L	1	0.10	<0.001	104	11	80 - 120	20
M,P,O-Xylene		0.309	mg/L	1	0.30	<0.001	103	10	80 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
TFT		0.098	mg/L	1	0.10	98	72 - 128
4-BFB		0.1	mg/L	1	0.10	100	72 - 128

Sample: LCS QC Batch: QC05668

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1069	mg/L	1	1000	<1.0	106		75 - 125	20
Dissolved Magnesium		1062	mg/L	1	1000	<1.0	106		75 - 125	20
Dissolved Potassium		1062	mg/L	1	1000	<1.0	106		75 - 125	20
Dissolved Sodium		1033	mg/L	1	1000	<1.0	103		75 - 125	20

Sample: LCSD QC Batch: QC05668

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1079	mg/L	1	1000	<1.0	107	1	75 - 125	20
Dissolved Magnesium		1036	mg/L	1	1000	<1.0	103	2	75 - 125	20
Dissolved Potassium		1095	mg/L	1	1000	<1.0	109	3	75 - 125	20
Dissolved Sodium		1013	mg/L	1	1000	<1.0	101	2	75 - 125	20

Sample: LCS QC Batch: QC05669

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		1.98	mg/L	1	2	<0.50	99		75 - 125	20
Total Arsenic		0.96	mg/L	1	1	<0.05	96		75 - 125	20
Total Barium		2.08	mg/L	1	2	<0.10	104		75 - 125	20
Total Boron		1.08	mg/L	1	1	<0.50	108		75 - 125	20
Total Cadmium		0.20	mg/L	1	0.20	<0.01	100		75 - 125	20
Total Chromium		0.42	mg/L	1	0.40	<0.01	105		75 - 125	20
Total Cobalt		1.02	mg/L	1	1	<0.05	102		75 - 125	20
Total Copper		0.40	mg/L	1	0.40	<0.10	100		75 - 125	20
Total Iron		2.08	mg/L	1	2	<0.10	104		75 - 125	20
Total Lead		1.01	mg/L	1	1	<0.01	101		75 - 125	20
Total Manganese		0.21	mg/L	1	0.20	<0.01	105		75 - 125	20
Total Molybdenum		1.06	mg/L	1	1	<0.01	106		75 - 125	20
Total Nickel		0.98	mg/L	1	1	<0.01	98		75 - 125	20
Total Selenium		0.87	mg/L	1	1	<0.05	87		75 - 125	20
Total Silver		0.20	mg/L	1	0.20	<0.01	100		75 - 125	20
Total Zinc		0.23	mg/L	1	0.20	<0.10	115		75 - 125	20

Sample: LCSD QC Batch: QC05669

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		2.01	mg/L	1	2	<0.50	100	2	75 - 125	20
Total Arsenic		0.94	mg/L	1	1	<0.05	94	2	75 - 125	20

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Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Barium		2.04	mg/L	1	2	<0.10	102	2	75 - 125	20
Total Boron		1.17	mg/L	1	1	<0.50	117	8	75 - 125	20
Total Cadmium		0.20	mg/L	1	0.20	<0.01	100	0	75 - 125	20
Total Chromium		0.41	mg/L	1	0.40	<0.01	102	2	75 - 125	20
Total Cobalt		1.01	mg/L	1	1	<0.05	101	1	75 - 125	20
Total Copper		0.40	mg/L	1	0.40	<0.10	100	0	75 - 125	20
Total Iron		2.04	mg/L	1	2	<0.10	102	2	75 - 125	20
Total Lead		0.98	mg/L	1	1	<0.01	98	3	75 - 125	20
Total Manganese		0.20	mg/L	1	0.20	<0.01	100	5	75 - 125	20
Total Molybdenum		1.03	mg/L	1	1	<0.01	103	3	75 - 125	20
Total Nickel		0.97	mg/L	1	1	<0.01	97	1	75 - 125	20
Total Selenium		0.86	mg/L	1	1	<0.05	86	1	75 - 125	20
Total Silver		0.20	mg/L	1	0.20	<0.01	100	0	75 - 125	20
Total Zinc		0.24	mg/L	1	0.20	<0.10	120	4	75 - 125	20

Sample: LCS QC Batch: QC05673

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00081	mg/L	1	0.001	<0.0002	81		80 - 120	20

Sample: LCSD QC Batch: QC05673

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00085	mg/L	1	0.001	<0.0002	85	5	80 - 120	20

Quality Control Report
Matrix Spikes and Duplicate Spikes

Sample: MS QC Batch: QC05456

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		987.91	mg/L	1	625	460	84		80 - 120	20
Fluoride		123.62	mg/L	1	125	2.5	96		80 - 120	20
Nitrate-N		122.13	mg/L	1	125	<1.0	97		80 - 120	20
Sulfate		846.21	mg/L	1	625	250	95		80 - 120	20

Sample: MSD QC Batch: QC05456

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		991.26	mg/L	1	625	460	85	1	80 - 120	20
Fluoride		123.68	mg/L	1	125	2.5	96	0	80 - 120	20
Nitrate-N		120.50	mg/L	1	125	<1.0	96	1	80 - 120	20
Sulfate		834.07	mg/L	1	625	250	93	2	80 - 120	20

Sample: MS QC Batch: QC05668

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1128	mg/L	1	1000	63	106		75 - 125	20
Dissolved Magnesium		1071	mg/L	1	1000	14	105		75 - 125	20
Dissolved Potassium		1128	mg/L	1	1000	11	111		75 - 125	20
Dissolved Sodium		1085	mg/L	1	1000	37	104		75 - 125	20

Sample: MSD QC Batch: QC05668

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Dissolved Calcium		1127	mg/L	1	1000	63	106	0	75 - 125	20
Dissolved Magnesium		1058	mg/L	1	1000	14	104	1	75 - 125	20
Dissolved Potassium		1117	mg/L	1	1000	11	110	1	75 - 125	20
Dissolved Sodium		1078	mg/L	1	1000	37	104	1	75 - 125	20

Sample: MS QC Batch: QC05669

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		2.14	mg/L	1	2	<0.50	107		75 - 125	20
Total Arsenic		0.89	mg/L	1	1	<0.05	89		75 - 125	20
Total Barium		1.92	mg/L	1	2	0.16	88		75 - 125	20
Total Boron		1.37	mg/L	1	1	0.57	80		75 - 125	20
Total Cadmium		0.17	mg/L	1	0.20	<0.01	85		75 - 125	20
Total Chromium		0.35	mg/L	1	0.40	<0.01	87		75 - 125	20
Total Cobalt		0.83	mg/L	1	1	<0.05	83		75 - 125	20
Total Copper		0.36	mg/L	1	0.40	<0.10	90		75 - 125	20
Total Iron		1.77	mg/L	1	2	<0.10	88		75 - 125	20
Total Lead		0.81	mg/L	1	1	<0.01	81		75 - 125	20
Total Manganese		0.17	mg/L	1	0.20	<0.01	85		75 - 125	20
Total Molybdenum		0.90	mg/L	1	1	<0.01	90		75 - 125	20

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Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Nickel		0.85	mg/L	1	1	<0.01	85		75 - 125	20
Total Selenium		0.82	mg/L	1	1	<0.05	82		75 - 125	20
Total Silver		0.18	mg/L	1	0.20	<0.01	90		75 - 125	20
Total Zinc		0.19	mg/L	1	0.20	<0.10	95		75 - 125	20

Sample: MSD QC Batch: QC05669

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Aluminum		2.15	mg/L	1	2	<0.50	107	0	75 - 125	20
Total Arsenic		0.90	mg/L	1	1	<0.05	90	1	75 - 125	20
Total Barium		1.95	mg/L	1	2	0.16	89	2	75 - 125	20
Total Boron		1.40	mg/L	1	1	0.57	83	4	75 - 125	20
Total Cadmium		0.17	mg/L	1	0.20	<0.01	85	0	75 - 125	20
Total Chromium		0.35	mg/L	1	0.40	<0.01	87	0	75 - 125	20
Total Cobalt		0.84	mg/L	1	1	<0.05	84	1	75 - 125	20
Total Copper		0.36	mg/L	1	0.40	<0.10	90	0	75 - 125	20
Total Iron		1.80	mg/L	1	2	<0.10	90	2	75 - 125	20
Total Lead		0.83	mg/L	1	1	<0.01	83	2	75 - 125	20
Total Manganese		0.17	mg/L	1	0.20	<0.01	85	0	75 - 125	20
Total Molybdenum		0.91	mg/L	1	1	<0.01	91	1	75 - 125	20
Total Nickel		0.85	mg/L	1	1	<0.01	85	0	75 - 125	20
Total Selenium		0.83	mg/L	1	1	<0.05	83	1	75 - 125	20
Total Silver		0.18	mg/L	1	0.20	<0.01	90	0	75 - 125	20
Total Zinc		0.20	mg/L	1	0.20	<0.10	100	5	75 - 125	20

Sample: MS QC Batch: QC05673

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00086	mg/L	1	0.001	<0.0002	86		80 - 120	20

Sample: MSD QC Batch: QC05673

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Total Mercury		0.00097	mg/L	1	0.001	<0.0002	97	12	80 - 120	20

Quality Control Report
Duplicate Samples

Sample: Duplicate QC Batch: QC05257

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance		2286		uMHOS/cm	1	1	20
Specific Conductance		2286	2300	uMHOS/cm	1	1	20

Sample: Duplicate QC Batch: QC05321

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH		7.6	7.6	s.u.	1	0	20

Sample: Duplicate QC Batch: QC05422

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids		1326	1400	mg/L	1	5	20

Sample: Duplicate QC Batch: QC05424

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	20
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	20
Bicarbonate Alkalinity		212	214	mg/L as CaCo3	1	1	20
Total Alkalinity		212	214	mg/L as CaCo3	1	1	20

Quality Control Report
Continuing Calibration Verification Standards

Sample: CCV (1) QC Batch: QC05257

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		uMHOS/cm	1413	1399	99	80 - 120	10/2/00

Sample: ICV (1) QC Batch: QC05257

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		uMHOS/cm	1413	1413	100	80 - 120	10/2/00

Sample: CCV (1) QC Batch: QC05321

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	80 - 120	10/2/00

Sample: ICV (1) QC Batch: QC05321

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	80 - 120	10/2/00

Sample: CCV (1) QC Batch: QC05422

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	972	97	80 - 120	10/5/00

Sample: ICV (1) QC Batch: QC05422

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	953	95	80 - 120	10/5/00

Sample: CCV (1) QC Batch: QC05424

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	8.0	0	80 - 120	10/6/00
Carbonate Alkalinity		mg/L as CaCo3	0	220	0	80 - 120	10/6/00
Bicarbonate Alkalinity		mg/L as CaCo3	0	<1.0	0	80 - 120	10/6/00

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Alkalinity		mg/L as CaCo3	250	228	91	80 - 120	10/6/00

Sample: ICV (1)

QC Batch: QC05424

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	80 - 120	10/6/00
Carbonate Alkalinity		mg/L as CaCo3	0	240	0	80 - 120	10/6/00
Bicarbonate Alkalinity		mg/L as CaCo3	0	<1.0	0	80 - 120	10/6/00
Total Alkalinity		mg/L as CaCo3	250	240	96	80 - 120	10/6/00

Sample: CCV (1)

QC Batch: QC05456

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.43	91	80 - 120	10/2/00
Fluoride		mg/L	2.50	2.40	96	80 - 120	10/2/00
Nitrate-N		mg/L	2.50	2.30	92	80 - 120	10/2/00
Sulfate		mg/L	12.50	11.71	93	80 - 120	10/2/00

Sample: ICV (1)

QC Batch: QC05456

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.53	92	80 - 120	10/2/00
Fluoride		mg/L	2.50	2.40	96	80 - 120	10/2/00
Nitrate-N		mg/L	2.50	2.30	92	80 - 120	10/2/00
Sulfate		mg/L	12.50	11.73	93	80 - 120	10/2/00

Sample: CCV (1)

QC Batch: QC05603

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.088	88	80 - 120	10/11/00
Benzene		mg/L	0.10	0.09	90	80 - 120	10/11/00
Toluene		mg/L	0.10	0.09	90	80 - 120	10/11/00
Ethylbenzene		mg/L	0.10	0.089	89	80 - 120	10/11/00

Continued ...

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
M,P,O-Xylene		mg/L	0.30	0.267	89	80 - 120	10/11/00

Sample: CCV (2)

QC Batch: QC05603

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.093	93	80 - 120	10/11/00
Benzene		mg/L	0.10	0.097	97	80 - 120	10/11/00
Toluene		mg/L	0.10	0.094	94	80 - 120	10/11/00
Ethylbenzene		mg/L	0.10	0.096	96	80 - 120	10/11/00
M,P,O-Xylene		mg/L	0.30	0.276	92	80 - 120	10/11/00

Sample: ICV (1)

QC Batch: QC05603

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.106	106	80 - 120	10/11/00
Benzene		mg/L	0.10	0.105	105	80 - 120	10/11/00
Toluene		mg/L	0.10	0.106	106	80 - 120	10/11/00
Ethylbenzene		mg/L	0.10	0.11	110	80 - 120	10/11/00
M,P,O-Xylene		mg/L	0.30	0.333	111	80 - 120	10/11/00

Sample: CCV (1)

QC Batch: QC05668

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	10	135	1350	75 - 125	10/4/00
Dissolved Magnesium		mg/L	10	133	1330	75 - 125	10/4/00
Dissolved Potassium		mg/L	10	134	1340	75 - 125	10/4/00
Dissolved Sodium		mg/L	10	126	1260	75 - 125	10/4/00

Sample: ICV (1)

QC Batch: QC05668

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	10	126	1260	75 - 125	10/4/00
Dissolved Magnesium		mg/L	10	125	1250	75 - 125	10/4/00

Continued ...

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Potassium		mg/L	10	133	1330	75 - 125	10/4/00
Dissolved Sodium		mg/L	10	123	1230	75 - 125	10/4/00

Sample: CCV (1)

QC Batch: QC05669

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	5	4.75	95	75 - 125	10/6/00
Total Arsenic		mg/L	2.50	2.43	97	75 - 125	10/6/00
Total Barium		mg/L	5	4.92	98	75 - 125	10/6/00
Total Boron		mg/L	2.50	2.41	96	75 - 125	10/6/00
Total Cadmium		mg/L	0.50	0.49	98	75 - 125	10/6/00
Total Chromium		mg/L	1	0.98	98	75 - 125	10/6/00
Total Cobalt		mg/L	2.50	2.45	98	75 - 125	10/6/00
Total Copper		mg/L	1	0.96	96	75 - 125	10/6/00
Total Iron		mg/L	5	4.92	98	75 - 125	10/6/00
Total Lead		mg/L	2.50	2.46	98	75 - 125	10/6/00
Total Manganese		mg/L	0.50	0.49	98	75 - 125	10/6/00
Total Molybdenum		mg/L	2.50	2.45	98	75 - 125	10/6/00
Total Nickel		mg/L	2.50	2.43	97	75 - 125	10/6/00
Total Selenium		mg/L	2.50	2.43	97	75 - 125	10/6/00
Total Silver		mg/L	0.50	0.49	98	75 - 125	10/6/00
Total Zinc		mg/L	0.50	0.50	100	75 - 125	10/6/00

Sample: ICV (1)

QC Batch: QC05669

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	5	4.97	99	75 - 125	10/6/00
Total Arsenic		mg/L	2.50	2.49	99	75 - 125	10/6/00
Total Barium		mg/L	5	5.05	101	75 - 125	10/6/00
Total Boron		mg/L	2.50	2.54	101	75 - 125	10/6/00
Total Cadmium		mg/L	0.50	0.50	100	75 - 125	10/6/00
Total Chromium		mg/L	1	1.00	100	75 - 125	10/6/00
Total Cobalt		mg/L	2.50	2.51	100	75 - 125	10/6/00
Total Copper		mg/L	1	1.00	100	75 - 125	10/6/00
Total Iron		mg/L	5	5.05	101	75 - 125	10/6/00
Total Lead		mg/L	2.50	2.51	100	75 - 125	10/6/00
Total Manganese		mg/L	0.50	0.50	100	75 - 125	10/6/00
Total Molybdenum		mg/L	2.50	2.52	100	75 - 125	10/6/00
Total Nickel		mg/L	2.50	2.52	100	75 - 125	10/6/00
Total Selenium		mg/L	2.50	2.52	100	75 - 125	10/6/00
Total Silver		mg/L	0.50	0.50	100	75 - 125	10/6/00
Total Zinc		mg/L	0.50	0.50	100	75 - 125	10/6/00

Sample: CCV (1)

QC Batch: QC05673

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00082	82	80 - 120	10/13/00

Sample: ICV (1)

QC Batch: QC05673

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00090	90	80 - 120	10/13/00

Cation-Anion Balance Sheet

Sample # 154674 Date: 10/19/00 MS

Cations

	ppm	meq/L
Calcium	112	5.5888
Magnesium	91	7.48839
Sodium	297	12.9195
Potassium	24	0.61392

Total Cations
26.6106 in meq/L

Anions

	ppm	meq/L
Alkalinity	298	5.96
Sulfate	250	5.205
Chloride	460	12.9766
Nitrate as N	0	0
Fluoride	2.5	0.1316

Total Anions
24.2732 in meq/L

Percentage Error
9.18724 %
(needs to be <10%)

OTHER INFORMATION

TDS	0
EC	0

Measure EC and Cation Sums	2661.061	Range should be:	0	to	0
Measure EC and Anion Sums	2427.32	Range should be:	0	to	0
Calculated TDS/Conductivity	#DIV/0!	Range should be:	0.55	to	0.77
Measure TDS and Cation Sums	0	Range should be:	0.55	to	0.77
Measure TDS and Anion Sums	0	Range should be:	0.55	to	0.77

154674

Page 1 of 1

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A000100222

Company Name: NM Oil Conservation Division
Phone #: (505) 827-7154
Address: (Street, City, Zip) 2040 S. Pacheco, Santa Fe, NM 87505
Fax #: (505) 827-8177
Contact Person: Bill Olson
Invoice to: (If different from above)
Project #:
Project Name: Jay Anthony
Project Location: Maralo #2
Sampler Signature: Will Olson

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	NaHSO4	H2SO4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
154674	0009281600 (Anthony)	2	40ml	✓				✓					✓		9/28/00	1600
	0009281600 (Anthony)	1	liter	✓									✓		9/28/00	1600
	0009281600 (Anthony)	1	500ml	✓					✓				✓		9/28/00	1600

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC-MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	OCD Cations/Anions	OCD Metals			Turn Around Time if different from standard	Hold
	✓	✓													✓					
															✓	✓				
																✓				

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Will Olson	9/29/00	1300			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Vicki Mensley	9/30/00	10:00

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp °
Log-in Review BL

REMARKS:

10/19

Carrier # TNM+O 902 463 3453

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

July 13, 2000

RECEIVED

JUL 18 2000

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

NMOCD Environmental Bureau
2040 South Pacheco St.
Santa Fe, NM 87505

RE: Maralo Site - Jal, NM

Bill Olson:

This information was obtained from the abandoned site owned by Maralo Oil Co. I have photos and analytical for this site.

The Jal water system is laying a new water line and the proposed line will go through the middle of this area, they are concerned as is the rancher, Mr. Anthony.

Your help in this matter would be appreciated.

Eddie W. Seay

Eddie W. Seay, Agent
601 W. Illinois
Hobbs, NM 88242
(505)392-2236

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
EDDIE SEAY CONSULTING
ATTN: EDDIE W. SEAY
601 W. ILLINOIS
HOBBS, NM. 88242
FAX TO: (505) 392-6949

Receiving Date: 07/07/00
Reporting Date: 07/10/00
Project Owner: ANTHONY
Project Name: MARALO SHELL-HUMBLE SITE
Project Location: JAL, NM

Analysis Date: 07/10/00
Sampling Date: 07/07/00
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

LAB NUMBER	SAMPLE ID	TPH (mg/Kg)
H4982-1	MARALO #1	37000
Quality Control		244
True Value QC		240
% Recovery		102
Relative Percent Difference		2.4

METHOD: EPA 600/4-79-020 418.1

Chemist

7/10/00
Date

H4982.XLS

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

ANALYTICAL RESULTS FOR
EDDIE SEAY CONSULTING
ATTN: EDDIE SEAY
601 W. ILLINOIS
HOBBS, NM. 88242
FAX TO:

Receiving Date: 02/08/00
Reporting Date: 02/14/00
Project Owner: JAY ANTHONY
Project Name: MARALO WATER WELL
Project Location: JAL, NM

Analysis Date: 02/12/00
Sampling Date: 02/07/00
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC

LAB NUMBER	SAMPLE ID	TPH (mg/L)
H4633-2	MARALO WW #2	<1.0
Quality Control		3.94
True Value QC		4.00
% Recovery		98.5
Relative Percent Difference		1.8

METHOD: EPA 600/4-79-020 418.1

Chemist

2/14/00
Date

H4633-2.XLS

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CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
EDDIE SEAY CONSULTING
ATTN: EDDIE SEAY
601 W. ILLINOIS
HOBBS, NM. 88242
FAX TO:

Receiving Date: 02/08/00
Reporting Date: 02/14/00
Project Owner: JAY ANTHONY
Project Name: MARALO WATER WELL
Project Location: JAL, NM

Sampling Date: 02/07/00
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: AH

LAB NO.	SAMPLE ID	P-Alkalinity (mg/L)	T-Alkalinity (mg/L)	Hardness (mg/L)	Chloride (mg/L)	Sulfates (mg/L)	pH (s.u.)
ANALYSIS DATE		02/10/00	02/10/00	02/10/00	02/10/00	02/10/00	02/10/00
H4633-1	MARALO WW #1	0	288	592	432	208	7.27
Quality Control		NR	NR	NR	1040	48.63	7.01
True Value QC		NR	NR	NR	1000	50.00	7.00
% Recovery		NR	NR	NR	104	97	100
Relative Percent Difference		NR	NR	NR	8.7	2.9	0
METHODS:	EPA 600/4-79-020,	-	-	130.2	325.3	375.4	150.1
	Standard Methods	2320 B	2320 B	-	-	-	-

LAB NO.	SAMPLE ID	Hydroxides (mg/L)	Carbonates (mg/L)	Bicarbonates (mg/L)	Conductivity (umhos/cm)	TDS (mg/L)
ANALYSIS DATE		02/10/00	02/10/00	02/10/00	02/10/00	02/10/00
H4633-1	MARALO WW #1	0	0	351	2100	1468
Quality Control		NR	NR	971	1392	NR
True Value QC		NR	NR	1000	1413	NR
% Recovery		NR	NR	97	99	NR
Relative Percent Difference		NR	NR	3.0	0.2	NR
METHODS:	EPA 600/4-79-020,	-	-	-	120.1	160.1
	Standard Methods	2320 B	2320 B	2320 B	-	-

Chemist

2/14/00
Date

H4633-1.XLS

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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 ____ of ____

Company Name: Eddie Seay Consulting	BILL TO PO #:
Project Manager: Eddie Seay	Company:
Address: 601 W Illinois	Attn:
City: Hobbs State: Zip:	Address:
Phone #: 2-22-34	City:
Fax #:	State: Zip:
Project #: Anthony Project Owner: Jay Anthony	Phone #:
Project Name: Maralo Water Well	Fax #:
Project Location: Jal N.M	

ANALYSIS REQUEST: TPH (418.1), Gen. Chemistry

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
H4633-1	Maralo WW #1		1	✓							✓		2/2/00	12:30
-2	Maralo WW #2		1	✓							✓		"	"

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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: Eddie Seay	Date: 2/8/00 Time: 9:30	Received By:	Phone Result ☐ Yes ☐ No Additional Fax #: Fax Result: ☐ Yes ☐ No REMARKS: Sec 34-25-34
Relinquished By:	Date: 02/08/2000 Time: 10:30 am	Received By: (Lab Staff)	
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.

RECEIVED
DEC 22
OIL CONSERVATION DIVISION

LLC

December 15, 2000

CERTIFIED MAIL/RETURN RECEIPT
7099 3220 0005 1182 7970

Mr. William C. Olson, Hydrologist
New Mexico Energy, Mineral and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Re: Humble State #3 Tank Battery Site
Lea County, New Mexico

Dear Mr. Olson:

Maralo is in receipt of your letter dated November 22, 2000, advising us that water samples from a water well owned by Mr. Jay Anthony contain chlorides and TDS in concentrations in excess of the New Mexico Water Quality Control Commission standards.

While Maralo acknowledges that it has operated two (2) wells in the immediate area, which as you may know were plugged in September and October of 1988, and the battery remediated by discing in 1993, we find no reason to believe that any of our actions contributed to the concentration of chlorides and TDS found through your analysis. As your report shows, no B-Tex or Toluene (Hydrocarbons) were noted, therefore eliminating the probability of oilfield contamination. Further, the chlorides noted in your analysis could be naturally occurring and in our opinion the water is still suitable for consumption by livestock which should be the primary consumer in the remote area of Mr. Anthony's ranch.

Finally, any application by your department of Rule 19 of the New Mexico Oil and Gas Regulations promulgated in February, 1997 would be considered, in our opinion, retroactively applied and therefore not enforceable.

If no response to our letter is received prior to January 22, 2001, we will assume this matter has been resolved to your satisfaction.

Yours very truly,

MARALO, LLC

Joe C. Pulido, CPL
Manager

JCP/jl

:humble state #3 tank battery site - nm emnr

BEFORE EXAMINER
OIL CONSERVATION DIVISION
EXHIBIT NO. 7
CASE NO. 13142

Maralo, LLC / P.O. Box 832 / Midland, Texas 79702-0832 / (915) 684-7441
Fax (915) 684-9836

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

November 22, 2000

CERTIFIED MAIL
RETURN RECEIPT NO: 5051-3877

Mr. Phillip Smith
Maralo, LLC
P.O. Box 832
Midland, Texas 79702

RE: HUMBLE STATE #3 TANK BATTERY SITE
JAL, NEW MEXICO

Dear Mr. Smith:

The New Mexico Oil Conservation Division (OCD) recently sampled a water well owned by Mr. Jay Anthony of Jal, New Mexico. The results of these analyses show that the water contains chlorides and total dissolved solids (TDS) in concentrations in excess of the New Mexico Water Quality Control Commission standards. The water well is located on the site of the former Maralo, LLC (Maralo) Humble State #3 Tank Battery located in Unit A, Section 36, Township 25 South, Range 36 East. Adjacent to Mr. Anthony's water well is an area containing contaminated soils at the surface where, according to Mr. Anthony, 4 surface storage tanks were formerly located. Also on the site are 3 former pits containing hydrocarbon materials. Since the contaminants in Mr. Anthony's well may be a result of operation of Maralo's tank battery, the OCD requires that Maralo submit a work plan to determine the extent of contamination related to the Humble State #3 Tank Battery. The plan shall be submitted to the OCD Santa Fe Office by January 22, 2001 with a copy provided to the OCD Hobbs District Office.

If you have any questions or comments, please contact me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Office
Jay Anthony

NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
DISTRICT I HOBBS
PO BOX 1980, Hobbs, NM 88241
(505) 393-6161
FAX (505) 393-0720

Jennifer A. Salisbury
CABINET SECRETARY

November 15, 1999

FAX 915-684-9836

Jay Anthony 390-7385

Maralo, LLC
P.O. Box 832
Midland, Tx 79702

Re: Humble State #3 (660 FNL 1980 FEL –Sec 36-Ts25S-R36E)
(Shell A St. #1) – ULA – UL B

Gentlemen:

The New Mexico Oil Conservation Division (NMOCD) is aware of some existing contamination at the location mentioned above. The last well was P&A'd December 11, 1989. Upon abandoning the last well on the lease, the tank battery site associated should have been cleared and the remaining contamination remediated. In the New Mexico Rules and Regulations, Rule 202.B (d) states after the completion of plugging operations the operator shall: take such other measures as are necessary or required by the Division to restore the location to a safe and clean condition. Also in Rule 19.B, Abatement Standards and Requirements states that the vadose zone shall be abated so that water contaminants in the vadose zone will not with reasonable probability contaminate ground water or surface water, in excess of the standards through leaching, percolation, or other transport mechanisms, or as the water table elevation fluctuates.

Plugged in 1988

Due to the contamination at the above referenced location the NMOCD hereby requests for the following:

1. Maralo perform vertical and horizontal extent at the above referenced location.
2. Maralo perform a site assessment and determine cleanup standards, using the guidelines for assistance.
3. Maralo submit to the NMOCD a site assessment and/or a remediation plan by December 1st, 1999 for approval. Dec. 15th OK
4. Provide to NMOCD a verification of the legals of tank battery locations involved. (UL –S-Ts-R)

If you have any further questions, or need any assistance please do not hesitate to write or call me at (505)393-6161 ext...113.
Sincerely,

Donna Williams

Donna Williams
Environmental Engineer Specialist
Cc: Wayne Price; Chris Williams;

*Dorthea Logan 915-684-7441 called on Nov 17th will set up meet

Turn west off of Sal-Bennett Hwy

- North of Sam Cooper Ranch house -

- go about 1 mile - west - gate - combination is 1301 - Keep going west until hit a T in the road & take a left - then it will take you right to it. -

Jay Anthony Hm# 395-3264
Landowner ↑ Cell# 390-7385

* Humble Water station

- used to be owned by Maralo (Southwest Royalties owns it now)
There is no sign on unit

Sec 36-T25S-R36E

MILEAGE

UIC: _____
OTHER: _____

OIL CONSERVATION DIVISION
COMPLAINT FORM

PERSON COMPLAINING:
NAME: Jay Anthony
ADDRESS: _____

PHONE: 390-7385

INFORMATION TAKEN BY:
TAKEN BY: Donna Williams
DATE: 10-06-99 TIME: _____
IN PERSON: ✓ BY PHONE: _____

COMPLAINT: Historical Contamination
Maralo's - Old Lease Locations
COMMENTS: Went to Jal to perform inspection.

- INVESTIGATION -

INVESTIGATOR: Donna Williams
DATE: 10-06-99
TIME: ≈ 1:00 p.m.
DESCRIBE INVESTIGATION AND FINDINGS: Old Historical Contamination that covered a large areas - There is a Standing <abandoned> possible - water flood station <system> old rusty tanks w/ Rotted Bottoms. Asphalty material All over location / Lease For ≈ 1/2 mile. Wells Humble State #3 1650 FNEL - Sec 36 - Ts 25S - R36E - Contamination Follows Flowlines Running To Lease. Also Shell "A" State #1 Old MARALO Lease Plugged & Abandoned in 1988 Contamination Around Well <Historical Contamination>

- FOLLOW-UP -

DATE: November 15, 1999
TIME: _____
ACTION TAKEN: Sent letter requesting a remediation plan. Vertical & Horizontal of Contamination. Requesting a site Assessment be performed. Received a call From Maralo ≈ Dec. 1st, 1999 held a conference w/ Joe Pulido - Phillip Smith, Dorthea Logan all w/ Maralo - myself (Donna Williams) & Gary Wink. Maralo said Rule was not in effect yet & They didn't feel the need to have to do anything - the Rule is not Retroactive. - After discussion I said I would get back w/ them. Waiting For Santa Fe to make a determination of historical?

*ATTACH ADDITIONAL SHEETS, IF NECESSARY

EXAMINER
OIL CONSERVATION DIVISION
EXHIBIT NO. 1
CASE NO. 13142

MILEAGE

UIC: _____
OTHER: _____

OIL CONSERVATION DIVISION
COMPLAINT FORM

PERSON COMPLAINING:

NAME: Jay Anthony
ADDRESS: _____
_____
_____
PHONE: 390-7385

INFORMATION TAKEN BY:

TAKEN BY: Donna Williams
DATE: 10-06-99 TIME: _____
IN PERSON: ✓ BY PHONE: _____

COMPLAINT: Historical Contamination
Maralo's - Old Lease locations
COMMENTS: Went to Jal to perform inspection.

- INVESTIGATION -

INVESTIGATOR: Donna Williams
DATE: 10-06-99
TIME: ≈ 1:00 p.m.
DESCRIBE INVESTIGATION AND FINDINGS: Old Historical Contamination that covered a Large Areas - There is a Standing (abandoned) possible - Water Flood station (system) Old Rusty Tank w/Rotted Bottoms. Asphalty material All over Location / Lease For ≈ 1/2 - 1 mile. Wells Humble State #3 1650 FNEL - Sec 36 - T-25S - R36E - Contamination Follows Flowlines Running To Lease. Also Shell "A" State #1 Old MARALO Lease Plugged & Abandoned in 1988 Contamination Around Well (Historical Contamination)

- FOLLOW-UP -

DATE: November 15, 1999
TIME: _____
ACTION TAKEN: Sent Letter requesting a remediation plan. Vertical & Horizontal of Contamination. Requesting a site Assessment be performed. Received a call From Maralo ≈ Dec. 1st, 1999 held a conference w/ Joe Pulido - Phillip Smith, Dorthea Logan all w/ Maralo - myself (Donna Williams) & Gary Wink. Maralo said Rule was not in effect yet & They didn't feel the need to have to do anything - the Rule is not Retroactive. - After discussion I said I would get back w/ them. Waiting For Santa Fe

*ATTACH ADDITIONAL SHEETS, IF NECESSARY

NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
DISTRICT I HOBBS
PO BOX 1980, Hobbs, NM 88241
(505) 393-6161
FAX (505) 393-0720

Jennifer A. Salisbury
CABINET SECRETARY

November 15, 1999

FAX 915-684-9836

Jay Anthony 390-7385

Maralo, LLC
P.O. Box 832
Midland, Tx 79702

EXAMINER
OIL CONSERVATION DIVISION
EXHIBIT 2
CASE NO. 13142

Re: Humble State #3 660 FEL
660 FNL 1980 FEL –Sec 36-Ts25S-R36E
(Shell A St. #1) UL B - ULA

Plugged in 1988

Gentlemen:

The New Mexico Oil Conservation Division (NMOCD) is aware of some existing contamination at the location mentioned above. The last well was P&A'd December 11, 1989. Upon abandoning the last well on the lease, the tank battery site associated should have been cleared and the remaining contamination remediated. In the New Mexico Rules and Regulations, Rule 202.B (d) states after the completion of plugging operations the operator shall: take such other measures as are necessary or required by the Division to restore the location to a safe and clean condition. Also in Rule 19.B, Abatement Standards and Requirements states that the vadose zone shall be abated so that water contaminants in the vadose zone will not with reasonable probability contaminate ground water or surface water, in excess of the standards through leaching, percolation, or other transport mechanisms, or as the water table elevation fluctuates.

Due to the contamination at the above referenced location the NMOCD hereby requests for the following:

1. Maralo perform vertical and horizontal extent at the above referenced location.
2. Maralo perform a site assessment and determine cleanup standards, using the guidelines for assistance.
3. Maralo submit to the NMOCD a site assessment and/or a remediation plan by December 1st, 1999 for approval. Dec. 15th OK
4. Provide to NMOCD a verification of the legals of tank battery locations involved. (UL –S-Ts-R)

If you have any further questions, or need any assistance please do not hesitate to write or call me at (505)393-6161 ext...113.

Sincerely,

Donna Williams

Donna Williams
Environmental Engineer Specialist
Cc: Wayne Price; Chris Williams;

*Dorthea Logan
915-684-7441
Called on Nov 17th will set up meet

OIL CONSERVATION DIVISION

Hobbs	Artesia	Aztec
P.O. Box 1980	P.O. Drawer DD	1000 Rio Brazos
Hobbs, N.M. 88240	Artesia, N.M. 88210	Aztec, N.M. 87410

NOTICE OF GAS WELL: CONNECTION RECONNECTION DISCONNECTION

This to notify the Oil Conservation Division of the following:

Connection ____ First Delivery _____ _____
Date Initial Potential

Reconnection ____ First Delivery _____ _____
Date Initial Potential

Disconnection X

for delivery of gas from the MARALO INCORPORATED
Operator

HUMBLE STATE # 1,2,3
Lease

63-698-01	63698	01	G	36-25S-36E
Meter Code	Site Code	Well No.	Unit Letter	S-T-R

JALMAT-YATES 7 RIVER
Pool

Jalmat Yates 7 Rivers

4964 (Ce)

Sec 7 25S 37E

was made on December 14, 1989.
Date

_____ Yates (Ce)
AOF

_____ 5,900 sec 21
Choke

********** 35,000 sec 6
*OCD use only

*
*County_____
*Land Type_____ *
*Liq. Transporter_____ *
****

El Paso Natural Gas Company
Transporter

Robert N. Rose
Systems Controller
Representative Name/Title

Robert N. Rose
Representative Signature

7-Rivers (Ce)
4,600
1,900

Submit in duplicate to the appropriate district office.
Ray McClure---Production Control M/O
Ted Sawyer---Gas Purchases M/O
Operator
James Midkiff---Jal
John Somerhalder---South Region Midland Div.
Joe Warren-----Eunice Field Lines
Nevin Foster---Carlsbad
File

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JAN 17 1990
OCD
HOBBS OFFICE

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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SANTA FE, NEW MEXICO 87501

API 30-025-0981

Form C-103
Revised 10-1

5a. Indicate Type of Lease
State [..] Fee [ ]

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL [-] GAS WELL [ ] OTHER-

7. Unit Agreement Name

2. Name of Operator
Arrallo, Inc. 14007

8. Farm or Lease Name
Rumole State 6343

3. Address of Operator
P. O. Box 832 Midland, TX 79702

9. Well No.
3

4. Location of Well
UNIT LETTER I , 460 FEET FROM THE South LINE AND 660 FEET FROM THE East LINE, SECTION 26 TOWNSHIP 25-S RANGE 36-E NMPM.

10. Field and Pool, or Wildcat
~~Wildcat~~ Jalmat Tansill Yates 7 Rvr

15. Elevation (Show whether DF, RT, GR, etc.)
3000 GL

12. County
Lea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [X]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER [ ]	

17. Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)* SEE RULE 1103.

10-12-88 1. Set 7" BP @ 2700' - 35' cement on top
10-12-88 2. Spot 35 sxs 2693' - 2593'
10-13-88 3. Pull 1200' of 7" casing
10-13-88 4. Spot 55 sxs 1310' - tag 1200'
10-14-88 5. Spot 55 sxs 1230' - tag 1100'
10-14-88 6. Perf 5 5/8" 455' - squeeze 65 sxs - no tag
10-15-88 7. Perf 4 1/2" 355' - spot 65 sxs 455' - no tag
10-15-88 8. Spot 70 sxs 455' - tag 300'
9. Spot 5 sxs @surface

Install dry hole marker
Hole Circulated with 10 # mud

ILLEGIBLE

Civil Engineer

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Brenda Coffman TITLE Agent DATE Oct 28, 1988

APPROVED BY [signature] TITLE OIL & GAS INSPECTOR DEC 11 1989

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

7. Unit Agreement Name

OIL WELL [X] GAS WELL [ ] OTHER-

Name of Operator

Maralo, Inc.

8. Farm or Lease Name

Humble State

Address of Operator

P. O. Box 832, Midland, Texas 79702 0832

9. Well No.

3

Location of Well

UNIT LETTER A, 660 FEET FROM THE North LINE AND 660 FEET FROM

10. Field and Pool, or Wildcat

Jalmat Yates 7 Rivers Tan

THE East LINE, SECTION 36 TOWNSHIP 25-S RANGE 36-E NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)

3000' GL

12. County

Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK [ ] Revised

TEMPORARILY ABANDON [ ]

PULL OR ALTER CASING [ ]

PLUG AND ABANDON [X]

CHANGE PLANS [ ]

OTHER [ ]

SUBSEQUENT REPORT OF:

REMEDIAL WORK [ ]

COMMENCE DRILLING OPNS. [ ]

CASING TEST AND CEMENT JOB [ ]

ALTERING CASING [ ]

PLUG AND ABANDONMENT [ ]

OTHER [ ]

Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

1. Set CIBP @ 2700'± (within 100' of top perforation) w/35' cement on top to 2680'
2. Load hole w/10#/gal mud-laden fluid using 25# gel/bbl.
3. Determine free-point of 7" casing. Cut and pull free casing.
4. If free-point is below 1190', place 100' cement plug across casing cut. If free-point is abov 1190', perf 7" casing @ 1240' and squeeze 100' cement outside casing & leave 100' cement inside casing.
5. Set 100' cement plug across 8 5/8" casing shoe. (1240-1140')
6. Determine free-point of 8 5/8" casing. Cut and pull free casing.
7. If free-point of 8 5/8" casing is below 405', place 100' cement plug across casing cut. If free-point is above 405', perf @455' and squeeze 100' cement outside casing & leave 100' cement inside casing.
8. Set 100' cement plug across 10 3/4" surface casing shoe from 355' to 455'.
9. Using 10 sacks cement, set surface plug.
0. Remove wellhead, cut off casing & weld plate on casing.
1. Clean up location.
2. Place a metal dry hole marker at location, per NMOCC requirements.

NOTIFY [illegible] BE NOTIFIED BEFORE PLUGGING WORK

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Brenda Coffman TITLE Agent DATE 10-16-87

APPROVED BY Eddie W. Seay TITLE Oil & Gas Inspector DATE OCT 20 1987

CONDITIONS OF APPROVAL, IF ANY:

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ERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State [X] Fee [ ]

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

7. Unit Agreement Name

OIL WELL [X] GAS WELL [ ] OTHER-

Name of Operator
Maralo, Inc.

8. Farm or Lease Name
Humble State

Address of Operator
P. O. Box 832, Midland, Texas 79702 0832

9. Well No.
3

Location of Well
UNIT LETTER A 660 FEET FROM THE North LINE AND 660 FEET FROM THE East LINE, SECTION 36 TOWNSHIP 25-S RANGE 36-E NMPM.

10. Field and Pool, or Wildcat
Jalmat Yates 7 Riv.Tan

15. Elevation (Show whether DF, RT, GR, etc.)
3000' GL

12. County
Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

FORM REMEDIAL WORK [ ]
IPORARILY ABANDON [ ]
L OR ALTER CASING [ ]
PLUG AND ABANDON [X]
CHANGE PLANS [ ]
OTHER [ ]

SUBSEQUENT REPORT OF:

REMEDIAL WORK [ ]
COMMENCE DRILLING OPNS. [ ]
CASING TEST AND CEMENT JOB [ ]
ALTERING CASING [ ]
PLUG AND ABANDONMENT [ ]
OTHER [ ]

Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work.) SEE RULE 1103.

SITUATION: 7 bad collars. Uneconomical to repair
PROPOSAL: Plug and abandon:
PROCEDURE:

1. Notify O.C.C.
2. Set 100' (15sx) cement plug across 7" casing shoe from 2850' to 2950'.
3. Load hole with 10#/gal mud-laden fluid using 25# gel/bbl.
4. Set 100' (15sx) plug across top of Yates from 2686' to 2786'.
5. Set 100' (15sx) cmt. plug across top of Tansill from 2523' to 2623'.
6. Set 100' (15sx) cement plug across top of salt from 1160' to 1260'. → WILL NEED TO PERFORATE SQ - @ 12
7. Set 100' (15sx) cement plug across 10 3/4" surface casing shoe from 355' to 455'.
8. Using 10 sacks cement, set surface plug.
9. Remove wellhead, cut off casing and weld plate on casing. → WILL NEED TO PERF THRU BOTH STRINGS OF PIPE
0. Clean up location.
1. Place a metal dry hole marker at location signifying operators' name, well location and well footage from section boundary.

NOTE: THE 7" CSG & 8 5/8" CSG DO NOT APPEAR TO HAVE CEMENT CIRC.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Brenda Coffman TITLE Agent DATE 10-9-86

APPROVED BY [signature] TITLE [ ] DATE [illegible]

CONDITIONS OF APPROVAL, IF ANY:

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

TONEY ANAYA
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

August 13, 1986

Maralo, Inc.
Box 832
Midland, TX 79702

Re: Humble State #3-A 36-25-36
Sholes B #2-P 25-25-36
Jalmat Pool

Gentlemen:

You have reported the above-referenced wells as being converted to water supply wells on your C-116, Gas/Oil Ratio Test. Our records do not confirm this.

We show the Sholes B #2 has had an intention to convert to water supply, but no subsequent report has been filed. If this report has been filed with the BLM, please send us a copy.

Also, we have no record of an intention to convert the Humble State #3 to a water supply well. Since this is a state lease this form should be filed with the Oil Conservation. Please file necessary C-103 showing any work done on this well to convert it to a water supply well.

Thank you for your cooperation in keeping our records up-to-date.

Very truly yours,

OIL CONSERVATION DIVISION

Jerry Sexton
Supervisor, District I

ed

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OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No.: A 36 25 36

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

OIL WELL [X] GAS WELL [ ] OTHER-

7. Unit Agreement Name:

Name of Operator: Maralo, Inc.

8. Farm or Lease Name: Humble State

Address of Operator: P. O. Box 832, Midland, Texas 79702 0832

9. Well No.: 3

Location of Well: UNIT LETTER A, 660 FEET FROM THE North LINE AND 660 FEET FROM THE East LINE, SECTION 36 TOWNSHIP 25-S RANGE 36-E NMPM.

10. Field and Pool, or Wildcat: Jalmat Yates 7 Riv. Tar

15. Elevation (*Show whether DF, RT, GR, etc.*): 3000' GL

12. County: Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [X]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [ ]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER [ ]	

Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

9-17-81 Tested casing from top to bottom - found hole @ 2046'. Pld. out of hole & laid down pack
9-18-81 Ran RBP & RTTS packer on 67 jts. 2 3/8" to 2115'. Stopped. Pld. out of hole. Reran tool dressed for 23# pipe on 89 jts. 2 3/8" tbg. Set RBP @ 2807' - tested to 1500 psi - o.k Pld. up to 2073'. Set RTTS packer. Pmpd into formation @ 250 psi 2.5 BPM. Unseated pac & went down to 2136'. Set packer & pressured csg. to 500 psi - held ok. Released packe & pld. up to 1886'. Set packer & pressured backside to 500 psi. Broke formation down @ 1150 psi. Squeezed w/200 sx Class "C" neat cement w/800 psi. WOC 14 hours - Tested casing - held okay. Job complete.

Tested casing to 1500 psi for 30 minutes.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Brenda Coffman TITLE Production Clerk DATE 9-22-81

APPROVED BY Orig. Signed by Jerry Sexton Dist I, Supv. TITLE _____ DATE OCT 1981

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OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State [XX] Fee. [ ]

5. State Oil & Gas Lease No.
A 36 25 36

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

7. Unit Agreement Name

OIL WELL [X] GAS WELL [ ] OTHER-

Name of Operator
Maralo, Inc.

8. Farm or Lease Name
Humble State

Address of Operator
P. O. Box 832, Midland, Texas 79702 0832

9. Well No.
3

Location of Well
UNIT LETTER A , 660 FEET FROM THE North LINE AND 660 FEET FROM THE East LINE, SECTION 36 TOWNSHIP 25-S RANGE 36-E NMPM.

10. Field and Pool, or Wildcat
Jalmat Yates 7 Riv. Tan

15. Elevation *(Show whether DF, RT, GR, etc.)*
3000' GL

12. County
Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	[ ]	PLUG AND ABANDON	[ ]	REMEDIAL WORK	[ ]	ALTERING CASING	[ ]
TEMPORARILY ABANDON	[ ]			COMMENCE DRILLING OPNS.	[ ]	PLUG AND ABANDONMENT	[ ]
PULL OR ALTER CASING	[X]	CHANGE PLANS	[ ]	CASING TEST AND CEMENT JOB	[ ]		
OTHER	[ ]			OTHER			[ ]

Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any propos work)* SEE RULE 1103.

PROPOSED OPERATION: EVALUATE YATES FOR GAS

Set RBP near 2838', spot 150 gals "mud cleanout acid" from 2824' up hole to approximately 2724. RU perforators w/4" carrier gun, premium charges and shoot Top to Bottom w/one ½" JSPF from 2739' to 2824' (22 holes).

Run tbg. w/7" csg. packer to set near 2675' and acid treat Yates perforations with 2500 gals acid in 5 - 500 gal stages w/10 ball sealers between stages.

Shut in, record pressures and evaluate.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

ED Brenda Coffman TITLE Production Clerk DATE 9-22-81

OVED BY Orig. Signed by Les Clements TITLE Oil & Gas Insp. DATE SEP 24 1981

DITIONS OF APPROVAL, IF ANY:

Summary Report

BEFORE EXAMINER
OIL CONSERVATION DIVISION
EXHIBIT NO. 3
CASE NO. 13142

Wayne Price
OCD
1220 S. Saint Francis Dr.
Santa Fe, NM 87504

Report Date: July 5, 2001

Order ID Number: A01050432

Project Number: SEC36-255-36E
Project Name: J. Anthony Ranch
Project Location: SEC 36-255-36E

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
170563	0105021700	Soil	5/2/01	17:00	5/4/01
170564	0105021710	Soil	5/2/01	17:00	5/4/01
170565	0105021720	Soil	5/2/01	17:00	5/4/01
170566	0105021800	Soil	5/2/01	17:00	5/4/01
170567	0105021830	Soil	5/2/01	17:00	5/4/01
170568	0105021900	Soil	5/2/01	17:00	5/4/01

This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX					TPH
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	M,P,O-Xylene (mg/Kg)	Total BTEX (mg/Kg)	TRPHC (mg/Kg)
170563 - 0105021700	<0.013	<0.013	<0.013	0.685	0.685	35700
170564 - 0105021710	<0.013	<0.013	<0.013	<0.013	<0.013	7500
170565 - 0105021720	<0.013	<0.013	<0.013	<0.013	<0.013	23900
170566 - 0105021800	<0.013	<0.013	<0.013	<0.013	<0.013	<10.0
170567 - 0105021830	<0.025	<0.025	<0.025	<0.025	<0.025	20900
170568 - 0105021900	1.06	2	<0.1	<0.1	3.06	16500

Sample: 170563 - 0105021700

Param	Flag	Result	Units
CL		<10	mg/Kg

Sample: 170564 - 0105021710

Param	Flag	Result	Units
CL		<10	mg/Kg

Sample: 170565 - 0105021720

Param	Flag	Result	Units
CL		<10	mg/Kg

~~Sample: 170566 - 0105021800~~

Param	Flag	Result	Units
CL		<50	mg/Kg

Sample: 170567 - 0105021830

Param	Flag	Result	Units
CL		<50	mg/Kg

Sample: 170568 - 0105021900

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/Kg as CaCo3
Carbonate Alkalinity		<1.0	mg/Kg as CaCo3
Bicarbonate Alkalinity		138	mg/Kg as CaCo3
Total Alkalinity		138	mg/Kg as CaCo3
Specific Conductance		675	μMHOS/cm
Total Mercury		<0.19	mg/Kg
CL		<50	mg/Kg
Fluoride		9.11	mg/Kg
Nitrate-N		<5.0	mg/Kg
Sulfate		106	mg/Kg
Dissolved Calcium		14.3	mg/Kg
Dissolved Magnesium		8.30	mg/Kg
Dissolved Potassium		9.47	mg/Kg
Dissolved Sodium		38.8	mg/Kg
Total Dissolved Solids		27900	mg/Kg
Total Arsenic		<5	mg/Kg
Total Barium		14.8	mg/Kg
Total Cadmium		<2	mg/Kg
Total Chromium		<5	mg/Kg
Total Lead		<5	mg/Kg
Total Selenium		<5	mg/Kg
Total Silver		<1	mg/Kg
pH		8.7	s.u.

TRACEANALYSIS, INC.

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Analytical and Quality Control Report

Wayne Price
OCD
1220 S. Saint Francis Dr.
Santa Fe, NM 87504

Report Date: July 5, 2001

Order ID Number: A01050432

Project Number: SEC36-255-36E
Project Name: J. Anthony Ranch
Project Location: SEC 36-255-36E

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
170563	0105021700	Soil	5/2/01	17:00	5/4/01
170564	0105021710	Soil	5/2/01	17:00	5/4/01
170565	0105021720	Soil	5/2/01	17:00	5/4/01
170566	0105021800	Soil	5/2/01	17:00	5/4/01
170567	0105021830	Soil	5/2/01	17:00	5/4/01
170568	0105021900	Soil	5/2/01	17:00	5/4/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 18 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 170563 - 0105021700

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC11133	Date Analyzed:	5/11/01
Analyst:	JW	Preparation Method:	E 5030B	Prep Batch:	PB09536	Date Prepared:	5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.013	mg/Kg	13	0.001
Toluene		<0.013	mg/Kg	13	0.001
Ethylbenzene		<0.013	mg/Kg	13	0.001
M,P,O-Xylene		0.685	mg/Kg	13	0.001
Total BTEX		0.685	mg/Kg	13	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.11	mg/Kg	13	0.10	85	72 - 128
4-BFB		1.02	mg/Kg	13	0.10	78	72 - 128

Sample: 170563 - 0105021700

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC11235	Date Analyzed:	5/15/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB09622	Date Prepared:	5/9/01

Param	Flag	Result	Units	Dilution	RDL
CL		<10	mg/Kg	1	0.50

Sample: 170563 - 0105021700

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC11015	Date Analyzed:	5/8/01
Analyst:	JJ	Preparation Method:	N/A	Prep Batch:	PB09454	Date Prepared:	5/5/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		35700	mg/Kg	1	10

Sample: 170564 - 0105021710

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC11133	Date Analyzed:	5/11/01
Analyst:	JW	Preparation Method:	E 5030B	Prep Batch:	PB09536	Date Prepared:	5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.013	mg/Kg	13	0.001
Toluene		<0.013	mg/Kg	13	0.001
Ethylbenzene		<0.013	mg/Kg	13	0.001
M,P,O-Xylene		<0.013	mg/Kg	13	0.001
Total BTEX		<0.013	mg/Kg	13	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.36	mg/Kg	13	0.10	104	72 - 128
4-BFB		1.19	mg/Kg	13	0.10	91	72 - 128

Sample: 170564 - 0105021710

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC11235 Date Analyzed: 5/15/01
Analyst: JS Preparation Method: N/A Prep Batch: PB09622 Date Prepared: 5/9/01

Param	Flag	Result	Units	Dilution	RDL
CL		<10	mg/Kg	1	0.50

Sample: 170564 - 0105021710

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC11015 Date Analyzed: 5/8/01
Analyst: JJ Preparation Method: N/A Prep Batch: PB09454 Date Prepared: 5/5/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		7500	mg/Kg	1	10

Sample: 170565 - 0105021720

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC11133 Date Analyzed: 5/11/01
Analyst: JW Preparation Method: E 5030B Prep Batch: PB09536 Date Prepared: 5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.013	mg/Kg	13	0.001
Toluene		<0.013	mg/Kg	13	0.001
Ethylbenzene		<0.013	mg/Kg	13	0.001
M,P,O-Xylene		<0.013	mg/Kg	13	0.001
Total BTEX		<0.013	mg/Kg	13	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.26	mg/Kg	13	0.10	96	72 - 128
4-BFB		1.08	mg/Kg	13	0.10	83	72 - 128

Sample: 170565 - 0105021720

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC11235 Date Analyzed: 5/15/01
Analyst: JS Preparation Method: N/A Prep Batch: PB09622 Date Prepared: 5/9/01

Param	Flag	Result	Units	Dilution	RDL
CL		<10	mg/Kg	1	0.50

Sample: 170565 - 0105021720

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC11015 Date Analyzed: 5/8/01
Analyst: JJ Preparation Method: N/A Prep Batch: PB09454 Date Prepared: 5/5/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		23900	mg/Kg	1	10

Sample: 170566 - 0105021800

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC11133	Date Analyzed:	5/11/01
Analyst:	JW	Preparation Method:	E 5030B	Prep Batch:	PB09536	Date Prepared:	5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.013	mg/Kg	13	0.001
Toluene		<0.013	mg/Kg	13	0.001
Ethylbenzene		<0.013	mg/Kg	13	0.001
M,P,O-Xylene		<0.013	mg/Kg	13	0.001
Total BTEX		<0.013	mg/Kg	13	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.3	mg/Kg	13	0.10	100	72 - 128
4-BFB		1.16	mg/Kg	13	0.10	89	72 - 128

Sample: 170566 - 0105021800

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC11235	Date Analyzed:	5/15/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB09622	Date Prepared:	5/9/01

Param	Flag	Result	Units	Dilution	RDL
CL		<50	mg/Kg	5	0.50

Sample: 170566 - 0105021800

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC11015	Date Analyzed:	5/8/01
Analyst:	JJ	Preparation Method:	N/A	Prep Batch:	PB09454	Date Prepared:	5/5/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		<10.0	mg/Kg	1	10

Sample: 170567 - 0105021830

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC11133	Date Analyzed:	5/11/01
Analyst:	JW	Preparation Method:	E 5030B	Prep Batch:	PB09536	Date Prepared:	5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.025	mg/Kg	25	0.001
Toluene		<0.025	mg/Kg	25	0.001
Ethylbenzene		<0.025	mg/Kg	25	0.001
M,P,O-Xylene		<0.025	mg/Kg	25	0.001
Total BTEX		<0.025	mg/Kg	25	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		2.43	mg/Kg	25	0.10	97	72 - 128
4-BFB		2.55	mg/Kg	25	0.10	102	72 - 128

Sample: 170567 - 0105021830

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC11235 Date Analyzed: 5/15/01
Analyst: JS Preparation Method: N/A Prep Batch: PB09622 Date Prepared: 5/9/01

Param	Flag	Result	Units	Dilution	RDL
CL		<50	mg/Kg	5	0.50

Sample: 170567 - 0105021830

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC11015 Date Analyzed: 5/8/01
Analyst: JJ Preparation Method: N/A Prep Batch: PB09454 Date Prepared: 5/5/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		20900	mg/Kg	1	10

Sample: 170568 - 0105021900

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC11295 Date Analyzed: 5/17/01
Analyst: RS Preparation Method: N/A Prep Batch: PB09662 Date Prepared: 5/17/01

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/Kg as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/Kg as CaCo3	1	1
Bicarbonate Alkalinity		138	mg/Kg as CaCo3	1	1
Total Alkalinity		138	mg/Kg as CaCo3	1	1

Sample: 170568 - 0105021900

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC11133 Date Analyzed: 5/11/01
Analyst: JW Preparation Method: E 5030B Prep Batch: PB09536 Date Prepared: 5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		1.06	mg/Kg	100	0.001
Toluene		2	mg/Kg	100	0.001
Ethylbenzene		<0.1	mg/Kg	100	0.001
M,P,O-Xylene		<0.1	mg/Kg	100	0.001
Total BTEX		3.06	mg/Kg	100	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		9.63	mg/Kg	100	0.10	96	72 - 128
4-BFB		11.1	mg/Kg	100	0.10	111	72 - 128

Sample: 170568 - 0105021900

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC11189 Date Analyzed: 5/9/01
Analyst: JS Preparation Method: N/A Prep Batch: PB09552 Date Prepared: 5/9/01

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		675	μMHOS/cm	1	

Sample: 170568 - 0105021900

Analysis:	Hg, Total	Analytical Method:	S 7471A	QC Batch:	QC11082	Date Analyzed:	5/10/01
Analyst:	SSC	Preparation Method:	N/A	Prep Batch:	PB09503	Date Prepared:	5/10/01

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.19	mg/Kg	1	0.19

Sample: 170568 - 0105021900

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC11178	Date Analyzed:	5/10/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB09567	Date Prepared:	5/9/01

Param	Flag	Result	Units	Dilution	RDL
CL		<50	mg/Kg	5	0.50
Fluoride		9.11	mg/Kg	5	0.20
Nitrate-N		<5.0	mg/Kg	5	0.20
Sulfate		106	mg/Kg	5	0.50

Sample: 170568 - 0105021900

Analysis:	Salts	Analytical Method:	S 6010B	QC Batch:	QC12373	Date Analyzed:	6/27/01
Analyst:	LB	Preparation Method:	E 3005 A	Prep Batch:	PB10481	Date Prepared:	6/27/01

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		14.3	mg/Kg	1	0.50
Dissolved Magnesium		8.30	mg/Kg	1	0.50
Dissolved Potassium		9.47	mg/Kg	1	0.50
Dissolved Sodium		38.8	mg/Kg	1	0.50

Sample: 170568 - 0105021900

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC11259	Date Analyzed:	5/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB09621	Date Prepared:	5/15/01

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		27900	mg/Kg	20	10

Sample: 170568 - 0105021900

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC11015	Date Analyzed:	5/8/01
Analyst:	JJ	Preparation Method:	N/A	Prep Batch:	PB09454	Date Prepared:	5/5/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		16500	mg/Kg	1	10

Sample: 170568 - 0105021900

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC11123	Date Analyzed:	5/12/01
Analyst:	RR	Preparation Method:	E 3010A	Prep Batch:	PB09414	Date Prepared:	5/7/01

Continued ...

... Continued Sample: 170568 Analysis: Total Metals

Param	Flag	Result	Units	Dilution	RDL
Total Arsenic		<5	mg/Kg	1	5
Total Barium		14.8	mg/Kg	1	5
Total Cadmium		<2	mg/Kg	1	2
Total Chromium		<5	mg/Kg	1	5
Total Lead		<5	mg/Kg	1	5
Total Selenium		<5	mg/Kg	1	5
Total Silver		<1	mg/Kg	1	1

Sample: 170568 - 0105021900

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC11251	Date Analyzed:	5/9/01
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB09627	Date Prepared:	5/9/01

Param	Flag	Result	Units	Dilution	RDL
pH		8.7	s.u.	1	1

Quality Control Report
Method Blank

Method Blank

QCBatch: QC11015

Param	Flag	Results	Units	Reporting Limit
TRPHC		<10.0	mg/Kg	10

Method Blank

QCBatch: QC11082

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.19	mg/Kg	0.19

Method Blank

QCBatch: QC11123

Param	Flag	Results	Units	Reporting Limit
Total Arsenic		<5	mg/Kg	5
Total Barium		<5	mg/Kg	5
Total Cadmium		<2	mg/Kg	2
Total Chromium		<5	mg/Kg	5
Total Lead		<5	mg/Kg	5
Total Selenium		<5	mg/Kg	5
Total Silver		<1	mg/Kg	1

Method Blank

QCBatch: QC11133

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.013	mg/Kg	0.001
Toluene		<0.013	mg/Kg	0.001
Ethylbenzene		<0.013	mg/Kg	0.001
M,P,O-Xylene		<0.013	mg/Kg	0.001
Total BTEX		<0.013	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.27	mg/Kg	13	0.10	97	72 - 128
4-BFB		1.11	mg/Kg	13	0.10	85	72 - 128

Method Blank

QCBatch: QC11178

Param	Flag	Results	Units	Reporting Limit
CL		2.91	mg/Kg	0.50
Fluoride		<1.0	mg/Kg	0.20
Nitrate-N		<1.0	mg/Kg	0.20
Sulfate		7.89	mg/Kg	0.50

Method Blank

QCBatch: QC11189

Param	Flag	Results	Units	Reporting Limit
Specific Conductance		6.77	µMHOS/cm	

Method Blank

QCBatch: QC11235

Param	Flag	Results	Units	Reporting Limit
CL		2.99	mg/Kg	0.50

Method Blank

QCBatch: QC11259

Param	Flag	Results	Units	Reporting Limit
Total Dissolved Solids		<10	mg/Kg	10

Method Blank

QCBatch: QC11295

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/Kg as CaCo3	1
Carbonate Alkalinity		<1.0	mg/Kg as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/Kg as CaCo3	1
Total Alkalinity		<4.0	mg/Kg as CaCo3	1

Method Blank

QCBatch: QC12373

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.5	mg/L	0.50
Dissolved Magnesium		<0.5	mg/L	0.50
Dissolved Potassium		<0.5	mg/L	0.50
Dissolved Sodium		<0.5	mg/L	0.50

Quality Control Report
Duplicate Samples

Duplicate

QCBatch: QC11189

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance		2875	2870	μMHOS/cm	1	0	6.1

Duplicate

QCBatch: QC11251

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH		7.5	7.5	s.u.	1	0	0.85

Duplicate

QCBatch: QC11295

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/Kg as CaCo3	1	0	7
Carbonate Alkalinity		<1.0	<1.0	mg/Kg as CaCo3	1	0	7
Bicarbonate Alkalinity	[1]	22	16	mg/Kg as CaCo3	1	31	7
Total Alkalinity		22	16	mg/Kg as CaCo3	1	31	7

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC11015

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
TRPHC	276	252	mg/Kg	1	250	<10.0	110	9	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC11082

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	2.55	2.55	mg/Kg	1	2.50	<0.19	102	0	83 - 124	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC11123

[1] Sample RPD was above acceptable control limits

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Arsenic	60.60	61.20	mg/Kg	1	50	<5	121	0	80 - 120	20
Total Barium	110	111	mg/Kg	1	100	<5	110	0	80 - 120	20
Total Cadmium	27.3	27.40	mg/Kg	1	25	<2	109	0	80 - 120	20
Total Chromium	11	11	mg/Kg	1	10	<5	110	0	80 - 120	20
Total Lead	55.4	55.1	mg/Kg	1	50	<5	110	0	80 - 120	20
Total Selenium	48.50	48.3	mg/Kg	1	50	<5	97	0	80 - 120	20
Total Silver	[2] 4.57	4.64	mg/Kg	1	12.50	<1	36	1	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC11133

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	1.28	1.19	mg/Kg	13	0.10	<0.013	98	7	80 - 120	20
Benzene	1.33	1.29	mg/Kg	13	0.10	<0.013	102	3	80 - 120	20
Toluene	1.25	1.23	mg/Kg	13	0.10	<0.013	96	1	80 - 120	20
Ethylbenzene	1.22	1.2	mg/Kg	13	0.10	<0.013	93	1	80 - 120	20
M,P,O-Xylene	3.7	3.62	mg/Kg	13	0.30	<0.013	94	2	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	1.3	1.25	mg/Kg	13	0.10	100	96	72 - 128
4-BFB	1.23	1.19	mg/Kg	13	0.10	94	91	72 - 128

Laboratory Control Spikes

QCBatch: QC11178

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Bromide	2.59	2.61	mg/Kg	1	2.50	<1.0	103	0	90 - 110	20
CL	[3] 14.16	[4] 14.21	mg/Kg	1	12.50	2.91	113	0	90 - 110	20
Fluoride	[5] 2.73	[6] 2.73	mg/Kg	1	2.50	<1.0	109	0	90 - 110	20
Nitrate-N	[7] 2.56	[8] 2.55	mg/Kg	1	2.50	<1.0	102	0	90 - 110	20
Sulfate	[9] 19.71	[10] 20.02	mg/Kg	1	12.50	7.89	157	1	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC11235

[2]Matrix spike and LCS recoveries were low on Ag due to the Ag falling out of solutions.
[3]Sample master doesn't subtract the blank from the spikes. The correct %EA = 90.
[4]Sample master doesn't subtract the blank from the spikes. The correct %EA = 90.
[5]Sample master doesn't subtract the blank from the spikes. The correct %EA = 109.
[6]Sample master doesn't subtract the blank from the spikes. The correct %EA = 109.
[7]Sample master doesn't subtract the blank from the spikes. The correct %EA = 102.
[8]Sample master doesn't subtract the blank from the spikes. The correct %EA = 102.
[9]Sample master doesn't subtract the blank from the spikes. The correct %EA = 95.
[10]Sample master doesn't subtract the blank from the spikes. The correct %EA = 97.

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	[11] 14.41	[12] 14.40	mg/Kg	1	12.50	2.99	115	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC12373

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	100	102	mg/L	1	100	<0.5	100	1	75 - 125	20
Dissolved Magnesium	95.9	99.3	mg/L	1	100	<0.5	95	3	75 - 125	20
Dissolved Potassium	97.4	99.4	mg/L	1	100	<0.5	97	2	75 - 125	20
Dissolved Sodium	94.9	99.1	mg/L	1	100	<0.5	94	4	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC11015

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
TRPHC	255	271	mg/Kg	1	250	<10.0	102	6	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC11082

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	2.43	2.55	mg/Kg	1	2.50	<0.19	97	4	83 - 124	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC11123

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Arsenic	57.5	58.3	mg/Kg	1	50	<5	115	1	75 - 125	20
Total Barium	211	196	mg/Kg	1	100	88.6	122	13	75 - 125	20
Total Cadmium	26.4	26.4	mg/Kg	1	25	<2	105	0	75 - 125	20

Continued ...

[11] Sample master doesn't subtract the blank from the spikes. The correct %EA = 91.
[12] Sample master doesn't subtract the blank from the spikes. The correct %EA = 91.

... Continued

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Chromium	[13] 24.3	[14] 23	mg/Kg	1	10	11	133	10	75 - 125	20
Total Lead	74.3	78.5	mg/Kg	1	50	29.3	90	8	75 - 125	20
Total Selenium	39	40.6	mg/Kg	1	50	<5	78	4	75 - 125	20
Total Silver	[15] 4.67	4.67	mg/Kg	1	12.50	<1	37	0	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC11133

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Benzene	0.744	0.968	mg/Kg	13	0.10	<0.013	57	177	80 - 120	20
Toluene	0.729	0.969	mg/Kg	13	0.10	<0.013	56	178	80 - 120	20
Ethylbenzene	0.682	0.918	mg/Kg	13	0.10	<0.013	52	178	80 - 120	20
M,P,O-Xylene	2	2.696	mg/Kg	13	0.30	<0.013	51	178	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.976	1.254	mg/Kg	13	0.10	75	96	72 - 128
4-BFB	1.05	1.261	mg/Kg	13	0.10	80	97	72 - 128

Matrix Spikes

QCBatch: QC11178

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	1435.61	1437.97	mg/Kg	1	625	863	91	0	70 - 115	20
Fluoride	[16] 122.26	[17] 126.20	mg/Kg	1	125	<5.0	97	3	77 - 111	20
Nitrate-N	[18] 126.15	[19] 127.18	mg/Kg	1	125	<5.0	100	0	80 - 112	20
Sulfate	[20] 675.59	[21] 682.15	mg/Kg	1	625	53.5	99	1	74 - 118	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC11235

[13]Poor spike recovery due to matrix difficulties. LCS/LCSD show analysis in control.
[14]Poor spike recovery due to matrix difficulties. LCS/LCSD show analysis in control.
[15]Matrix spike and LCS recoveries were low on Ag due to the Ag falling out of solutions.
[16]I spiked the * 50 dilution for 170574, but reported the *5 dilution. The correct %EA = 92.
[17]I spiked the * 50 dilution for 170574, but reported the *5 dilution.
[18]I spiked the * 50 dilution for 170574, but reported the *5 dilution.
[19]I spiked the * 50 dilution for 170574, but reported the *5 dilution.
[20]I spiked the * 50 dilution for 170574, but reported the *5 dilution. The correct %EA = 96.
[21]I spiked the * 50 dilution for 170574, but reported the *5 dilution.

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	773.57	771.37	mg/Kg	1	250	520	101	0	70 - 115	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC12373

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	111	109	mg/L	1	100	14.3	96	2	75 - 125	20
Dissolved Magnesium	99.6	97.6	mg/L	1	100	8.30	91	2	75 - 125	20
Dissolved Potassium	103	100	mg/L	1	100	9.47	93	3	75 - 125	20
Dissolved Sodium	132	127	mg/L	1	100	38.8	93	5	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC11015

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	98.1	98	75 - 125	5/8/01

CCV (2)

QCBatch: QC11015

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	104	104	75 - 125	5/8/01

ICV (1)

QCBatch: QC11015

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	98.6	98	75 - 125	5/8/01

CCV (1)

QCBatch: QC11082

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/Kg	0.005	0.00492	98	80 - 120	5/10/01

ICV (1) QCBatch: QC11082

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/Kg	0.005	0.00513	102	80 - 120	5/10/01

CCV (1) QCBatch: QC11123

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/L	1	1.07	107	90 - 110	5/12/01
Total Barium		mg/L	2	2.09	104	90 - 110	5/12/01
Total Cadmium		mg/L	0.50	0.531	106	90 - 110	5/12/01
Total Chromium		mg/L	0.20	0.209	104	90 - 110	5/12/01
Total Lead		mg/L	1	1.05	105	90 - 110	5/12/01
Total Selenium		mg/L	1	1.04	104	90 - 110	5/12/01
Total Silver		mg/L	0.25	0.251	100	90 - 110	5/12/01

ICV (1) QCBatch: QC11123

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/L	1	1.03	103	90 - 110	5/12/01
Total Barium		mg/L	2	2	100	90 - 110	5/12/01
Total Cadmium		mg/L	0.50	0.501	100	90 - 110	5/12/01
Total Chromium		mg/L	0.20	0.20	100	90 - 110	5/12/01
Total Lead		mg/L	1	1	100	90 - 110	5/12/01
Total Selenium		mg/L	1	1	100	90 - 110	5/12/01
Total Silver		mg/L	0.25	0.249	99	90 - 110	5/12/01

CCV (1) QCBatch: QC11133

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.106	106	85 - 115	5/11/01
Benzene		mg/Kg	0.10	0.103	103	85 - 115	5/11/01
Toluene		mg/Kg	0.10	0.0977	97	85 - 115	5/11/01
Ethylbenzene		mg/Kg	0.10	0.0921	92	85 - 115	5/11/01
M,P,O-Xylene		mg/Kg	0.30	0.272	90	85 - 115	5/11/01

CCV (2)

QCBatch: QC11133

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.0985	98	85 - 115	5/11/01
Benzene		mg/Kg	0.10	0.0988	98	85 - 115	5/11/01
Toluene		mg/Kg	0.10	0.0916	91	85 - 115	5/11/01
Ethylbenzene		mg/Kg	0.10	0.0884	88	85 - 115	5/11/01
M,P,O-Xylene		mg/Kg	0.30	0.265	88	85 - 115	5/11/01

ICV (1)

QCBatch: QC11133

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.10	0.102	102	85 - 115	5/11/01
Benzene		mg/Kg	0.10	0.103	103	85 - 115	5/11/01
Toluene		mg/Kg	0.10	0.0985	98	85 - 115	5/11/01
Ethylbenzene		mg/Kg	0.10	0.0972	97	85 - 115	5/11/01
M,P,O-Xylene		mg/Kg	0.30	0.29	96	85 - 115	5/11/01

CCV (1)

QCBatch: QC11178

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.61	104	90 - 110	5/10/01
CL		mg/L	12.50	11.71	93	90 - 110	5/10/01
Fluoride		mg/L	2.50	2.41	96	90 - 110	5/10/01
Nitrate-N		mg/L	2.50	2.43	97	90 - 110	5/10/01
Sulfate		mg/L	12.50	12.02	96	90 - 110	5/10/01

ICV (1)

QCBatch: QC11178

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.52	100	90 - 110	5/10/01
CL		mg/L	12.50	11.82	94	90 - 110	5/10/01
Fluoride		mg/L	2.50	2.56	102	90 - 110	5/10/01
Nitrate-N		mg/L	2.50	2.43	97	90 - 110	5/10/01
Sulfate		mg/L	12.50	12.24	97	90 - 110	5/10/01

CCV (1)

QCBatch: QC11189

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		µMHOS/cm	1412	1388	98	90 - 110	5/9/01

ICV (1) QCBatch: QC11189

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		µMHOS/cm	1411	1397	99	90 - 110	5/9/01

CCV (1) QCBatch: QC11235

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.96	95	90 - 110	5/15/01

ICV (1) QCBatch: QC11235

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	12.47	99	90 - 110	5/15/01

CCV (1) QCBatch: QC11251

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	-0.1 s.u. - +0.1 s.u.	5/9/01

ICV (1) QCBatch: QC11251

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	-0.1 s.u. - +0.1 s.u.	5/9/01

CCV (1) QCBatch: QC11295

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/Kg as CaCo3	0	<1.0	0	90 - 110	5/17/01
Carbonate Alkalinity		mg/Kg as CaCo3	0	236	0	90 - 110	5/17/01
Bicarbonate Alkalinity		mg/Kg as CaCo3	0	10	0	90 - 110	5/17/01
Total Alkalinity		mg/Kg as CaCo3	250	246	98	90 - 110	5/17/01

ICV (1) QCBatch: QC11295

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/Kg as CaCo3	0	<1.0	0	90 - 110	5/17/01
Carbonate Alkalinity		mg/Kg as CaCo3	0	228	0	90 - 110	5/17/01
Bicarbonate Alkalinity		mg/Kg as CaCo3	0	18	0	90 - 110	5/17/01
Total Alkalinity		mg/Kg as CaCo3	250	246	98	90 - 110	5/17/01

CCV (1) QCBatch: QC12373

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.4	101	90 - 110	6/27/01
Dissolved Magnesium		mg/L	25	24.9	99	90 - 110	6/27/01
Dissolved Potassium		mg/L	25	24.4	97	90 - 110	6/27/01
Dissolved Sodium		mg/L	25	24.5	98	90 - 110	6/27/01

ICV (1) QCBatch: QC12373

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.2	100	95 - 105	6/27/01
Dissolved Magnesium		mg/L	25	25.4	101	95 - 105	6/27/01
Dissolved Potassium		mg/L	25	24.7	98	95 - 105	6/27/01
Dissolved Sodium		mg/L	25	24.8	99	95 - 105	6/27/01

Page 1 of 1

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TraceAnalysis, Inc.

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: OIL CONSERVATION DIV Phone #: 505-476-3487

Address: (Street, City, Zip) 1220 S SAINT FRANCIS DR (SF) NM 87505 Fax #: SANTA FE

Contact Person: WAYNE PRICE

Invoice to: (If different from above)

Project #: Project Name: J ANTHONY RANCH

Project Location: SEC 36-25S-36E Sampler Signature: Wayne Price

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	WATER	SOIL	AIR	SLUDGE	HCL	HNO3	$NaHSO_4$	H_2SO_4	NaOH	ICE	NONE	DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC-MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CHLORIDES	GEN CHEM	Turn Around Time if different from standard	Hold
170563	0105021700	1	4oz		X								X					X	X													X			
64	0105021710	1	"		X								X					X	X													X			
65	010502 1720	1	"		X								X					X	X													X			
66	010502 1800	1	"		X								X					X	X													X			
67	010502 1830	1	"		X								X					X	X													X			
68	010502 1900	1	"		X								X					X	X		X											*X	X		

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
WAYNE PRICE	5/3/01	10:15AM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			[illegible]	5-4-01	[illegible]

LAB USE ONLY
Intact: Y / N
Headspace: Y / N
Temp: 0
Log-in Review:

REMARKS:
* DELETE 7/5/01

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

Carrier # Bus 902 591 413 9

TraceAnalysis , Inc.
General Terms and Conditions

Article 1: General

1.1 The words "we", "us", and "our" refer to TraceAnalysis. You will deliver samples to us for analysis, accompanied, or preceded by, a signed Chain of Custody/Analysis Request defining the scope and timing of our work and stating either the testing criteria you require or identifying the agency to which the results will be submitted.

Article 2: Our General Responsibilities

2.1 We agree to provide the professional services described in this agreement. We will provide you with written reports containing analytical results. In performing our service, we will use that degree of care and skill ordinarily exercised under similar circumstances by reputable members of our profession practicing in the same locality.

2.2 Test and observations will be conducted using test procedures and laboratory protocols as specified in accepted Chain of Custody/Analysis Request. If you direct a manner of making tests that varies from our standard or recommended procedures, you agree to hold us harmless from all claims, damages, and expenses arising out of your direction.

2.3 We will not release information regarding our services for you or any information that we receive from you, except for information that is in the public domain and except as we are required by law.

Article 3: Your General Responsibilities

3.1 On each Chain of Custody/Analysis Request you will designate a representative who has authority to transmit instructions, receive information, and make decisions relative to our work.

3.2 You will respond in a reasonable time to our request for decisions, authorization for changes, additional compensation, or schedule extensions.

3.3 For each Chain of Custody/Analysis Request you will either provide us with the exact methods for analysis of each fraction or you will identify the regulations and agency under which or for which the analysis are to be prepared. If permits, consent orders, work plans, quality assurance plans, or correspondence with regulatory agencies address laboratory requirements, you will provide us with copies of the relevant provisions prior to our initiation of the analyses.

Article 4: Reports and Records

4.1 We will furnish copies of each report to you as specified in the Chain of Custody and Analysis Request. We will retain analytical data for seven years and financial data for three years relating to the services performed following transmittal of our final report.

4.2 If you do not pay for our services as agreed, you agree that we may retain all reports and work not yet delivered to you. You also agree that our work will not be used by you for any purpose unless paid for.

Article 5: Delivery and Acceptance of Samples

5.1 Until we accept delivery of samples by notation on chain of custody documents or otherwise in writing accept the samples, you are responsible for loss of or damage to samples. Until so accepted, we have no responsibility as to samples.

5.2 As to any samples that are suspected of containing hazardous substances or radioactive material, such that would make special handling required, you will specify the suspected or known substances and level and type of radioactive activity. This information will be given to us in writing as a part of the Chain of Custody/Analysis Request and will precede or accompany samples suspected of containing hazardous substances.

5.3 Samples accepted by us remain your property while in our custody. We will retain samples for a period of 14 days following the date of submission or our report. We will extend the retention period if you so direct. Following the retention period we will dispose of non-hazardous samples. We may return highly hazardous, acutely toxic, or radioactive samples and samples containers and residues to you. You agree to accept them.

5.4 Regardless of a prior acceptance, we may refuse acceptance or revoke acceptance of samples if we determine that the samples present a risk to health, safety, or the environment, or that we are not authorized to accept them. If we revoke acceptance of any sample, you will have it removed from our facilities promptly.

Article 6: Changes to Task Orders

6.1 No persons other than the designated representatives for each Chain of Custody/Analysis Request are authorized to act regarding changes to a Chain of Custody/Analysis Request. We will notify you promptly if we identify any activity that we regard as a change to the terms and conditions of a Chain of Custody/Analysis Request. Our notice will include the date, nature, circumstance, and cause of the activity regarded as a change. We will specify the particular elements of project performance for which we may seek an equitable adjustment.

6.2 You will respond to the notice provided for in paragraph 6.1 promptly. Changes may be made to a Chain of Custody/Analysis Request through issuance of an amendment. The amendment will specify the reason for the change and, as appropriate, include any modified budgets, schedules, scope of work, and other necessary provisions.

6.3 Until agreement is reached concerning the proposed change, we may regard the situation as a suspension directed by you.

Article 7: Compensation

7.1 Our pricing for the work is predicated upon your acceptance of the conditions and allocations of risks and responsibilities described in this agreement. You agree to pay for services as stated in our proposal and accepted by you or according to our then current standard pricing documents if there is no other written agreement as to price. An estimate or statement of probable cost is not a firm figure unless stated as such.

7.2 Unless otherwise agreed to elsewhere, you agree to pay invoices within 30 days of receipt unless, within 15 days from receipt of the invoice, you notify us in writing of a particular item that is alleged to be incorrect. You agree to pay the uncontested portions of the invoices within 30 days of receipt. You agree to pay interest on unpaid balances beginning 60 days after receipt of invoice at the rate of 1.5% per month, but not to exceed the maximum rate allowed by law.

7.3 If you direct us to invoice another, we will do so, but you agree to be ultimately responsible for our compensation until you provide us with that third party's written acceptance of all terms of our agreement and until we agree to the substitution.

7.4 You agree to compensate us for our services and expenses if we are required to respond to legal process related to our services for you. Compensable services include hourly charges for all personnel involved in the response and attorney fees reasonably incurred in obtaining advice concerning the response, the preparation of the testifier, and appearances related to the legal process.

7.5 If we are delayed by, or the period of performance is materially extended because of, factors beyond our control, or if project condition or the scope or amount of work change, or if the standards or methods of testing change, we will give you timely notice of the change and we will receive an equitable adjustment of our compensation.

Article 8: Risk Allocation, Disputes, and Damages

8.1 Neither we nor you will be liable to the other for special, incidental, consequential or punitive losses or damages, including but not limited to those arising from delay, loss of use, loss of profits or revenue, or the cost of capital.

8.2 We will not be liable to you for damages unless suit is commenced within two years of injury or loss or within two years of the date of the completion of our services, whichever is earlier. In no event will we be liable to you unless you have notified us of the discovery of the negligent act, error, omission or breach within 30 days of the date of its discovery and unless you have given us an opportunity to investigate and to recommend ways of mitigating your damages.

8.3 In the event you fail to pay us within 90 days following the invoice date, we may consider the default a total breach of our agreement and we may, at our option, terminate all of our duties without liability to you or to others.

8.4 If it is claimed by a third party that we did not complete an acceptable analysis, at your request will seek further review and acceptance of the completed work by the third party and use your best efforts to obtain that acceptance. We will assist you as directed.

8.5 You and we agree that disputes will be submitted to "Alternative Dispute Resolution" (ADR) as a condition precedent to litigation and other remedies provided by law. Each of us agrees to exercise good faith efforts to resolve disputes through mediation unless we both agree upon another ADR procedure. All disputes will be governed by the law of the place where our services are rendered, or if our services are rendered in more than one state, you and we agree that the law of the place that services were first rendered will govern.

8.6 If either of us makes a claim against the other as to issues out of the performance of this agreement, the prevailing party will be entitled to recover its reasonable expenses of litigation, including reasonable attorney's fees. If we bring lawsuit against you to collect our invoiced fees and expenses, you agree to pay our reasonable collection expenses including attorney fees.

Article 9: Indemnities

9.1 We will indemnify and hold you harmless from and against demands, damages, and expenses caused by our negligent acts and omissions and breach of contract and by the negligent acts and omissions and breach of contract of persons for whom we are legally responsible. You will indemnify and hold us harmless from and against demands, damages, and expenses caused by your negligent act and omissions and breach of contract and by the negligent acts and omissions and breach of contract of persons for whom you are legally responsible. These indemnities are subject to specific limitations provided for in this agreement.

Article 10: Miscellaneous Provisions

10.1 This agreement constitutes the entire agreement between you and us, and it supersedes all prior agreements. Any term, condition, prior course of dealing, course of performance, usage of trade, understanding, purchase order conditions, or other agreement purporting to modify, vary, supplement, or explain any provision of this agreement is of no effect until placed in writing and signed by both parties subsequent to the date of this agreement. In no event will the printed terms or conditions stated in a purchase or work order, other than an agreed upon Chain of Custody/Analysis Request, be considered a part of this agreement, even if the document is signed by both of us.

10.2 Neither party will assign this agreement without the express written approval of the other, but we may subcontract laboratory procedures with your approval as we deem necessary to meet our obligations to you.

10.3 If any of the provisions of this agreement are held to be invalid or unenforceable in any respect, the remaining terms will be in full effect and the agreement will be construed as if the invalid or unenforceable matters were never included in it. No waiver of any default will be waiver of any future default.

10.4 Neither you or we will have any liability for nonperformance caused in whole or in part by causes beyond our reasonable control. Such causes include but are not limited to Acts of God, civil unrest and war, labor unrest and strikes, equipment failures, matrix interference, acts of authorities, and failures of subcontractors that could not be reasonably anticipated.

10.5 You may stop our work by giving a written suspension or termination directive, but once work has been suspended, we need not resume work until we agree to change in scope, schedule, and compensation. Upon suspension or termination, we will use reasonable care to preserve samples provided that you agree to compensate us for any additional effort, but we will have no responsibility for meeting holding time limitations after the effective time of a suspension or termination directive. We will be compensated for service rendered and expenses incurred prior to termination that cannot reasonably be avoided.

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: OIL CONSERVATION DIV Phone #: 505-476-3487

Address: (Street, City, Zip) 1220 S SAINT FRANCIS DR (SF) NM 87505 Fax #: SANTA FE

Contact Person: WAYNE PRICE

Invoice to: (If different from above)

Project #: Project Name: J ANTHONY RANCH

Project Location: SEC 36-25S-36E Sampler Signature: Wayne Price

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	NaHSO4	H2SO4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
	0105021700	1	40Z		X								X			
	010502 1710	1	"		X								X			
	010502 1720	1	"		X								X			
	010502 1800	1	"		X								X			
	010502 1830	1	"		X								X			
	010502 1900	1	"		X								X			

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC-MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CHLORIDES	SULFATES			Turn Around Time if different from standard	Hold
	X	X												X	X	X				
	X	X												X	X					
	X	X												X	X					
	X	X												X	X					
	X	X												X	X					
	X	X		X										X	X					

Relinquished by: WAYNE PRICE Date: 5/3/01 Time: 10:15 AM Received by: Date: Time:

Relinquished by: Date: Time: Received by: Date: Time:

Relinquished by: Date: Time: Received for Laboratory by: Date: Time:

LAB USE ONLY

REMARKS:

X DF

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

TraceAnalysis , Inc.
General Terms and Conditions

Article 1: General

1.1 The words "we", "us", and "our" refer to TraceAnalysis. You will deliver samples to us for analysis, accompanied, or preceded by, a signed Chain of Custody/Analysis Request defining the scope and timing of our work and stating either the testing criteria you require or identifying the agency to which the results will be submitted.

Article 2: Our General Responsibilities

2.1 We agree to provide the professional services described in this agreement. We will provide you with written reports containing analytical results. In performing our service, we will use that degree of care and skill ordinarily exercised under similar circumstances by reputable members of our profession practicing in the same locality.

2.2 Test and observations will be conducted using test procedures and laboratory protocols as specified in accepted Chain of Custody/Analysis Request. If you direct a manner of making tests that varies from our standard or recommended procedures, you agree to hold us harmless from all claims, damages, and expenses arising out of your direction.

2.3 We will not release information regarding our services for you or any information that we receive from you, except for information that is in the public domain and except as we are required by law.

Article 3: Your General Responsibilities

3.1 On each Chain of Custody/Analysis Request you will designate a representative who has authority to transmit instructions, receive information, and make decisions relative to our work.

3.2 You will respond in a reasonable time to our request for decisions, authorization for changes, additional compensation, or schedule extensions.

3.3 For each Chain of Custody/Analysis Request you will either provide us with the exact methods for analysis of each fraction or you will identify the regulations and agency under which or for which the analysis are to be prepared. If permits, consent orders, work plans, quality assurance plans, or correspondence with regulatory agencies address laboratory requirements, you will provide us with copies of the relevant provisions prior to our initiation of the analyses.

Article 4: Reports and Records

4.1 We will furnish copies of each report to you as specified in the Chain of Custody and Analysis Request. We will retain analytical data for seven years and financial data for three years relating to the services performed following transmittal of our final report.

4.2 If you do not pay for our services as agreed, you agree that we may retain all reports and work not yet delivered to you. You also agree that our work will not be used by you for any purpose unless paid for.

Article 5: Delivery and Acceptance of Samples

5.1 Until we accept delivery of samples by notation on chain of custody documents or otherwise in writing accept the samples, you are responsible for loss of or damage to samples. Until so accepted, we have no responsibility as to samples.

5.2 As to any samples that are suspected of containing hazardous substances or radioactive material, such that would make special handling required, you will specify the suspected or known substances and level and type of radioactive activity. This information will be given to us in writing as a part of the Chain of Custody/Analysis Request and will precede or accompany samples suspected of containing hazardous substances.

5.3 Samples accepted by us remain your property while in our custody. We will retain samples for a period of 14 days following the date of submission or our report. We will extend the retention period if you so direct. Following the retention period we will dispose of non-hazardous samples. We may return highly hazardous, acutely toxic, or radioactive samples and samples containers and residues to you. You agree to accept them.

5.4 Regardless of a prior acceptance, we may refuse acceptance or revoke acceptance of samples if we determine that the samples present a risk to health, safety, or the environment, or that we are not authorized to accept them. If we revoke acceptance of any sample, you will have it removed from our facilities promptly.

Article 6: Changes to Task Orders

6.1 No persons other than the designated representatives for each Chain of Custody/Analysis Request are authorized to act regarding changes to a Chain of Custody/Analysis Request. We will notify you promptly if we identify any activity that we regard as a change to the terms and conditions of a Chain of Custody/Analysis Request. Our notice will include the date, nature, circumstance, and cause of the activity regarded as a change. We will specify the particular elements of project performance for which we may seek an equitable adjustment.

6.2 You will respond to the notice provided for in paragraph 6.1 promptly. Changes may be made to a Chain of Custody/Analysis Request through issuance of an amendment. The amendment will specify the reason for the change and, as appropriate, include any modified budgets, schedules, scope of work, and other necessary provisions.

6.3 Until agreement is reached concerning the proposed change, we may regard the situation as a suspension directed by you.

Article 7: Compensation

7.1 Our pricing for the work is predicated upon your acceptance of the conditions and allocations of risks and responsibilities described in this agreement. You agree to pay for services as stated in our proposal and accepted by you or according to our then current standard pricing documents if there is no other written agreement as to price. An estimate or statement of probable cost is not a firm figure unless stated as such.

7.2 Unless otherwise agreed to elsewhere, you agree to pay invoices within 30 days of receipt unless, within 15 days from receipt of the invoice, you notify us in writing of a particular item that is alleged to be incorrect. You agree to pay the uncontested portions of the invoices within 30 days of receipt. You agree to pay interest on unpaid balances beginning 60 days after receipt of invoice at the rate of 1.5% per month, but not to exceed the maximum rate allowed by law.

7.3 If you direct us to invoice another, we will do so, but you agree to be ultimately responsible for our compensation until you provide us with that third party's written acceptance of all terms of our agreement and until we agree to the substitution.

7.4 You agree to compensate us for our services and expenses if we are required to respond to legal process related to our services for you. Compensable services include hourly charges for all personnel involved in the response and attorney fees reasonably incurred in obtaining advice concerning the response, the preparation of the testifier, and appearances related to the legal process.

7.5 If we are delayed by, or the period of performance is materially extended because of, factors beyond our control, or if project condition or the scope or amount of work change, or if the standards or methods of testing change, we will give you timely notice of the change and we will receive an equitable adjustment of our compensation.

Article 8: Risk Allocation, Disputes, and Damages

8.1 Neither we nor you will be liable to the other for special, incidental, consequential or punitive losses or damages, including but not limited to those arising from delay, loss of use, loss of profits or revenue, or the cost of capital.

8.2 We will not be liable to you for damages unless suit is commenced within two years of injury or loss or within two years of the date of the completion of our services, whichever is earlier. In no event will we be liable to you unless you have notified us of the discovery of the negligent act, error, omission or breach within 30 days of the date of its discovery and unless you have given us an opportunity to investigate and to recommend ways of mitigating your damages.

8.3 In the event you fail to pay us within 90 days following the invoice date, we may consider the default a total breach of our agreement and we may, at our option, terminate all of our duties without liability to you or to others.

8.4 If it is claimed by a third party that we did not complete an acceptable analysis, at your request will seek further review and acceptance of the completed work by the third party and use your best efforts to obtain that acceptance. We will assist you as directed.

8.5 You and we agree that disputes will be submitted to "Alternative Dispute Resolution" (ADR) as a condition precedent to litigation and other remedies provided by law. Each of us agrees to exercise good faith efforts to resolve disputes through mediation unless we both agree upon another ADR procedure. All disputes will be governed by the law of the place where our services are rendered, or if our services are rendered in more than one state, you and we agree that the law of the place that services were first rendered will govern.

8.6 If either of us makes a claim against the other as to issues out of the performance of this agreement, the prevailing party will be entitled to recover its reasonable expenses of litigation, including reasonable attorney's fees. If we bring lawsuit against you to collect our invoiced fees and expenses, you agree to pay our reasonable collection expenses including attorney fees.

Article 9: Indemnities

9.1 We will indemnify and hold you harmless from and against demands, damages, and expenses caused by our negligent acts and omissions and breach of contract and by the negligent acts and omissions and breach of contract of persons for whom we are legally responsible. You will indemnify and hold us harmless from and against demands, damages, and expenses caused by your negligent act and omissions and breach of contract and by the negligent acts and omissions and breach of contract of persons for whom you are legally responsible. These indemnities are subject to specific limitations provided for in this agreement.

Article 10: Miscellaneous Provisions

10.1 This agreement constitutes the entire agreement between you and us, and it supersedes all prior agreements. Any term, condition, prior course of dealing, course of performance, usage of trade, understanding, purchase order conditions, or other agreement purporting to modify, vary, supplement, or explain any provision of this agreement is of no effect until placed in writing and signed by both parties subsequent to the date of this agreement. In no event will the printed terms or conditions stated in a purchase or work order, other than an agreed upon Chain of Custody/Analysis Request, be considered a part of this agreement, even if the document is signed by both of us.

10.2 Neither party will assign this agreement without the express written approval of the other, but we may subcontract laboratory procedures with your approval as we deem necessary to meet our obligations to you.

10.3 If any of the provisions of this agreement are held to be invalid or unenforceable in any respect, the remaining terms will be in full effect and the agreement will be construed as if the invalid or unenforceable matters were never included in it. No waiver of any default will be waiver of any future default.

10.4 Neither you or we will have any liability for nonperformance caused in whole or in part by causes beyond our reasonable control. Such causes include but are not limited to Acts of God, civil unrest and war, labor unrest and strikes, equipment failures, matrix interference, acts of authorities, and failures of subcontractors that could not be reasonably anticipated.

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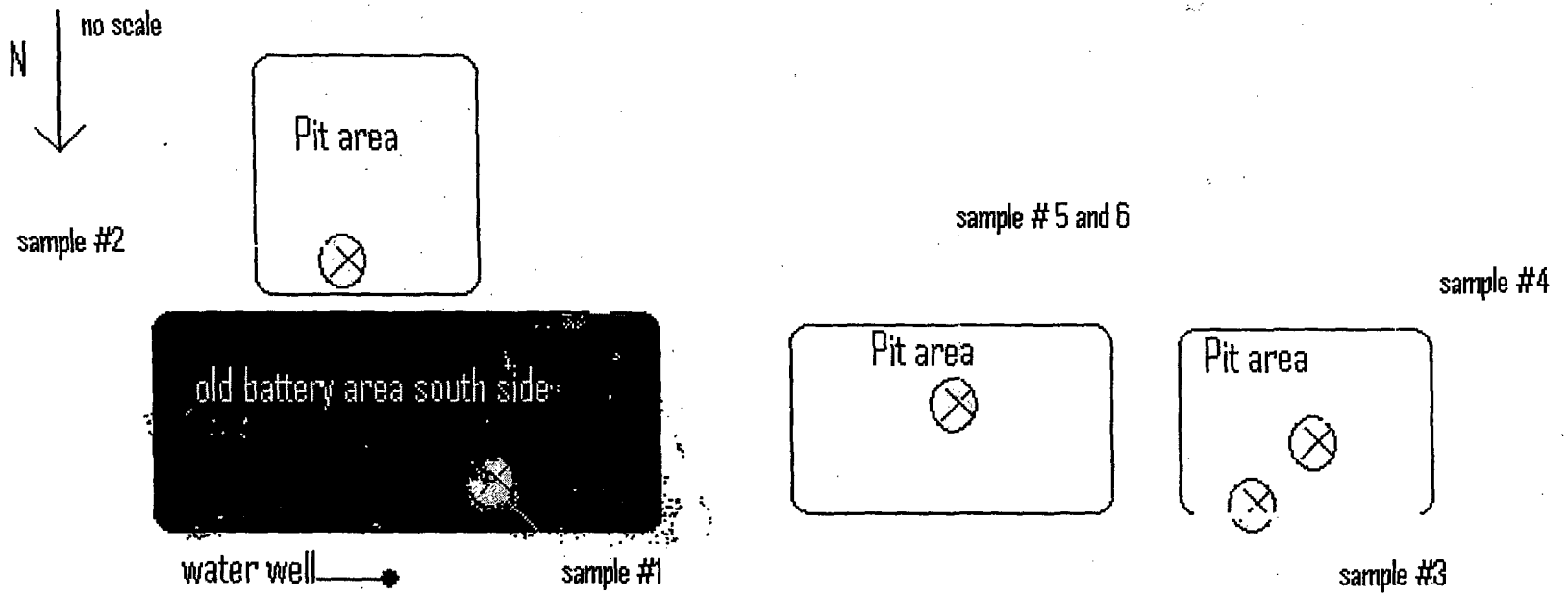

Jay Anthony Ranch- Humble State #3 Tank Battery Site Unit A-Sec 36-Ts25s-R36e

- COC attached- Project name: J Anthony Ranch Project Location: sec 36-25s-36e

- Sample #1 (0105021700) collected from 0-12" deep; located 45 feet SW of water well.
  Sample #2 (0105021710) collected from 0-12" deep; located 255 feet SSE of water well.
  Sample #3 (0105021720) surface sample; located 345 feet west and 51 feet south of water well.
  Sample #4 (0105021800) collected from 4 feet deep; located 363 feet west and 99 feet south of water well.
  Sample #5 (0105021830) collected from 3-4 feet deep; Sample #6 (0105021900) collected from 6-8 feet deep; located 237 feet west and 120 feet south of water

Summary Report

BEFORE EXAMINER
OIL CONSERVATION DIVISION
EXHIBIT NO. 4
CASE NO. 13142

Wayne Price
OCD
1220 S. Saint Francis Dr.
Santa Fe, NM 87505

Report Date: June 5, 2002

Order ID Number: A02051716

Project Number: N/A
Project Name: Maralo
Project Location: Jay Anotheny Ranch

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
197262	North Area-2'	Soil	5/16/02	9:29	5/17/02
197263	North Area-4'-6'	Soil	5/16/02	9:49	5/17/02
197264	North Area-6-8'	Soil	5/16/02	10:00	5/17/02
197265	North Area-10-12'	Soil	5/16/02	10:17	5/17/02
197266	North Area-15'-17'	Soil	5/16/02	10:42	5/17/02
197267	North Area-20-22'	Soil	5/16/02	11:25	5/17/02
197268	North Area-25-27'	Soil	5/16/02	12:20	5/17/02
197269	SW Area 5'	Soil	5/16/02	13:38	5/17/02
197270	SW Area 10'	Soil	5/16/02	13:59	5/17/02
197271	SW Area 15'	Soil	5/16/02	14:13	5/17/02
197272	SW Area 20'	Soil	5/16/02	14:53	5/17/02
197273	SW Area 27'-28'	Soil	5/16/02	15:57	5/17/02

0 This report consists of a total of 3 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX					TPH
Sample - Field Code	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	M,P,O-Xylene (ppm)	Total BTEX (ppm)	TRPHC (ppm)
197262 - North Area-2'	<0.010	<0.010	<0.010	<0.010	<0.010	9040
197263 - North Area-4'-6'	<0.010	<0.010	<0.010	0.016	0.016	8710
197264 - North Area-6-8'	<0.050	<0.050	<0.050	0.277	0.277	10900
197265 - North Area-10-12'	<0.100	<0.100	0.22	0.583	0.803	12900
197266 - North Area-15'-17'	0.0937	<0.050	0.305	0.96	1.36	14900
197267 - North Area-20-22'	0.0723	<0.050	0.151	0.576	0.799	12700
197268 - North Area-25-27'	<0.100	<0.100	0.274	0.921	1.20	12600
197269 - SW Area 5'	0.111	<0.050	0.402	0.741	1.25	18800
197270 - SW Area 10'	0.179	<0.100	0.38	0.792	1.35	25400
197271 - SW Area 15'	0.12	<0.100	0.432	0.672	1.22	13100
197272 - SW Area 20'	<0.010	<0.010	0.038	0.0155	0.0535	56.8
197273 - SW Area 27'-28'	<0.010	<0.010	<0.010	<0.010	<0.010	143

Continued on next page ...

This is only a summary. Please, refer to the complete report package for quality control data.

Sample 197262 continued ...

Param	Flag	Result	Units

Sample: 197262 - North Area-2'

Param	Flag	Result	Units
Chloride		2.66	mg/Kg

Sample: 197263 - North Area-4'-6'

Param	Flag	Result	Units
Chloride		3.12	mg/Kg

Sample: 197264 - North Area-6-8'

Param	Flag	Result	Units
Chloride		7.56	mg/Kg

Sample: 197265 - North Area-10-12'

Param	Flag	Result	Units
Chloride		5.87	mg/Kg

Sample: 197266 - North Area-15'-17'

Param	Flag	Result	Units
Chloride		3.37	mg/Kg

Sample: 197267 - North Area-20-22'

Param	Flag	Result	Units
Chloride		18.1	mg/Kg

Sample: 197268 - North Area-25-27'

Param	Flag	Result	Units
Chloride		66.9	mg/Kg

Sample: 197269 - SW Area 5'

Param	Flag	Result	Units
Chloride		54.1	mg/Kg

Sample: 197270 - SW Area 10'

Param	Flag	Result	Units
Chloride		5.83	mg/Kg

Sample: 197271 - SW Area 15'

Param	Flag	Result	Units
Chloride		<10.0	mg/Kg

Sample: 197272 - SW Area 20'

Param	Flag	Result	Units
Chloride		10.2	mg/Kg

Sample: 197273 - SW Area 27'-28'

Param	Flag	Result	Units
Chloride		10.3	mg/Kg

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Wayne Price
OCD
1220 S. Saint Francis Dr.
Santa Fe, NM 87505

Report Date: June 5, 2002

Order ID Number: A02051716

Project Number: N/A
Project Name: Maralo
Project Location: Jay Anotheny Ranch

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
97262	North Area-2'	Soil	5/16/02	9:29	5/17/02
97263	North Area-4'-6'	Soil	5/16/02	9:49	5/17/02
97264	North Area-6-8'	Soil	5/16/02	10:00	5/17/02
97265	North Area-10-12'	Soil	5/16/02	10:17	5/17/02
97266	North Area-15'-17'	Soil	5/16/02	10:42	5/17/02
97267	North Area-20-22'	Soil	5/16/02	11:25	5/17/02
97268	North Area-25-27'	Soil	5/16/02	12:20	5/17/02
97269	SW Area 5'	Soil	5/16/02	13:38	5/17/02
97270	SW Area 10'	Soil	5/16/02	13:59	5/17/02
97271	SW Area 15'	Soil	5/16/02	14:13	5/17/02
97272	SW Area 20'	Soil	5/16/02	14:53	5/17/02
97273	SW Area 27'-28'	Soil	5/16/02	15:57	5/17/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.
The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 18 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 197262 - North Area-2'

Analysis: BTEX | Analytical Method: S 8021B | QC Batch: QC20528 | Date Analyzed: 5/17/02
Analyst: CG | Preparation Method: S 5035 | Prep Batch: PB19598 | Date Prepared: 5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		<0.010	mg/Kg	10	0.001
Total BTEX		<0.010	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.846	mg/Kg	10	1	84	70 - 130
4-BFB		0.708	mg/Kg	10	1	70	70 - 130

Sample: 197262 - North Area-2'

Analysis: Ion Chromatography (IC) | Analytical Method: E 300.0 | QC Batch: QC20761 | Date Analyzed: 6/5/02
Analyst: JSW | Preparation Method: N/A | Prep Batch: PB19790 | Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		2.66	mg/Kg	2	1

Sample: 197262 - North Area-2'

Analysis: TPH | Analytical Method: E 418.1 | QC Batch: QC20561 | Date Analyzed: 5/24/02
Analyst: KM | Preparation Method: N/A | Prep Batch: PB19623 | Date Prepared: 5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		9040	mg/Kg	100	10

Sample: 197263 - North Area-4'-6'

Analysis: BTEX | Analytical Method: S 8021B | QC Batch: QC20519 | Date Analyzed: 5/17/02
Analyst: CG | Preparation Method: S 5035 | Prep Batch: PB19591 | Date Prepared: 5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		0.016	mg/Kg	10	0.001
Total BTEX		0.016	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.897	mg/Kg	10	1	89	70 - 130
4-BFB		0.749	mg/Kg	10	1	74	70 - 130

Sample: 197263 - North Area-4'-6'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		3.12	mg/Kg	2	1

Sample: 197263 - North Area-4'-6'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC20561 Date Analyzed: 5/24/02
Analyst: KM Preparation Method: N/A Prep Batch: PB19623 Date Prepared: 5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		8710	mg/Kg	100	10

Sample: 197264 - North Area-6-8'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20528 Date Analyzed: 5/17/02
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19598 Date Prepared: 5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.050	mg/Kg	50	0.001
Toluene		<0.050	mg/Kg	50	0.001
Ethylbenzene		<0.050	mg/Kg	50	0.001
M,P,O-Xylene		0.277	mg/Kg	50	0.001
Total BTEX		0.277	mg/Kg	50	0.001
Test Comments	[1]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.747	mg/Kg	50	1	74	70 - 130

Sample: 197264 - North Area-6-8'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		7.56	mg/Kg	5	1

[1] Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of 0.0318 which is lower than the RDL but greater than the MDL of 0.01183.

Sample: 197264 - North Area-6-8'

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC20561	Date Analyzed:	5/24/02
Analyst:	KM	Preparation Method:	N/A	Prep Batch:	PB19623	Date Prepared:	5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		10900	mg/Kg	30	10

Sample: 197265 - North Area-10-12'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20528	Date Analyzed:	5/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19598	Date Prepared:	5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.100	mg/Kg	100	0.001
Toluene		<0.100	mg/Kg	100	0.001
Ethylbenzene		0.22	mg/Kg	100	0.001
M,P,O-Xylene		0.583	mg/Kg	100	0.001
Total BTEX		0.803	mg/Kg	100	0.001
Test Comments	[2]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.963	mg/Kg	100	1	96	70 - 130
4-BFB	[3]	2.24	mg/Kg	50	1	224	70 - 130

Sample: 197265 - North Area-10-12'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC20761	Date Analyzed:	6/5/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB19790	Date Prepared:	6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		5.87	mg/Kg	5	1

Sample: 197265 - North Area-10-12'

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC20561	Date Analyzed:	5/24/02
Analyst:	KM	Preparation Method:	N/A	Prep Batch:	PB19623	Date Prepared:	5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		12900	mg/Kg	30	10

Sample: 197266 - North Area-15'-17'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20528	Date Analyzed:	5/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19598	Date Prepared:	5/17/02

[2]Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of 0.0202 which is lower than the RDL but greater than the MDL of 0.0237.

[3]High surrogate recovery due to peak interference.

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.0937	mg/Kg	50	0.001
Toluene		<0.050	mg/Kg	50	0.001
Ethylbenzene		0.305	mg/Kg	50	0.001
M,P,O-Xylene		0.96	mg/Kg	50	0.001
Total BTEX		1.36	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.9	mg/Kg	50	1	90	70 - 130
4-BFB	[4]	3.32	mg/Kg	100	1	332	70 - 130

Sample: 197266 - North Area-15'-17'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		3.37	mg/Kg	2	1

Sample: 197266 - North Area-15'-17'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC20561 Date Analyzed: 5/24/02
Analyst: KM Preparation Method: N/A Prep Batch: PB19623 Date Prepared: 5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		14900	mg/Kg	30	10

Sample: 197267 - North Area-20-22'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20528 Date Analyzed: 5/17/02
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19598 Date Prepared: 5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.0723	mg/Kg	50	0.001
Toluene		<0.050	mg/Kg	50	0.001
Ethylbenzene		0.151	mg/Kg	50	0.001
M,P,O-Xylene		0.576	mg/Kg	50	0.001
Total BTEX		0.799	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[5]	0.506	mg/Kg	50	1	50	70 - 130
4-BFB	[6]	2.59	mg/Kg	50	1	259	70 - 130

[4] High surrogate recovery due to peak interference.
[5] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[6] High surrogate recovery due to peak interference.

Sample: 197267 - North Area-20-22'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		18.1	mg/Kg	2	1

Sample: 197267 - North Area-20-22'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC20561 Date Analyzed: 5/24/02
Analyst: KM Preparation Method: N/A Prep Batch: PB19623 Date Prepared: 5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		12700	mg/Kg	30	10

Sample: 197268 - North Area-25-27'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20528 Date Analyzed: 5/17/02
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19598 Date Prepared: 5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.100	mg/Kg	100	0.001
Toluene		<0.100	mg/Kg	100	0.001
Ethylbenzene		0.274	mg/Kg	100	0.001
M,P,O-Xylene		0.921	mg/Kg	100	0.001
Total BTEX		1.20	mg/Kg	100	0.001
Test Comments	[7]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[8]	0.557	mg/Kg	100	1	55	70 - 130
4-BFB	[9]	3.19	mg/Kg	50	1	319	70 - 130

Sample: 197268 - North Area-25-27'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		66.9	mg/Kg	5	1

Sample: 197268 - North Area-25-27'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC20561 Date Analyzed: 5/24/02
Analyst: KM Preparation Method: N/A Prep Batch: PB19623 Date Prepared: 5/19/02

[7] Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of 0.0801 which is lower than the RDL but greater than the MDL of 0.02366.
[8] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[9] High surrogate recovery due to peak interference.

Param	Flag	Result	Units	Dilution	RDL
TRPHC		12600	mg/Kg	30	10

Sample: 197269 - SW Area 5'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20528 Date Analyzed: 5/17/02
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19598 Date Prepared: 5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.111	mg/Kg	50	0.001
Toluene		<0.050	mg/Kg	50	0.001
Ethylbenzene		0.402	mg/Kg	50	0.001
M,P,O-Xylene		0.741	mg/Kg	50	0.001
Total BTEX		1.25	mg/Kg	50	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[10]	0.381	mg/Kg	50	1	38	70 - 130
4-BFB	[11]	3.07	mg/Kg	100	1	307	70 - 130

Sample: 197269 - SW Area 5'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		54.1	mg/Kg	50	1

Sample: 197269 - SW Area 5'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC20561 Date Analyzed: 5/24/02
Analyst: KM Preparation Method: N/A Prep Batch: PB19623 Date Prepared: 5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		18800	mg/Kg	30	10

Sample: 197270 - SW Area 10'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20528 Date Analyzed: 5/17/02
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19598 Date Prepared: 5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.179	mg/Kg	100	0.001
Toluene		<0.100	mg/Kg	100	0.001
Ethylbenzene		0.38	mg/Kg	100	0.001
M,P,O-Xylene		0.792	mg/Kg	100	0.001
Total BTEX		1.35	mg/Kg	100	0.001

[10] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[11] High surrogate recovery due to peak interference.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[12]	0.463	mg/Kg	100	1	46	70 - 130
4-BFB	[13]	3.09	mg/Kg	50	1	309	70 - 130

Sample: 197270 - SW Area 10'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		5.83	mg/Kg	5	1

Sample: 197270 - SW Area 10'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC20562 Date Analyzed: 5/24/02
Analyst: KM Preparation Method: N/A Prep Batch: PB19623 Date Prepared: 5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		25400	mg/Kg	30	10

Sample: 197271 - SW Area 15'

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC20528 Date Analyzed: 5/17/02
Analyst: CG Preparation Method: S 5035 Prep Batch: PB19598 Date Prepared: 5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.12	mg/Kg	100	0.001
Toluene		<0.100	mg/Kg	100	0.001
Ethylbenzene		0.432	mg/Kg	100	0.001
M,P,O-Xylene		0.672	mg/Kg	100	0.001
Total BTEX		1.22	mg/Kg	100	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[14]	0.661	mg/Kg	100	1	66	70 - 130
4-BFB	[15]	2.33	mg/Kg	100	1	233	70 - 130

Sample: 197271 - SW Area 15'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20761 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19790 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		<10.0	mg/Kg	10	1

[12]Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[13]High surrogate recovery due to peak interference.
[14]Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[15]High surrogate recovery due to peak interference.

Sample: 197271 - SW Area 15'

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC20562	Date Analyzed:	5/24/02
Analyst:	KM	Preparation Method:	N/A	Prep Batch:	PB19623	Date Prepared:	5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		13100	mg/Kg	30	10

Sample: 197272 - SW Area 20'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20528	Date Analyzed:	5/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19598	Date Prepared:	5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		0.038	mg/Kg	10	0.001
M,P,O-Xylene		0.0155	mg/Kg	10	0.001
Total BTEX		0.0535	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[16]	0.405	mg/Kg	10	1	40	70 - 130
4-BFB	[17]	0.368	mg/Kg	100	1	36	70 - 130

Sample: 197272 - SW Area 20'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC20760	Date Analyzed:	6/5/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB19791	Date Prepared:	6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		10.2	mg/Kg	10	1

Sample: 197272 - SW Area 20'

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC20562	Date Analyzed:	5/24/02
Analyst:	KM	Preparation Method:	N/A	Prep Batch:	PB19623	Date Prepared:	5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		56.8	mg/Kg	1	10

Sample: 197273 - SW Area 27'-28'

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC20528	Date Analyzed:	5/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB19598	Date Prepared:	5/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.010	mg/Kg	10	0.001

Continued ...

[16] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[17] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

... *Continued* Sample: 197273 Analysis: BTEX

Param	Flag	Result	Units	Dilution	RDL
Toluene		<0.010	mg/Kg	10	0.001
Ethylbenzene		<0.010	mg/Kg	10	0.001
M,P,O-Xylene		<0.010	mg/Kg	10	0.001
Total BTEX		<0.010	mg/Kg	10	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT	[18]	0.562	mg/Kg	10	1	56	70 - 130
4-BFB	[19]	0.477	mg/Kg	10	1	47	70 - 130

Sample: 197273 - SW Area 27'-28'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC20760 Date Analyzed: 6/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB19791 Date Prepared: 6/4/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		10.3	mg/Kg	10	1

Sample: 197273 - SW Area 27'-28'

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC20562 Date Analyzed: 5/24/02
Analyst: KM Preparation Method: N/A Prep Batch: PB19623 Date Prepared: 5/19/02

Param	Flag	Result	Units	Dilution	RDL
TRPHC		143	mg/Kg	1	10

[18] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.
[19] Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

Quality Control Report
Method Blank

Method Blank

QCBatch: QC20519

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.010	mg/Kg	0.001
Toluene		<0.010	mg/Kg	0.001
Ethylbenzene		<0.010	mg/Kg	0.001
M,P,O-Xylene		<0.010	mg/Kg	0.001
Total BTEX		<0.010	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.923	mg/Kg	10	1	92	70 - 130
4-BFB		0.835	mg/Kg	10	1	83	70 - 130

Method Blank

QCBatch: QC20528

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.010	mg/Kg	0.001
Toluene		<0.010	mg/Kg	0.001
Ethylbenzene		<0.010	mg/Kg	0.001
M,P,O-Xylene		<0.010	mg/Kg	0.001
Total BTEX		<0.010	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.948	mg/Kg	10	1	94	70 - 130
4-BFB		0.812	mg/Kg	10	1	81	70 - 130

Method Blank

QCBatch: QC20561

Param	Flag	Results	Units	Reporting Limit
TRPHC		<25.0	mg/Kg	10

Method Blank

QCBatch: QC20562

Param	Flag	Results	Units	Reporting Limit
TRPHC		<25.0	mg/Kg	10

Method Blank

QCBatch: QC20760

Param	Flag	Results	Units	Reporting Limit
Chloride		12.82	mg/Kg	1

Method Blank

QCBatch: QC20761

Param	Flag	Results	Units	Reporting Limit
Chloride		<12.82	mg/Kg	1

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC20519

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.966	0.958	mg/Kg	10	1	<0.010	96	0	70 - 130	20
Benzene	0.966	0.966	mg/Kg	10	1	<0.010	96	0	70 - 130	20
Toluene	0.958	0.957	mg/Kg	10	1	<0.010	95	0	70 - 130	20
Ethylbenzene	0.932	0.945	mg/Kg	10	1	<0.010	93	1	70 - 130	20
M,P,O-Xylene	2.91	2.83	mg/Kg	10	3	<0.010	97	2	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.924	0.925	mg/Kg	10	1	92	92	70 - 130
4-BFB	0.889	0.816	mg/Kg	10	1	88	81	70 - 130

Laboratory Control Spikes

QCBatch: QC20528

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.873	0.87	mg/Kg	10	1	<0.010	87	0	70 - 130	20
Benzene	0.988	0.975	mg/Kg	10	1	<0.010	98	1	70 - 130	20
Toluene	0.968	0.906	mg/Kg	120	1	<0.010	96	6	70 - 130	20
Ethylbenzene	0.96	0.916	mg/Kg	10	1	<0.010	96	4	70 - 130	20
M,P,O-Xylene	3.02	2.9	mg/Kg	10	3	<0.010	100	4	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.903	0.89	mg/Kg	10	1	90	89	70 - 130
4-BFB	0.882	0.934	mg/Kg	10	1	88	93	70 - 130

Laboratory Control Spikes

QCBatch: QC20561

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
TRPHC	268	305	mg/Kg	1	250	<25.0	107	12	74 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC20562

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
TRPHC	268	305	mg/Kg	1	250	<25.0	107	12	74 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC20760

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	[20] 24.02	[21] 23.88	mg/Kg	1	12.50	12.82	192	0	90 - 110	20
Sulfate	[22] 25.58	[23] 25.59	mg/Kg	1	12.50	14.34	204	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC20761

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	[24] 24.02	[25] 23.9	mg/Kg	1	12.50	<12.82	192	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC20519

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Benzene	0.868	0.839	mg/Kg	10	1	<0.010	86	3	70 - 130	20

Continued ...

[20]The Soil blank should be subracted from the spikes; giving a %EA of 90
[21]The Soil blank should be subracted from the spikes; giving a %EA of 90
[22]The Soil blank should be subracted from the spikes; giving a %EA of 90
[23]The Soil blank should be subracted from the spikes; giving a %EA of 90
[24]The Soil blank should be subracted from the spikes; giving a %EA of 90
[25]The Soil blank should be subracted from the spikes; giving a %EA of 90

... Continued

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Toluene	0.839	0.854	mg/Kg	10	1	<0.010	83	1	70 - 130	20
Ethylbenzene	0.857	0.849	mg/Kg	10	1	<0.010	85	0	70 - 130	20
M,P,O-Xylene	2.74	2.69	mg/Kg	10	3	0.016	90	1	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.834	[26] 0.549	mg/Kg	10	1	83	54	70 - 130
4-BFB	[27] 0.682	[28] 0.475	mg/Kg	10	1	68	47	70 - 130

Matrix Spikes

QCBatch: QC20528

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Benzene	0.938	0.936	mg/Kg	10	1	<0.010	93	0	70 - 130	20
Toluene	0.92	0.915	mg/Kg	10	1	<0.010	92	0	70 - 130	20
Ethylbenzene	0.908	0.92	mg/Kg	10	1	<0.010	90	1	70 - 130	20
M,P,O-Xylene	2.92	2.76	mg/Kg	10	3	<0.010	97	5	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.781	0.88	mg/Kg	10	1	78	88	70 - 130
4-BFB	0.714	0.725	mg/Kg	10	1	71	72	70 - 130

Matrix Spikes

QCBatch: QC20561

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
TRPHC	40200	40500	mg/Kg	1	250	44300	-1640	-7	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC20562

[26] Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.
[27] Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.
[28] Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
TRPHC	399	337	mg/Kg	1	250	143	102	27	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC20760

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	30400	30377	mg/Kg	1	12500	19500	87	0	35 - 144	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC20761

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	589.14	590.11	mg/Kg	1	625	54.1	85	0	35 - 144	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC20519

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0979	97	85 - 115	5/17/02
Benzene		mg/L	0.10	0.0905	90	85 - 115	5/17/02
Toluene		mg/L	0.10	0.0926	92	85 - 115	5/17/02
Ethylbenzene		mg/L	0.10	0.0865	86	85 - 115	5/17/02
M,P,O-Xylene		mg/L	0.30	0.279	93	85 - 115	5/17/02

ICV (1)

QCBatch: QC20519

aram	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0942	94	85 - 115	5/17/02
enzene		mg/L	0.10	0.0965	96	85 - 115	5/17/02
oluene		mg/L	0.10	0.0958	95	85 - 115	5/17/02
thylbenzene		mg/L	0.10	0.0899	89	85 - 115	5/17/02

Continued ...

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
M,P,O-Xylene		mg/L	0.30	0.293	97	85 - 115	5/17/02

CCV (1)

QCBatch: QC20528

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0925	92	85 - 115	5/17/02
Benzene		mg/L	0.10	0.0939	93	85 - 115	5/17/02
Toluene		mg/L	0.10	0.0936	93	85 - 115	5/17/02
Ethylbenzene		mg/L	0.10	0.091	91	85 - 115	5/17/02
M,P,O-Xylene		mg/L	0.30	0.285	95	85 - 115	5/17/02

CCV (2)

QCBatch: QC20528

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0895	89	85 - 115	5/17/02
Benzene		mg/L	0.10	0.0952	95	85 - 115	5/17/02
Toluene		mg/L	0.10	0.0892	89	85 - 115	5/17/02
Ethylbenzene		mg/L	0.10	0.093	93	85 - 115	5/17/02
M,P,O-Xylene		mg/L	0.30	0.293	97	85 - 115	5/17/02

ICV (1)

QCBatch: QC20528

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.0871	87	85 - 115	5/17/02
Benzene		mg/L	0.10	0.0929	92	85 - 115	5/17/02
Toluene		mg/L	0.10	0.0965	96	85 - 115	5/17/02
Ethylbenzene		mg/L	0.10	0.0961	96	85 - 115	5/17/02
M,P,O-Xylene		mg/L	0.30	0.307	102	85 - 115	5/17/02

CCV (1)

QCBatch: QC20561

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	109	109	80 - 120	5/24/02

CCV (2) QCBatch: QC20561

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	107	107	80 - 120	5/24/02

ICV (1) QCBatch: QC20561

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	111	111	80 - 120	5/24/02

CCV (1) QCBatch: QC20562

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	109	109	80 - 120	5/24/02

CCV (2) QCBatch: QC20562

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	107	107	80 - 120	5/24/02

ICV (1) QCBatch: QC20562

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	111	111	80 - 120	5/24/02

CCV (1) QCBatch: QC20760

aram	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
hloride		mg/L	12.50	11.19	89	90 - 110	6/5/02
ulfate		mg/L	12.50	11.25	90	90 - 110	6/5/02

ICV (1) QCBatch: QC20760

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.19	89	90 - 110	6/5/02
Sulfate		mg/L	12.50	11.38	91	90 - 110	6/5/02

CCV (1) QCBatch: QC20761

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.19	89	90 - 110	6/5/02

ICV (1) QCBatch: QC20761

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.59	92	90 - 110	6/5/02

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon,Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

TRACE Order ID #: A0205171160

Company Name: NM OCD
Phone #: 505-476-3487
Address: (Street, City, Zip) 1220 S SAINT FRANCIS DR. SANTA FE NM 87505
Fax #:
Contact Person: WAYNE PRICE
Invoice to: (If different from above)
Project #:
Project Name: MARALO
Project Location: JAY ANOTHENY RANCH - 32° 5' 25.60" N / 103° 12' 52.09" W
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
602	NORTH AREA - 2'	1	4oz		X							X		5/16/02	0929
603	" " 4'-6'	1	"		X							X		"	0949
604	" " 6-8'	1	"		X							X		"	1000
605	" " 10-12'	1	"		X							X		"	1017
606	" " 15-17'	1	"		X							X		"	1042
607	" " 20-22'	1	"		X							X		"	1125
608	" " 25-27'	1	"		X							X		"	1220

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CHLORIDES					Turn Around Time if different from standard	Hold
	X	X													X						
	X	X													X						
	X	X													X						
	X	X													X						
	X	X													X						
	X	X													X						
	X	X													X						

Relinquished by: WAYNE PRICE Date: 5/16/02 Time: 5:20PM
Received by: Date: Time:
Relinquished by: Date: Time:
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Date: 5/17/02 Time: 10:20

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp. 2°
Log in Review

REMARKS: 6/6F/P

☐ Check If Special Reporting Limits Are Needed

Carrier # Bus 902 878 0354

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

General Terms and Conditions

Article 1: General

1.1 The words "we", "us", and "our" refer to TraceAnalysis. You will deliver samples to us for analysis, accompanied, or preceded by, a signed Chain of Custody/Analysis Request defining the scope and timing of our work and stating either the testing criteria you require or identifying the agency to which the results will be submitted.

Article 2: Our General Responsibilities

2.1 We agree to provide the professional services described in this agreement. We will provide you with written reports containing analytical results. In performing our service, we will use that degree of care and skill ordinarily exercised under similar circumstances by reputable members of our profession practicing in the same locality.

2.2 Test and observations will be conducted using test procedures and laboratory protocols as specified in accepted Chain of Custody/Analysis Request. If you direct a manner of making tests that varies from our standard or recommended procedures, you agree to hold us harmless from all claims, damages, and expenses arising out of your direction.

2.3 We will not release information regarding our services for you or any information that we receive from you, except for information that is in the public domain and except as we are required by law.

Article 3: Your General Responsibilities

3.1 On each Chain of Custody/Analysis Request you will designate a representative who has authority to transmit instructions, receive information, and make decisions relative to our work.

3.2 You will respond in a reasonable time to our request for decisions, authorization for changes, additional compensation, or schedule extensions.

3.3 For each Chain of Custody/Analysis Request you will either provide us with the exact methods for analysis of each fraction or you will identify the regulations and agency under which or for which the analysis are to be prepared. If permits, consent orders, work plans, quality assurance plans, or correspondence with regulatory agencies address laboratory requirements, you will provide us with copies of the relevant provisions prior to our initiation of the analyses.

Article 4: Reports and Records

4.1 We will furnish copies of each report to you as specified in the Chain of Custody and Analysis Request. We will retain analytical data for seven years and financial data for three years relating to the services performed following transmittal of our final report.

4.2 If you do not pay for our services as agreed, you agree that we may retain all reports and work not yet delivered to you. You also agree that our work will not be used by you for any purpose unless paid for.

Article 5: Delivery and Acceptance of Samples

5.1 Until we accept delivery of samples by notation on chain of custody documents or otherwise in writing accept the samples, you are responsible for loss of or damage to samples. Until so accepted, we have no responsibility as to samples.

5.2 As to any samples that are suspected of containing hazardous substances or radioactive material, such that would make special handling required, you will specify the suspected or known substances, and level and type of radioactive activity. This information will be given to us in writing as a part of the Chain of Custody/Analysis Request and will precede or accompany samples suspected of containing hazardous substances.

5.3 Samples accepted by us remain your property while in our custody. We will retain samples for a period of 14 days following the date of submission of our report. We will extend the retention period if you so direct. Following the retention period we will dispose of non-hazardous samples. We may return highly hazardous, acutely toxic, or radioactive samples and samples containers and residues to you. You agree to accept them.

5.4 Regardless of a prior acceptance, we may refuse acceptance or revoke acceptance of samples if we determine that the samples present a risk to health, safety, or the environment, or that we are not authorized to accept them. If we revoke acceptance of any sample, you will have it removed from our facilities promptly.

Article 6: Changes to Task Orders

6.1 No persons other than the designated representatives for each Chain of Custody/Analysis Request are authorized to act regarding changes to a Chain of Custody/Analysis Request. We will notify you promptly if we identify any activity that we regard as a change to the terms and conditions of a Chain of Custody/Analysis Request. Our notice will include the date, nature, circumstance, and cause of the activity regarded as a change. We will specify the particular elements of project performance for which we may seek an equitable adjustment.

6.2 You will respond to the notice provided for in paragraph 6.1 promptly. Changes may be made to a Chain of Custody/Analysis Request through issuance of an amendment. The amendment will specify the reason for the change and, as appropriate, include any modified budgets, schedules, scope of work, and other necessary provisions.

6.3 Until agreement is reached concerning the proposed change, we may regard the situation as a suspension directed by you.

Article 7: Compensation

7.1 Our pricing for the work is predicated upon your acceptance of the conditions and allocations of risks and responsibilities described in this agreement. You agree to pay for services as stated in our proposal and accepted by you or according to our then current standard pricing documents if there is no other written agreement as to price. An estimate or statement of probable cost is not a firm figure unless stated as such.

7.2 Unless otherwise agreed to elsewhere, you agree to pay invoices within 30 days of receipt unless, within 15 days from receipt of the invoice, you notify us in writing of a particular item that is alleged to be incorrect. You agree to pay the uncontested portions of the invoices within 30 days of receipt. You agree to pay interest on unpaid balances beginning 60 days after receipt of invoice at the rate of 1.5% per month, but not to exceed the maximum rate allowed by law.

7.3 If you direct us to invoice another, we will do so, but you agree to be ultimately responsible for our compensation until you provide us with that third party's written acceptance of all terms of our agreement and until we agree to the substitution.

7.4 You agree to compensate us for our services and expenses if we are required to respond to legal process related to our services for you. Compensable services include hourly charges for all personnel involved in the response and attorney fees reasonably incurred in obtaining advice concerning the response, the preparation of the testifier, and appearances related to the legal process.

7.5 If we are delayed by, or the period of performance is materially extended because of, factors beyond our control, or if project condition or the scope or amount of work change, or if the standards or methods of testing change, we will give you timely notice of the change and we will receive an equitable adjustment of our compensation.

Article 8: Risk Allocation, Disputes, and Damages

8.1 Neither we nor you will be liable to the other for special, incidental, consequential or punitive losses or damages, including but not limited to those arising from delay, loss of use, loss of profits or revenue, or the cost of capital.

8.2 We will not be liable to you for damages unless suit is commenced within two years of injury or loss or within two years of the date of the completion of our services, whichever is earlier. In no event will we be liable to you unless you have notified us of the discovery of the negligent act, error, omission or breach within 30 days of the date of its discovery and unless you have given us an opportunity to investigate and to recommend ways of mitigating your damages.

8.3 In the event you fail to pay us within 90 days following the invoice date, we may consider the default a total breach of our agreement and we may, at our option, terminate all of our duties without liability to you or to others.

8.4 If it is claimed by a third party that we did not complete an acceptable analysis, at your request we will seek further review and acceptance of the completed work by the third party and use your best efforts to obtain that acceptance. We will assist you as directed.

8.5 You and we agree that disputes will be submitted to "Alternative Dispute Resolution" (ADR) as a condition precedent to litigation and other remedies provided by law. Each of us agrees to exercise good faith efforts to resolve disputes through mediation unless we both agree upon another ADR procedure. All disputes will be governed by the law of the place where our services are rendered, or if our services are rendered in more than one state, you and we agree that the law of the place that services were first rendered will govern.

8.6 If either of us makes a claim against the other as to issues out of the performance of this agreement, the prevailing party will be entitled to recover its reasonable expenses of litigation, including reasonable attorney's fees. If we bring lawsuit against you to collect our invoiced fees and expenses, you agree to pay our reasonable collection expenses including attorney fees.

Article 9: Indemnities

9.1 We will indemnify and hold you harmless from and against demands, damages, and expenses caused by our negligent acts and omissions and breach of contract and by the negligent acts and omissions and breach of contract of persons for whom we are legally responsible. You will indemnify and hold us harmless from and against demands, damages, and expenses caused by your negligent act and omissions and breach of contract and by the negligent acts and omissions and breach of contract of persons for whom you are legally responsible. These indemnities are subject to specific limitations provided for in this agreement.

Article 10: Miscellaneous Provisions

10.1 This agreement constitutes the entire agreement between you and us, and it supersedes all prior agreements. Any term, condition, prior course of dealing, course of performance, usage of trade, understanding, purchase order conditions, or other agreement purporting to modify, vary, supplement, or explain any provision of this agreement is of no effect until placed in writing and signed by both parties subsequent to the date of this agreement. In no event will the printed terms or conditions stated in a purchase or work order, other than an agreed upon Chain of Custody/Analysis Request, be considered a part of this agreement, even if the document is signed by both of us.

10.2 Neither party will assign this agreement without the express written approval of the other, but we may subcontract laboratory procedures with your approval as we deem necessary to meet our obligations to you.

10.3 If any of the provisions of this agreement are held to be invalid or unenforceable in any respect, the remaining terms will be in full effect and the agreement will be construed as if the invalid or unenforceable matters were never included in it. No waiver of any default will be waiver of any future default.

10.4 Neither you or we will have any liability for nonperformance caused in whole or in part by causes beyond our reasonable control. Such causes include but are not limited to Acts of God, civil unrest and war, labor unrest and strikes, equipment failures, matrix interference, acts of authorities, and failures of subcontractors that could not be reasonably anticipated.

10.5 You may stop our work by giving a written suspension or termination directive, but once work has been suspended, we need not resume work until we agree to change in scope, schedule, and compensation. Upon suspension or termination, we will use reasonable care to preserve samples provided that you agree to compensate us for any additional effort, but we will have no responsibility for meeting holding time limitations after the effective time of a suspension or termination directive. We will be compensated for service rendered and expenses incurred prior to termination that cannot reasonably be avoided.

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon,Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #: 402051216

Company Name: NMOCD
Phone #: 505-476-3487
Address: (Street, City, Zip) 1220 S. SAINT FRANCIS SANTA Fe NM 87505
Fax #:
Contact Person: WAYNE PRICE
Invoice to: (If different from above)
Project #:
Project Name: MARALO
Project Location: RAY ANOTHENY RANCH-
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
1970M	SW AREA 5'	1	4oz		X							X		5/16/02	1338
70	" " 10'	1	"		X							X		"	1359
71	" " 15'	1	"		X							X		"	1413
72	" " 20'	1	"		X							X		"	1453
73	" " ~~25~~ 27-28'	1	"		X							X		"	1557
	SOUTH AREA 5'	1	"		X							X		"	
	" " 10'	1	"		X							X		"	
	" " 15'	1	"		X							X		"	
	" " ~~20~~ 27-28'	1	"		X							X		"	
	" " 25'	1	"		X							X		"	

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CHLORIDES					Turn Around Time if different from standard	Hold
	X	X													X						
	X	X													X						
	X	X													X						
	X	X													X						
	X	X													X						
	X	X													X						
	X	X													X						
	X	X													X						
	X	X													X						

Relinquished by: WAYNE PRICE Date: 5/16/02 Time: 5:20PM
Received by: Date: Time:

Relinquished by: Date: Time:
Received by: Date: Time:

Relinquished by: Date: Time:
Received at Laboratory by: Date: Time:

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp °C
Log-In Review

REMARKS:

☐ Check If Special Reporting Limits Are Needed

Carrier # BUS 902878 035 4

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

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2.2 Test and observations will be conducted using test procedures and laboratory protocols as specified in accepted Chain of Custody/Analysis Request. If you direct a manner of making tests that varies from our standard or recommended procedures, you agree to hold us harmless from all claims, damages, and expenses arising out of your direction.

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7.2 Unless otherwise agreed to elsewhere, you agree to pay invoices within 30 days of receipt unless, within 15 days from receipt of the invoice, you notify us in writing of a particular item that is alleged to be incorrect. You agree to pay the uncontested portions of the invoices within 30 days of receipt. You agree to pay interest on unpaid balances beginning 60 days after receipt of invoice at the rate of 1.5% per month, but not to exceed the maximum rate allowed by law.

7.3 If you direct us to invoice another, we will do so, but you agree to be ultimately responsible for our compensation until you provide us with that third party's written acceptance of all terms of our agreement and until we agree to the substitution.

7.4 You agree to compensate us for our services and expenses if we are required to respond to legal process related to our services for you. Compensable services include hourly charges for all personnel involved in the response and attorney fees reasonably incurred in obtaining advice concerning the response, the preparation of the testifier, and appearances related to the legal process.

7.5 If we are delayed by, or the period of performance is materially extended because of, factors beyond our control, or if project condition or the scope or amount of work change, or if the standards or methods of testing change, we will give you timely notice of the change and we will receive an equitable adjustment of our compensation.

Article 8: Risk Allocation, Disputes, and Damages

8.1 Neither we nor you will be liable to the other for special, incidental, consequential or punitive losses or damages, including but not limited to those arising from delay, loss of use, loss of profits or revenue, or the cost of capital.

8.2 We will not be liable to you for damages unless suit is commenced within two years of injury or loss or within two years of the date of the completion of our services, whichever is earlier. In no event will we be liable to you unless you have notified us of the discovery of the negligent act, error, omission or breach within 30 days of the date of its discovery and unless you have given us an opportunity to investigate and to recommend ways of mitigating your damages.

8.3 In the event you fail to pay us within 90 days following the invoice date, we may consider the default a total breach of our agreement and we may, at our option, terminate all of our duties without liability to you or to others.

8.4 If it is claimed by a third party that we did not complete an acceptable analysis, at your request we will seek further review and acceptance of the completed work by the third party and use your best efforts to obtain that acceptance. We will assist you as directed.

8.5 You and we agree that disputes will be submitted to "Alternative Dispute Resolution" (ADR) as a condition precedent to litigation and other remedies provided by law. Each of us agrees to exercise good faith efforts to resolve disputes through mediation unless we both agree upon another ADR procedure. All disputes will be governed by the law of the place where our services are rendered, or if our services are rendered in more than one state, you and we agree that the law of the place that services were first rendered will govern.

8.6 If either of us makes a claim against the other as to issues out of the performance of this agreement, the prevailing party will be entitled to recover its reasonable expenses of litigation, including reasonable attorney's fees. If we bring lawsuit against you to collect our invoiced fees and expenses, you agree to pay our reasonable collection expenses including attorney fees.

Article 9: Indemnities

9.1 We will indemnify and hold you harmless from and against demands, damages, and expenses caused by our negligent acts and omissions and breach of contract and by the negligent acts and omissions and breach of contract of persons for whom we are legally responsible. You will indemnify and hold us harmless from and against demands, damages, and expenses caused by your negligent act and omissions and breach of contract and by the negligent acts and omissions and breach of contract of persons for whom you are legally responsible. These indemnities are subject to specific limitations provided for in this agreement.

Article 10: Miscellaneous Provisions

10.1 This agreement constitutes the entire agreement between you and us, and it supersedes all prior agreements. Any term, condition, prior course of dealing, course of performance, usage of trade, understanding, purchase order conditions, or other agreement purporting to modify, vary, supplement, or explain any provision of this agreement is of no effect until placed in writing and signed by both parties subsequent to the date of this agreement. In no event will the printed terms or conditions stated in a purchase or work order, other than an agreed upon Chain of Custody/Analysis Request, be considered a part of this agreement, even if the document is signed by both of us.

10.2 Neither party will assign this agreement without the express written approval of the other, but we may subcontract laboratory procedures with your approval as we deem necessary to meet our obligations to you.

10.3 If any of the provisions of this agreement are held to be invalid or unenforceable in any respect, the remaining terms will be in full effect and the agreement will be construed as if the invalid or unenforceable matters were never included in it. No waiver of any default will be waiver of any future default.

10.4 Neither you or we will have any liability for nonperformance caused in whole or in part by causes beyond our reasonable control. Such causes include but are not limited to Acts of God, civil unrest and war, labor unrest and strikes, equipment failures, matrix interference, acts of authorities, and failures of subcontractors that could not be reasonably anticipated.

10.5 You may stop our work by giving a written suspension or termination directive, but once work has been suspended, we need not resume work until we agree to change in scope, schedule, and compensation. Upon suspension or termination, we will use reasonable care to preserve samples provided that you agree to compensate us for any additional effort, but we will have no responsibility for meeting holding time limitations after the effective time of a suspension or termination directive. We will be compensated for service rendered and expenses incurred prior to termination that cannot reasonably be avoided.

RECEIVED

MAR 24 2003

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

MARALO SITE

SECTION 36, TWS. 25 S., RNG. 36 E.

JAL, NM

MARCH 2003

BEFORE EXAMINER

OIL CONSERVATION DIVISION

EXHIBIT NO. 5

CASE NO. 13142

March 14, 2003

William Olson
NMOCD Environmental
Box 6429
1220 S. Saint Francis Drive
Santa Fe, NM 87504

RE: Maralo site
Anthony Ranch

Mr. Olson:

I was requested by Mr. Jay Anthony to conduct a preliminary site investigation of an abandoned tank battery site, which belonged to Maralo Oil Co.

The request was to drill soil borings at the site to determine the extent of contamination. This investigation was not to delineate the extent of the contamination, but to investigate if contamination existed above OCD guidelines. Two soil borings were advanced at the site, one up gradient and one down gradient of an existing water well.

Within is information obtained. If you have any questions, please call.

Sincerely,

Eddie W. Seay

Eddie W. Seay, Agent
601 W. Illinois
Hobbs, NM 88242
(505)392-2236

Maralo Site
Anthony Ranch
Jal, New Mexico

The site is an abandoned oil and gas production facility which was taken out of service and all equipment removed. The site was not remediated, the facility covered approximately three acres of surface and the remains of pits and hydrocarbon soil are visible. On the lease road adjacent to this site is an abandoned water well, the analytical from the water sample taken from this well shows elevated chloride.

The investigation consisted of installing two soil borings, one up gradient and one down gradient and testing the soil for BTEX, TPH and chloride. Both borings were advanced to 80', taking samples at various depths. The two borings were identified by MA 1 and MA 2, attached are logs, analytical, photos and maps.

Investigation

A rotary rig was used and operated by Phoenix Environmental. Samples were taken with split spoon sampling tool, deconing equipment between samples. After sampling was completed, the borings were plugged with bentonite and holes were marked for future reference.

Sampling:

MA 1-1	8 to 10 ft. oily strong odor
MA 1-2	20 ft. oily strong odor
MA 1-3	40 ft. strong odor, discolored caliche
MA 1-4	60 ft. slight odor, staining
MA 1-5	80 ft. slight odor

TD 80 ft.

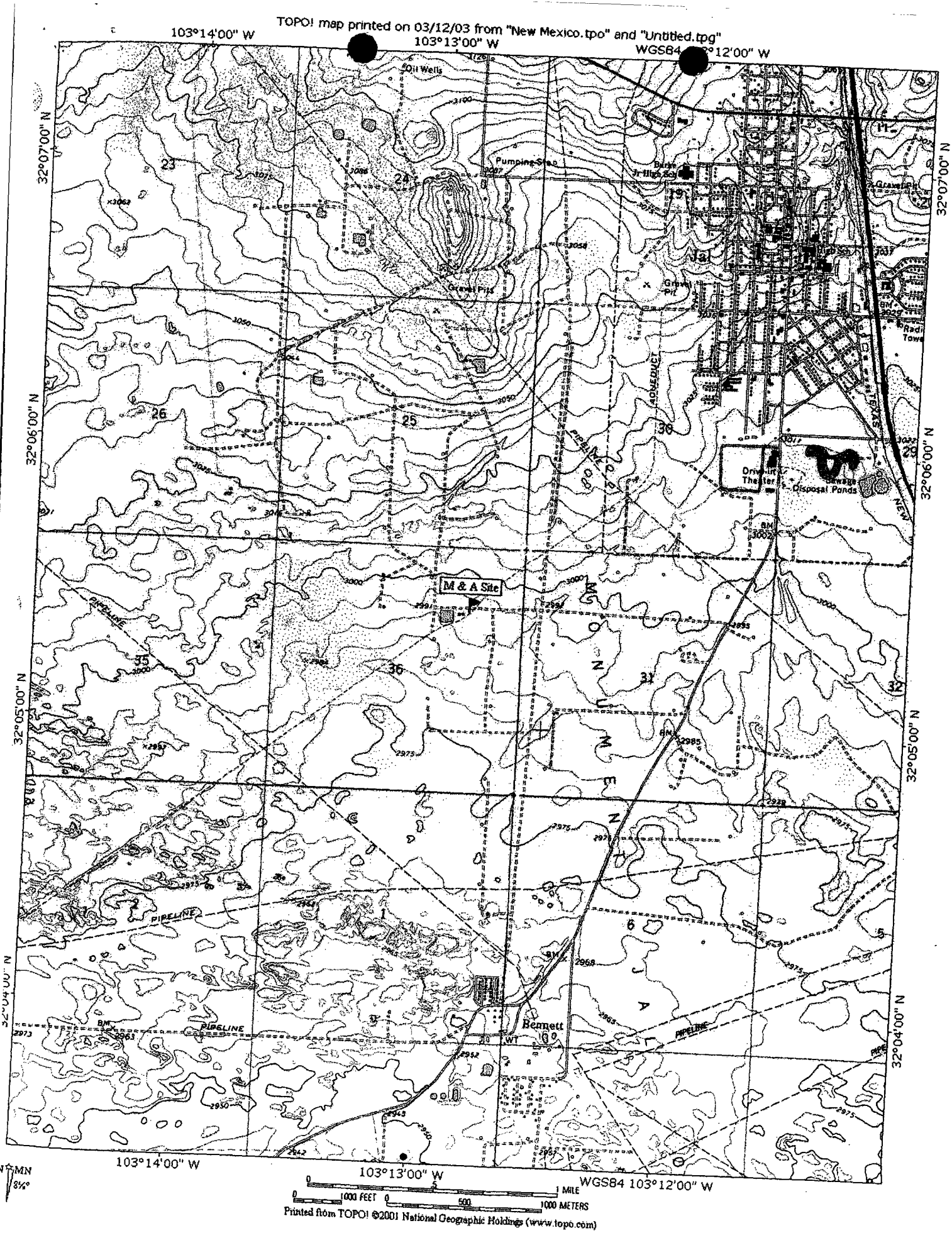
0'-10' top soil rock, very oily
10'-35' sand, rock, oily
35'-50' caliche, rock, oil stained
50'-65' sand, small gravel
65'-80' sand, clay

MA 2-1	8' to 10' black oily, strong odor
MA 2-2	20' oily, strong odor
MA 2-3	40' stained caliche, slight odor
MA 2-4	60' slight odor
MA 2-5	80' slight odor

0'-15' black very oily top soil
15'-26' sand, rock, oily, strong odor
26'-32' caliche, charcoal gray, strong odor
32'-38' caliche white in color, odor
38'-48' caliche, sand, rock, odor
48'-57' sand, caliche, rock
57'-80' sand, clay, rock
TD 80 ft.

Conclusion

From the analytical data provided on the soil borings, it is obvious that an extensive investigation and remediation plan needs to be undertaken by the responsible party. The analytical exceeds the guidelines set forth by the NMOCD for cleanup and remediation. Given the depth of contamination in the soil borings, it will just be a matter of time before we have major impact to the groundwater.



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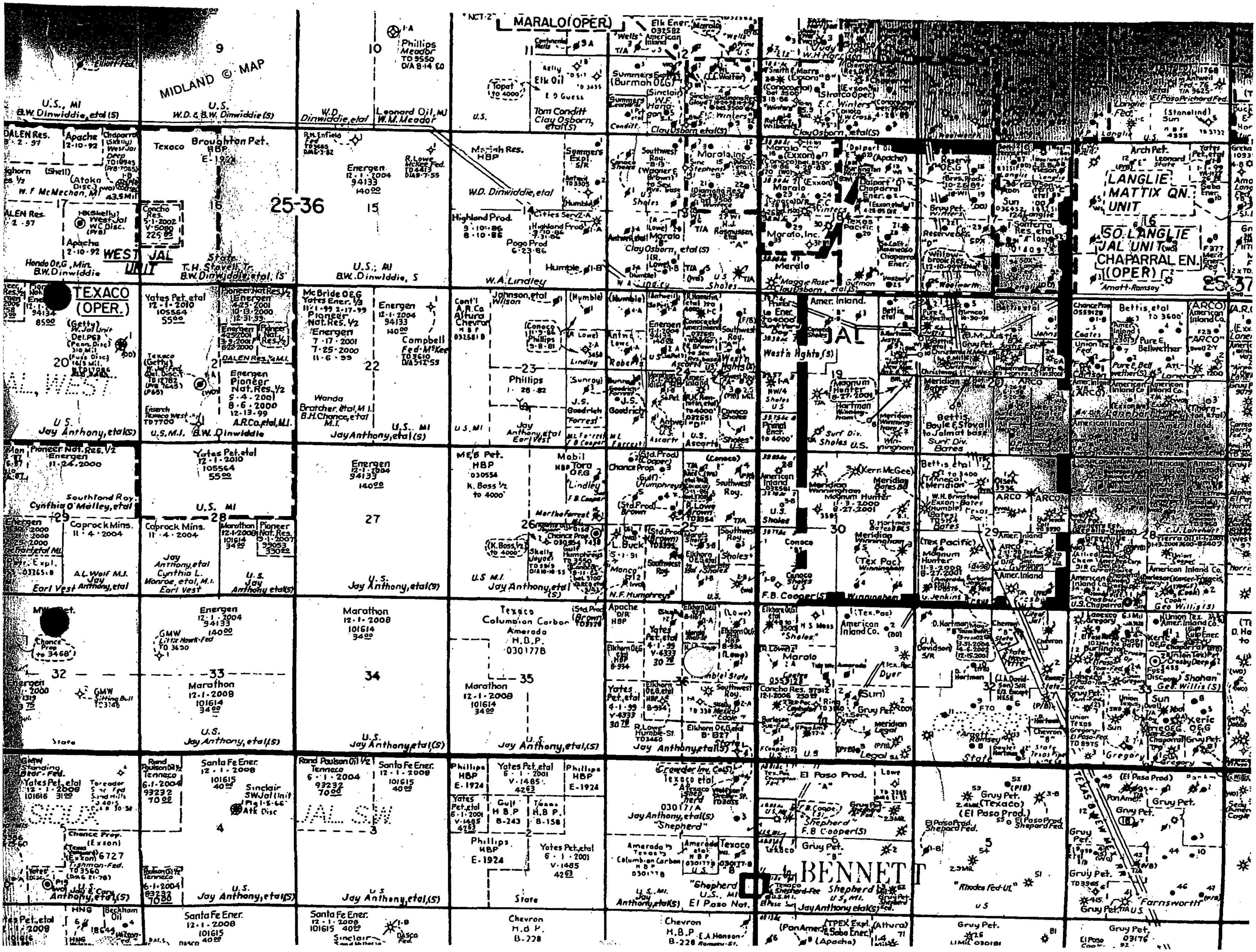
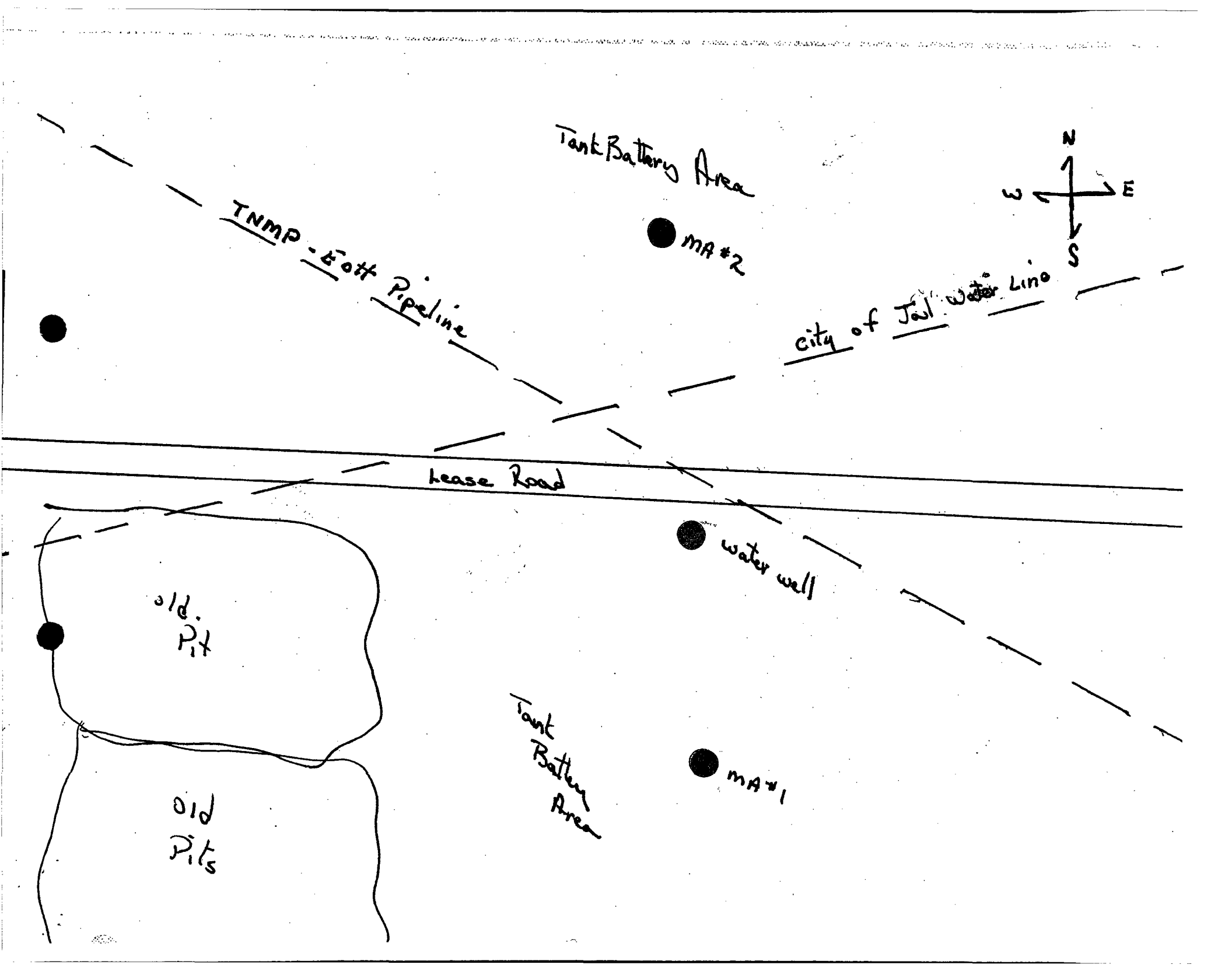


MIDLAND © MAP
25-36
TEXACO (OPER.)
WEST JAL UNIT
MARALO (OPER.)
JAL
BENNETT
LANGLIE MATTIX QN. UNIT
SO. LANGLIE JAL UNIT
CHAPARRAL EN. (OPER.)
U.S., MI
B.W. Dinwiddie, etal (S)
W.D. & B.W. Dinwiddie (S)
Broughton Pet.
Energen
Marathon
Yates Pet. etal
Santa Fe Ener.
Jay Anthony, etal (S)
Phillips
Chevron
El Paso Prod.
Gruy Pet.
Texas New Mexico


Tank Battery Area
MA #2
N
W
E
S
TNMP - Eott Pipeline
City of Jal Water Line
Lease Road
water well
old Pit
old Pits
Tank Battery Area
MA #1

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 B[illegible]HWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS. NM 88240

ANALYTICAL RESULTS FOR
EDDIE SEAY CONSULTING
ATTN: EDDIE SEAY
601 W. ILLINOIS
HOBBS, NM 88242
FAX TO: (505) 392-6949

Receiving Date: 03/05/03
Reporting Date: 03/10/03
Project Owner: J. ANTHONY
Project Name: MARALO-ANTHONY
Project Location: JAL, NM

Sampling Date: 03/04/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

LAB NUMBER	SAMPLE ID	TPH (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE:		03/06/03	03/06/03
H7515-1	MA 1-1	5480	160
H7515-2	MA 1-2	5670	80
H7515-3	MA 1-3	8250	80
H7515-4	MA 1-4	2580	80
H7515-5	MA 1-5	2860	144
H7515-6	MA 2-1	16600	48
H7515-7	MA 2-2	1700	48
H7515-8	MA 2-3	5690	112
H7515-9	MA 2-4	999	80
H7515-10	MA 2-5	1370	48
Quality Control		241	1080
True Value QC		240	1000
% Recovery		100	108
Relative Percent Difference		1.1	8.0

METHODS: TPH-EPA 600/4-79-020 418.1; Cl-Std. Methods 4500-Cl B
*Analyses performed on 1:4 w:v aqueous extracts.

Chemist

3/10/03
Date

H7515A.XLS

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.

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 B[illegible]CHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS. NM 88240

ANALYTICAL RESULTS FOR
EDDIE SEAY CONSULTING
ATTN: EDDIE SEAY
601 W. ILLINOIS
HOBBS, NM 88242
FAX TO: (505) 392-6949

Receiving Date: 03/05/03
Reporting Date: 03/10/03
Project Owner: J. ANTHONY
Project Name: MARALO-ANTHONY
Project Location: JAL, NM

Sampling Date: 03/04/03
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		03/07/03	03/07/03	03/07/03	03/07/03
H7515-1	MA 1-1	<0.005	<0.005	<0.005	<0.015
H7515-5	MA 1-5	<0.005	<0.005	<0.005	<0.015
H7515-6	MA 2-1	<0.005	<0.005	<0.005	<0.015
H7515-10	MA 2-5	<0.005	<0.005	<0.005	<0.015
Quality Control		0.094	0.092	0.090	0.268
True Value QC		0.100	0.100	0.100	0.300
% Recovery		94.3	91.6	90.3	89.3
Relative Percent Difference		3.8	6.8	8.2	5.4

METHOD: EPA SW-846 8260

Chemist

3/10/03
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.

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 ____ of ____

Company Name: Eddie Seay Consulting
Project Manager: Eddie Seay
Address: 601 W Illinois
City: Hobbs State: NM Zip: 88240
Phone #: 392-2236
Fax #: 392-6949
Project #: Marolo Project Owner: J. Anthony
Project Name: Marolo - Anthony
Project Location: Jal N.M.

BILL TO PO #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Fax #:

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	TPH (418.1)	Chlorides	BTEX
H7515-1	MA 1-1	G	1			✓					✓		3/4	9:35	✓	✓	✓
-2	MA 1-2	G	1			✓					✓		"	9:55	✓	✓	
-3	MA 1-3	G	1			✓					✓		"	10:30	✓	✓	
-4	MA 1-4	G	1			✓					✓		"	11:00	✓	✓	
-5	MA 1-5	G	1			✓					✓		"	12:10	✓	✓	✓
-6	MA 2-1	G	1			✓					✓		"	12:35	✓	✓	✓
-7	MA 2-2	G	1			✓					✓		"	12:50	✓	✓	
-8	MA 2-3	G	1			✓					✓		"	1115	✓	✓	
-9	MA 2-4	G	1			✓					✓		"	1:45	✓	✓	
-10	MA 2-5	G	1			✓					✓		"	2:30	✓	✓	✓

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.

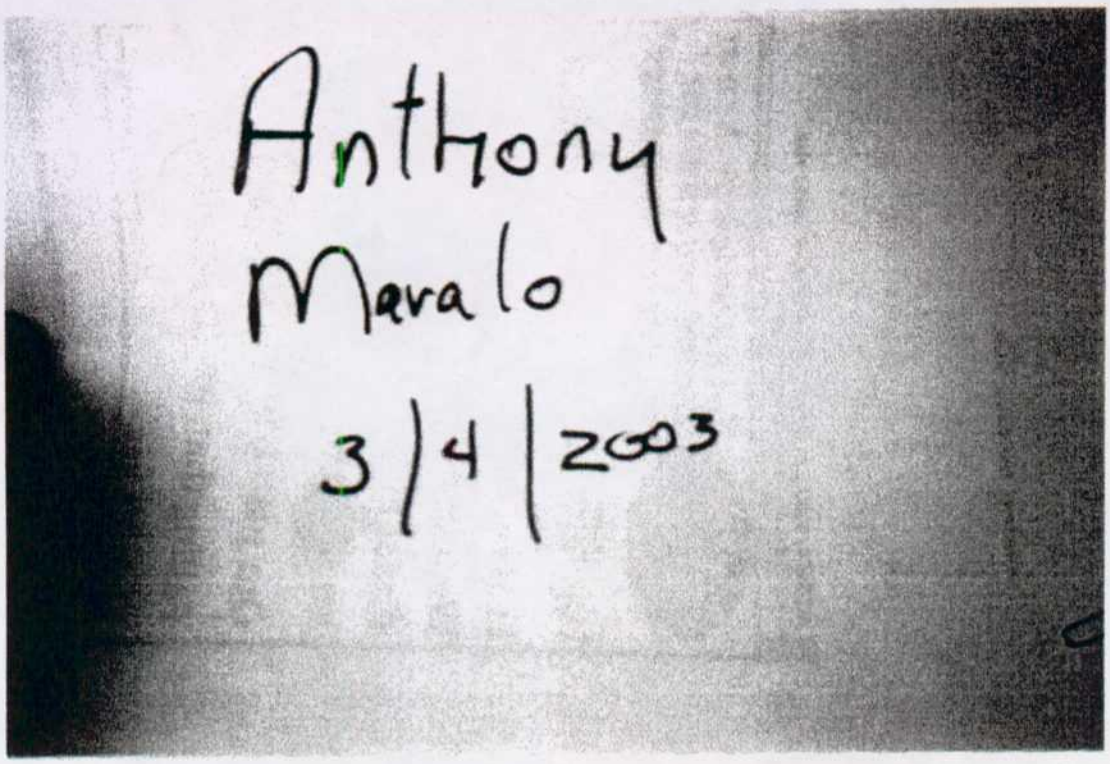
Sampler Relinquished: Eddie Seay
Date: 3/5
Time: 9:30
Relinquished By:
Date: 3/5/03
Time: 9:40
Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Received By:
Received By: (Lab Staff)
Sample Condition: Cool ☑ Yes ☐ No; Intact ☐ Yes ☐ No
CHECKED BY: (Initials)

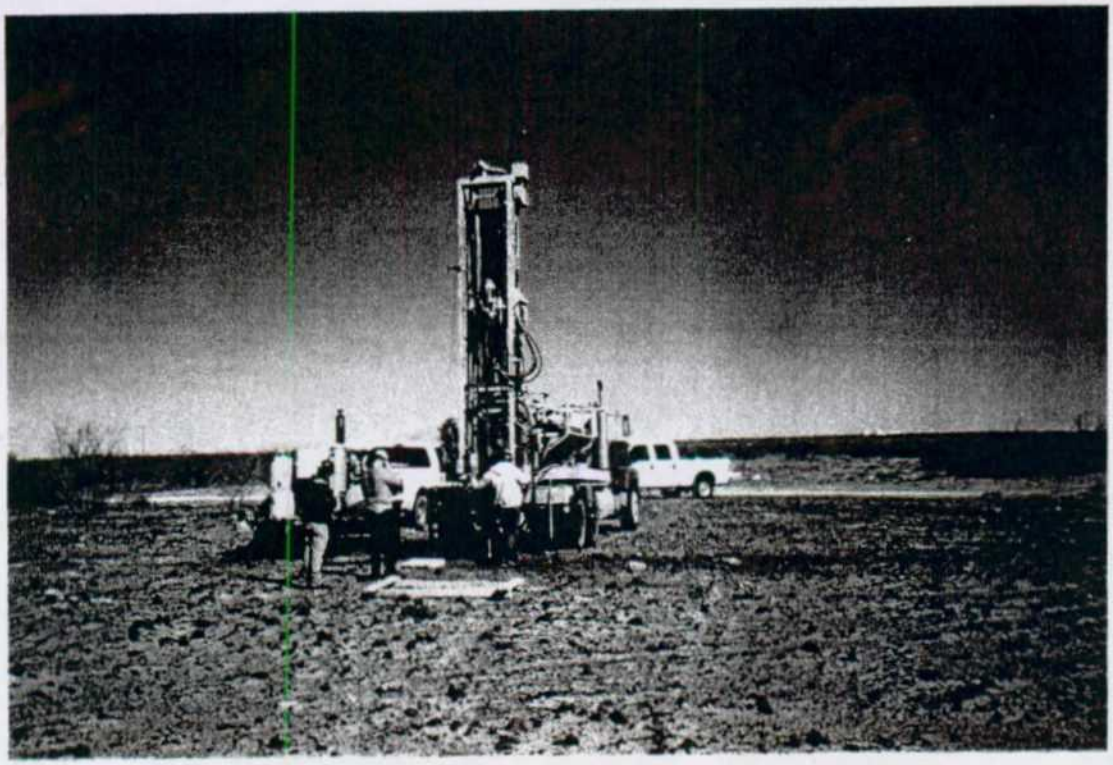
Phone Result ☐ Yes ☑ No Additional Fax #:
Fax Result: ☐ Yes ☑ No
REMARKS:

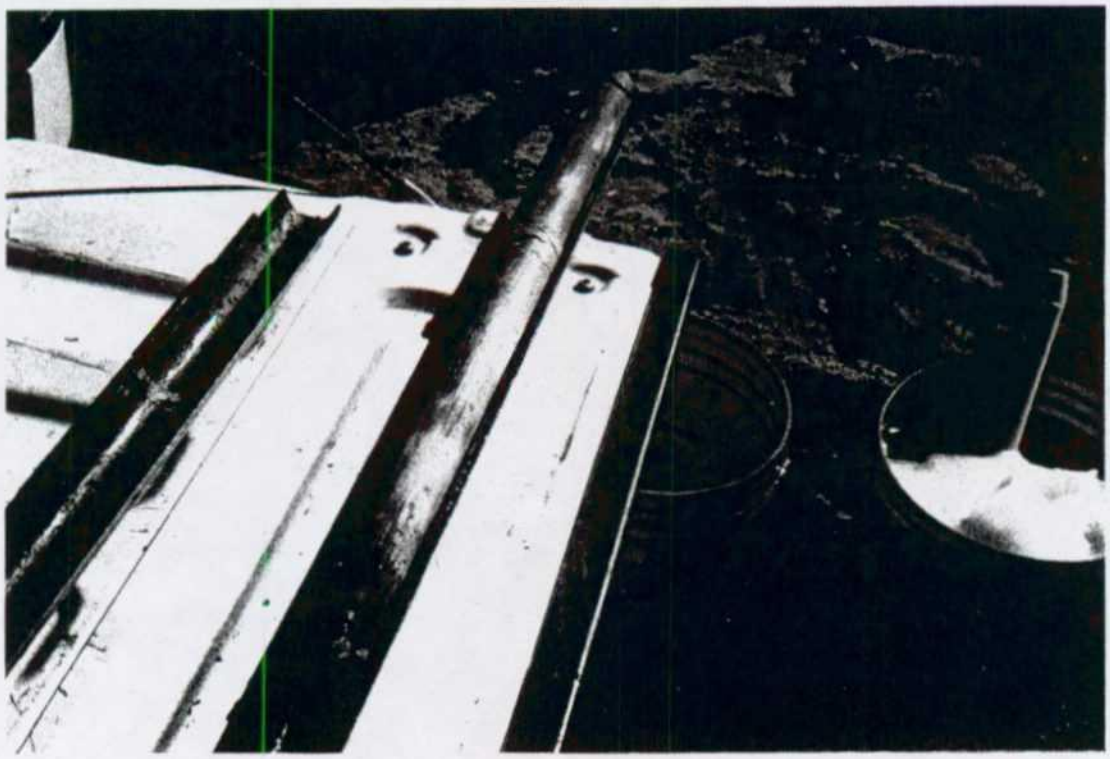
MA - Marolo, Anthony

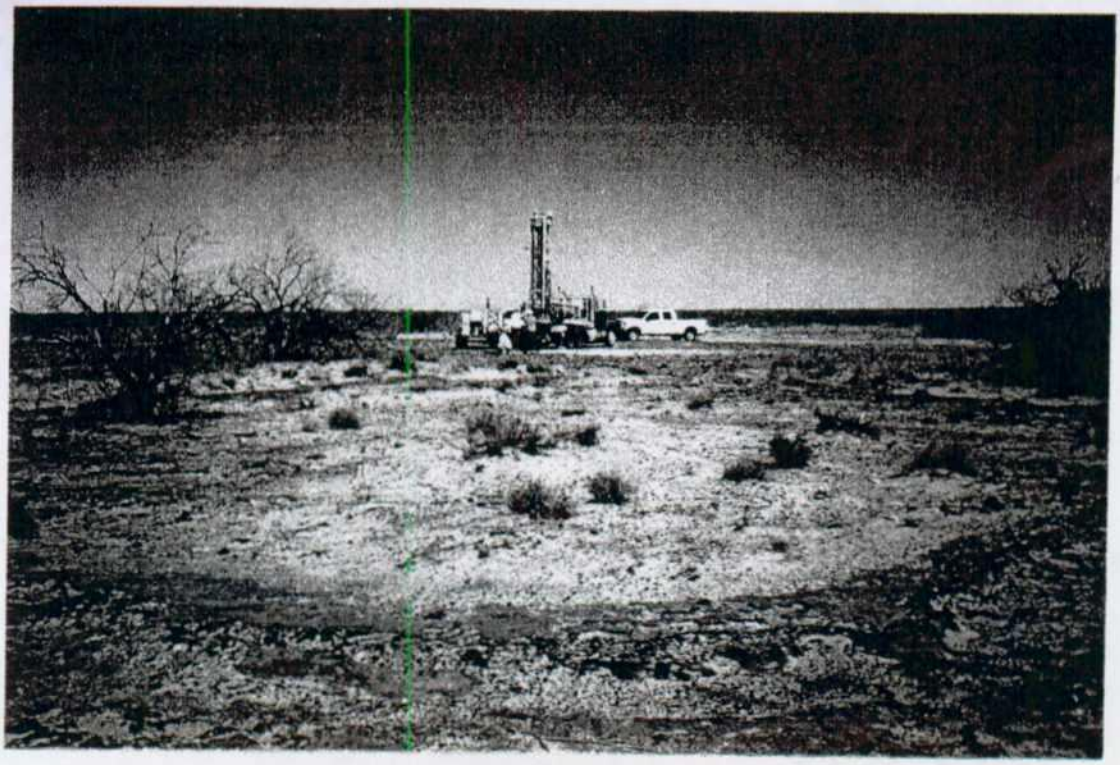
† Cardinal cannot accept verbal changes. Please fax written changes to



MA #1







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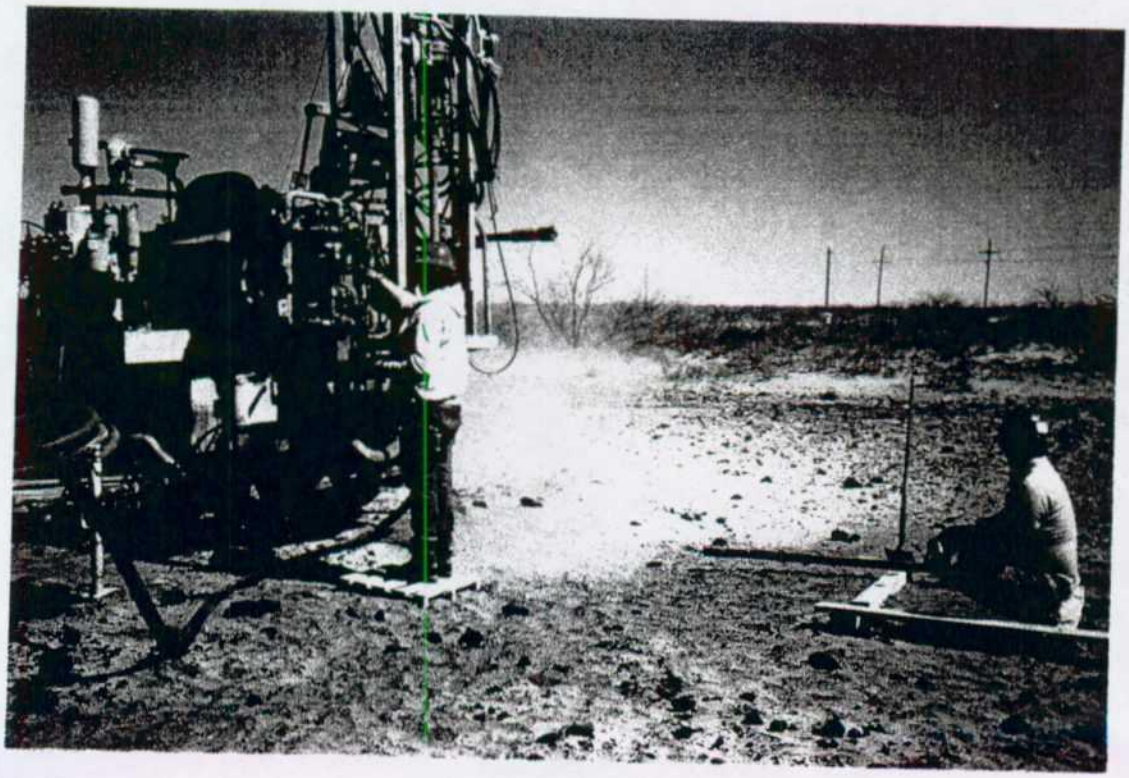

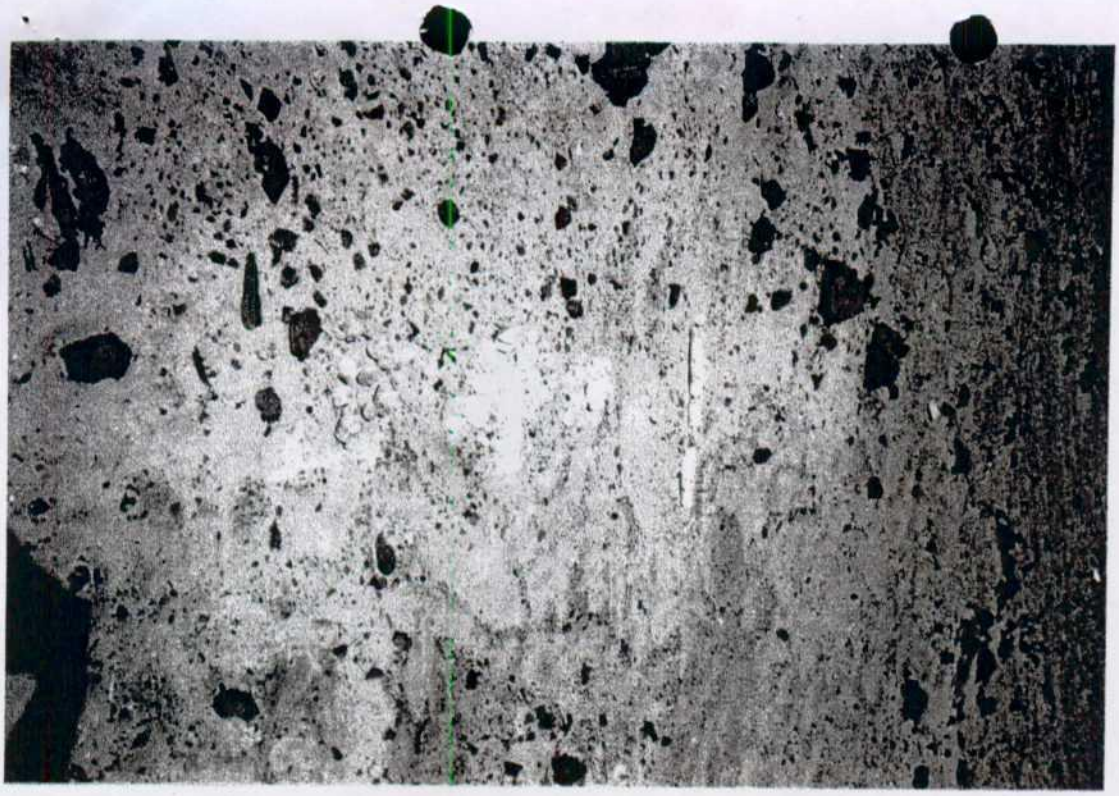

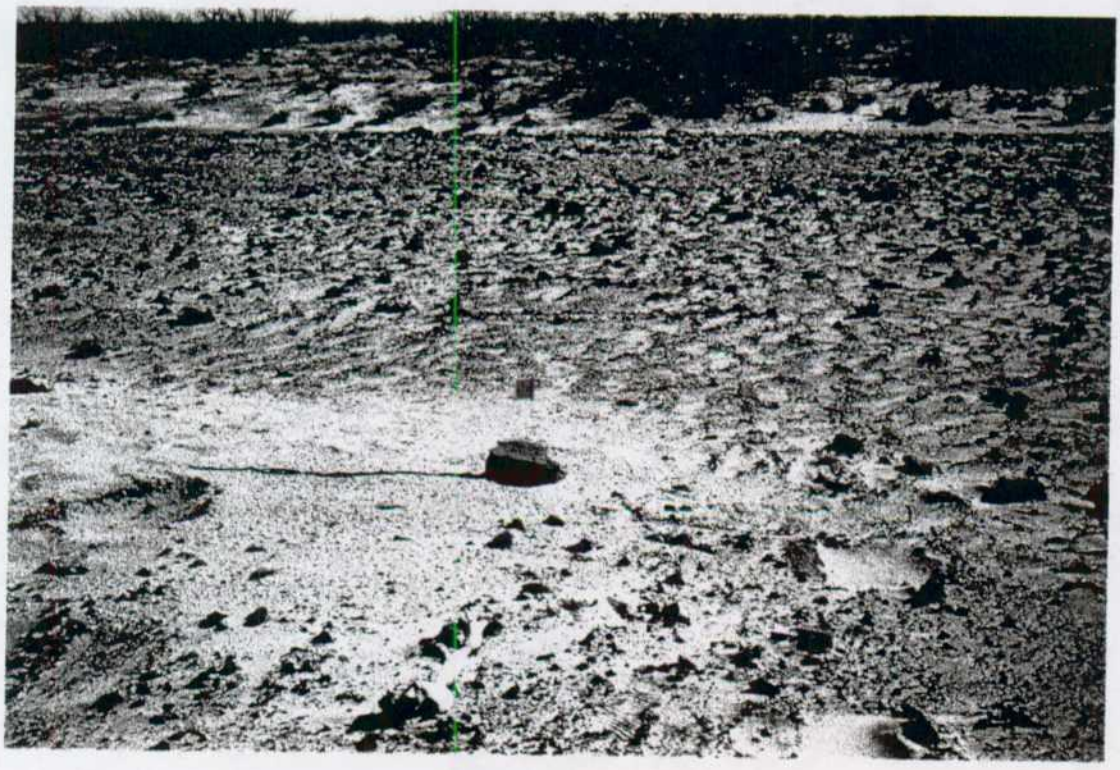

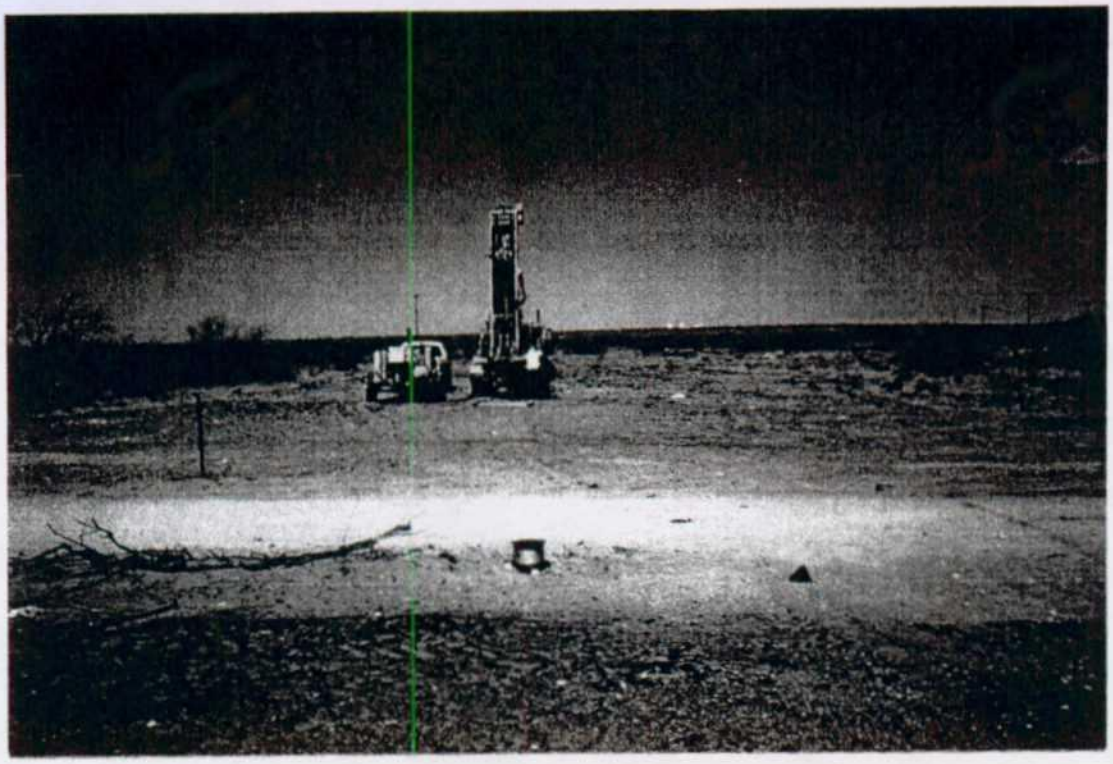

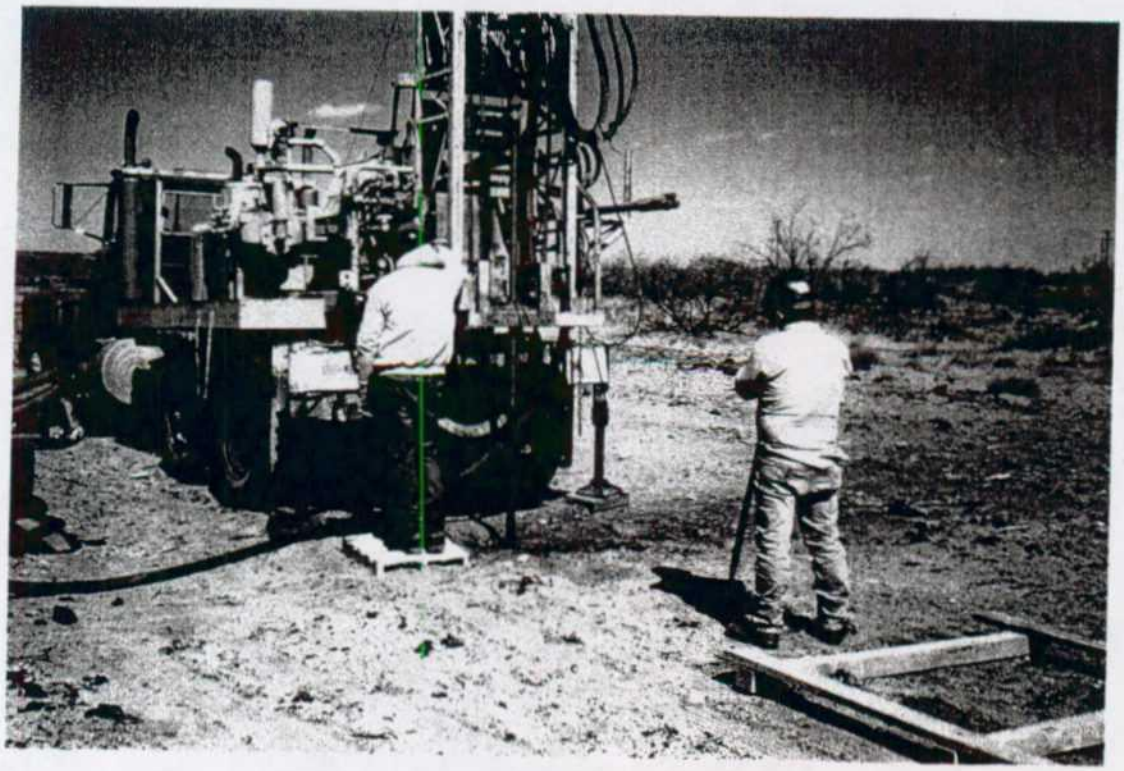

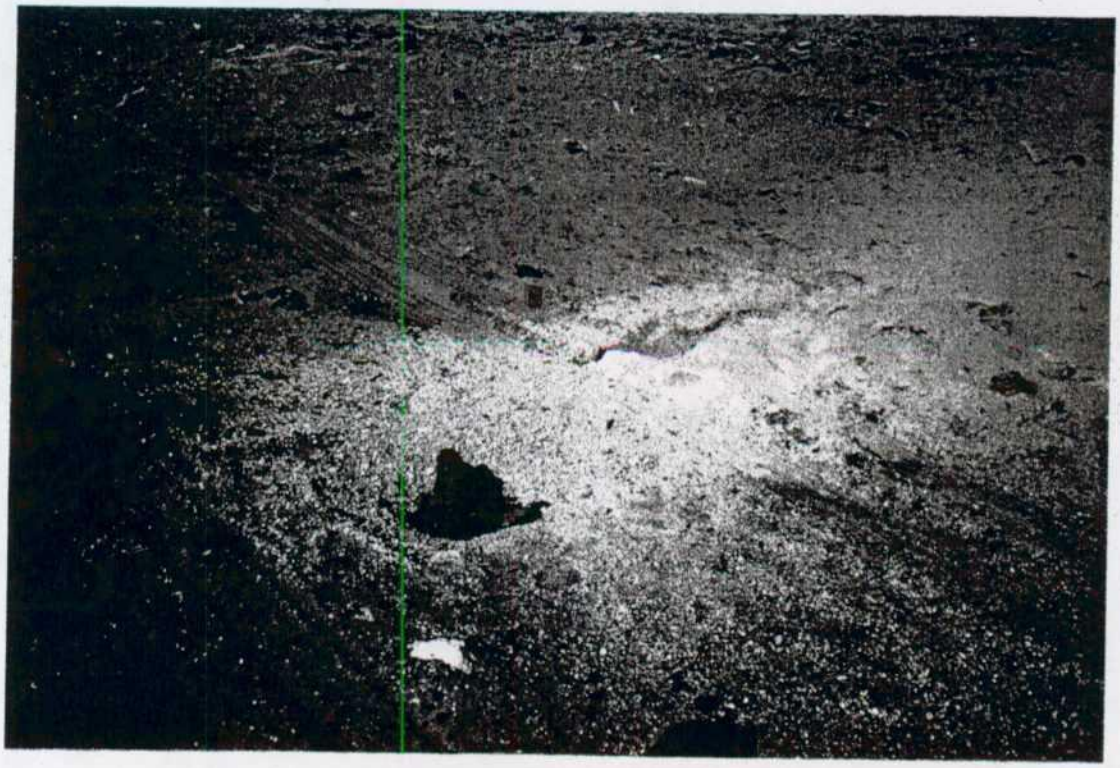

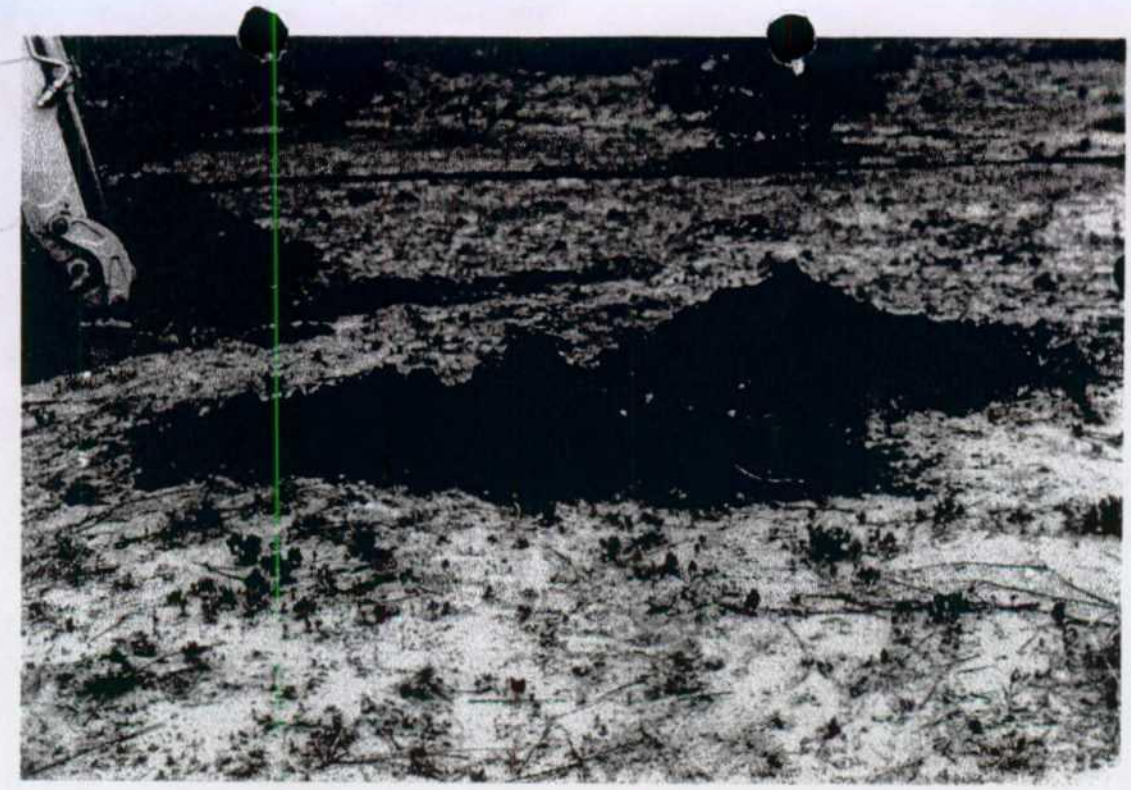

BEFORE EXAMINER

OIL CONSERVATION DIVISION

EXHIBIT NO. 6

CASE NO. 13142

RECEIVED
DEC 22 2000
OIL CONSERVATION DIVISION

maralo LLC

December 15, 2000

CERTIFIED MAIL/RETURN RECEIPT
7099 3220 0005 1182 7970

Mr. William C. Olson, Hydrologist
New Mexico Energy, Mineral and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Re: Humble State #3 Tank Battery Site
Lea County, New Mexico

Dear Mr. Olson:

Maralo is in receipt of your letter dated November 22, 2000, advising us that water samples from a water well owned by Mr. Jay Anthony contain chlorides and TDS in concentrations in excess of the New Mexico Water Quality Control Commission standards.

While Maralo acknowledges that it has operated two (2) wells in the immediate area, which as you may know were plugged in September and October of 1988, and the battery remediated by discing in 1993, we find no reason to believe that any of our actions contributed to the concentration of chlorides and TDS found through your analysis. As your report shows, no B-Tex or Toluene (Hydrocarbons) were noted, therefore eliminating the probability of oilfield contamination. Further, the chlorides noted in your analysis could be naturally occurring and in our opinion the water is still suitable for consumption by livestock which should be the primary consumer in the remote area of Mr. Anthony's ranch.

Finally, any application by your department of Rule 19 of the New Mexico Oil and Gas Regulations promulgated in February, 1997 would be considered, in our opinion, retroactively applied and therefore not enforceable.

If no response to our letter is received prior to January 22, 2001, we will assume this matter has been resolved to your satisfaction.

Yours very truly,

MARALO, LLC

Joe C. Pulido

Joe C. Pulido, CPL
Manager

JCP/jl

:humble state #3 tank battery site - nm emnr

BEFORE EXAMINER
OIL CONSERVATION DIVISION
EXHIBIT NO. 7
CASE NO. 13142

Maralo, LLC / P.O. Box 832 / Midland, Texas 79702-0832 / (915) 684-7441
Fax (915) 684-9836

COTTON, BLEDSOE, TIGHE & DAWSON

A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW

500 W. ILLINOIS
SUITE 300
MIDLAND, TEXAS 79701-4337
P.O. BOX 2776 ZIP 79702-2776

TELEPHONE (915) 684-5782
FAX (915) 682-3672
WEB www.cbtd.com

1415 LOUISIANA
SUITE 2100
HOUSTON, TEXAS 77002-7351
TELEPHONE (713) 759-9281
FAX (713) 759-0458

RICK G. STRANGE
BOARD CERTIFIED CIVIL TRIAL LAW
BOARD CERTIFIED OIL, GAS & MINERAL LAW

Writer's Direct #: (915) 685-8574
Writer's Direct Fax #: (915) 684-3168
Email: rstrange@cbtd.com

APR 25 2001
OIL CONSERVATION DIVISION

April 23, 2001

Mr. Roger Anderson
New Mexico Energy, Minerals and
Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Abatement Plan AP-26, Humble State #3 Tank Battery Site
Jal, New Mexico

Dear Mr. Anderson:

Maralo, LLC has asked us to respond to your letter dated April 11, 2001. In that letter, you ask us to submit a plan to investigate the extent of contamination at the site of the former Maralo Humble State #3 Tank Battery Site located in Unit A, Section 36, Township 25 South, Range 36 East. In your correspondence, you indicate that Maralo is required to submit to the OCD by June 11, 2001 a Stage 1 investigation proposal pursuant to OCD Rule 19.E.1 and 19.E.3. As you are no doubt aware, Rule 19 of the New Mexico Oil and Gas Regulations was promulgated in February 1997. Maralo's wells in that area were plugged in 1988 and the battery was remediated in 1993. We have had no operations on the site since. Rule 19, therefore, is inapplicable, and any attempt to apply it retroactively now would, in my opinion, be unconstitutional. If you disagree, I would be happy to review any information you have or to discuss this matter with your legal counsel. If we have not heard from you within a reasonable period of time, we will assume that you agree with our assessment and will close our file.

Very truly yours,

COTTON, BLEDSOE, TIGHE & DAWSON

By:
Rick G. Strange

RGS/sm

BEFORE EXAMINER
OIL CONSERVATION DIVISION
EXHIBIT NO. 8
CASE NO. 13142

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

April 22, 2003

Mr. Joe Pulido, Manager
Maralo, LLC
P.O. Box 832
Midland, Texas 79702-0832

RE: HUMBLE STATE #3 TANK BATTERY SITE
JAL, NEW MEXICO

Dear Mr. Pulido:

On April 11, 2001, the New Mexico Oil Conservation Division (OCD) informed Maralo, LLC (Maralo) that OCD investigations at the former Maralo Humble State #3 Tank Battery, located in Unit A, Section 36, Township 25 South, Range 36 East, have shown that ground water directly underlying Maralo's former Humble State #3 Tank Battery site is contaminated with chlorides and total dissolved solids (TDS) in concentrations in excess of the New Mexico Water Quality Control Commission standards. On that date, the OCD required that Maralo submit a Stage 1 Investigation Proposal to investigate and, if necessary, remediate ground water pollution at the site of the former tank battery. Subsequent soil investigations conducted by the OCD and recent investigations by the land owner, Mr. Jay Anthony, have not found appreciable concentrations of chlorides in soils at the site. Therefore, the OCD is rescinding the April 11, 2001 abatement plan requirement.

However, site inspections have shown that several backfilled pits remain at the surface of the site. Asphaltic type oil is present at the surface of each pit. These pits appear to have been used for disposal of emulsions, basic sediments and tank bottoms. According to 19.15.5.313 NMAC, "these substances and tank bottoms shall not be allowed to pollute fresh waters or cause surface damage". Since these pits are causing surface damage, the OCD requires that Maralo submit a work plan to eliminate surface damage at the site. The work plan shall be submitted to the OCD Santa Fe Office by May 22, 2003 with a copy provided to the OCD Hobbs District Office. If you have any questions, please contact Bill Olson at (505) 476-3491.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

xc: Chris Williams, OCD Hobbs District Office
Jay Anthony

RECEIVED
OIL CONSERVATION DIV.
EXHIBIT NO. 9
CASE NO. 13142

maralo LLC

CERTIFIED MAIL
RETURN RECEIPT NO. 7001 1140 0002 4294 9923

RECEIVED
MAY 0 8 2003
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

May 5, 2003

Mr. Roger C. Anderson
New Mexico Energy, Minerals and
Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Humble State #3 Tank Battery Site
Lea County, New Mexico

Dear Mr. Anderson:

Maralo, LLC is in receipt of your letter dated April 22, 2003, wherein you advise that the OCD is rescinding the April 11, 2001 abatement plan requirement although you request a work plan be submitted to eliminate surface damage at the captioned site.

We call your attention to letter dated April 23, 2001 from our attorney, Mr. Rick G. Strange with the Cotton, Bledsoe, Tighe & Dawson firm (copy enclosed), wherein he clearly states that Rule 19 is inapplicable.

Because we have had no response to our previous correspondence (4/23/01) and due to the significant passage of time, we believe you agree with our position on Rule 19, but if you have information that requires further review or discussion, I am certain Mr. Strange would be willing to discuss it further with your legal counsel.

Yours very truly,

Joe C. Pulido, CPL
Manager

JCP/sg
Enclosure

cc: Mr. Rick G. Strange
Cotton, Bledsoe, Tighe & Dawson

BEFORE EXAMINER
OIL CONSERVATION DIVISION
EXHIBIT NO. 10
CASE NO. 13142

Maralo, LLC / P.O. Box 832 / Midland, Texas 79702-0832 / (915) 684-7441
Fax (915) 684-9836

COTTON, BLEDSOE, TIGHE & DAWSON

A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
500 W. ILLINOIS
SUITE 300
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FAX (915) 682-3672
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SUITE 2100
HOUSTON, TEXAS 77002-7351
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FAX (713) 759-0458

RICK G. STRANGE
BOARD CERTIFIED CIVIL TRIAL LAW
BOARD CERTIFIED OIL, GAS & MINERAL LAW

Writer's Direct #: (915) 685-8574
Writer's Direct Fax #: (915) 684-3168
Email: rstrange@cbtd.com

April 23, 2001

Mr. Roger Anderson
New Mexico Energy, Minerals and
Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Abatement Plan AP-26, Humble State #3 Tank Battery Site
Jal, New Mexico

Dear Mr. Anderson:

Maralo, LLC has asked us to respond to your letter dated April 11, 2001. In that letter, you ask us to submit a plan to investigate the extent of contamination at the site of the former Maralo Humble State #3 Tank Battery Site located in Unit A, Section 36, Township 25 South, Range 36 East. In your correspondence, you indicate that Maralo is required to submit to the OCD by June 11, 2001 a Stage 1 investigation proposal pursuant to OCD Rule 19.E.1 and 19.E.3. As you are no doubt aware, Rule 19 of the New Mexico Oil and Gas Regulations was promulgated in February 1997. Maralo's wells in that area were plugged in 1988 and the battery was remediated in 1993. We have had no operations on the site since. Rule 19, therefore, is inapplicable, and any attempt to apply it retroactively now would, in my opinion, be unconstitutional. If you disagree, I would be happy to review any information you have or to discuss this matter with your legal counsel. If we have not heard from you within a reasonable period of time, we will assume that you agree with our assessment and will close our file.

Very truly yours,

COTTON, BLEDSOE, TIGHE & DAWSON

By:
Rick G. Strange

RGS/sm

RANGE\004802\000050\284434.1

NEW MEXICO ENERGY, MINERALS and
NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

July 9, 2003

Mr. Rick G. Strange
Cotton, Bledsoe, Tighe & Dawson
500 W. Illinois, Suite 300
Midland, TX 79701-4337

Re: Maralo LLC
Humble State #3 Tank Battery Site
Lea County, New Mexico

Dear Mr. Strange:

On April 11, 2001, the Division notified Maralo LLC that it would require an abatement plan pursuant to OCD Rule 19 [19.15.1.19 NMAC] to remedy fresh water contamination believed to exist at the referenced site. By letter dated April 23, 2001, you, on behalf of Maralo, advised us of your contention that Rule 19 is inapplicable because it was adopted subsequent to Maralo's abandonment of the facility.

By letter dated April 22, 2003, the Division notified Maralo that we were rescinding the requirement of an abatement plan because we had determined that there was insufficient evidence of water pollution to impose such a requirement at this time. The Division further notified Maralo, however, that we were requiring a work plan to remedy surface pollution resulting from tank bottoms at the referenced site.

Maralo responded by letter of May 5, 2003 referencing your letter of April 23, 2001.

Although OCD does not agree with your position regarding the application of Rule 19, our rescinding the abatement plan requirement moots that issue. Rule 313 [19.15.5.313 NMAC], which is the basis for the demand set forth in our letter of April 22, 2003, was originally adopted in 1950.

We accordingly reiterate our requirement of a work plan to address the surface contamination issues. The plan should be filed not later than August 15, 2003.

Please contact me at 505-476-3450 if you have questions or wish to discuss this matter further.

Very truly yours,

David K. Brooks
Assistant General Counsel

cc. William C. Olson
OCD Senior Hydrologist

COTTON, BLEDSOE, TIGHE & DAWSON

A PROFESSIONAL CORPORATION

ATTORNEYS AT LAW

500 W. ILLINOIS
SUITE 300
MIDLAND, TEXAS 79701-4337
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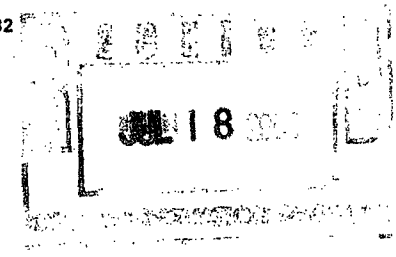
BOARD CERTIFIED OIL, GAS & MINERAL LAW

Writer's Direct #: (432) 685-8574
Writer's Direct Fax #: (432) 684-3168
Email: rstrange@cbtd.com



July 16, 2003

Mr. David K. Brooks
Assistant General Counsel
New Mexico Energy, Minerals and Natural
Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Humble State #3 Tank Battery Site
Lea County, New Mexico

Dear Mr. Brooks:

Thank you for your letter dated July 9th. I have reviewed that with my client and provide this response.

Your letter references Rule 313 and indicates this rule was originally adopted in 1950. That rule has been amended, as recently as May 15, 2000. We ceased operations on this lease in 1988. Any subsequent changes to the rule would not apply to us. I do not have the exact text of the rule as it existed in 1988, but even looking at its most current version, I fail to see where this provides your agency with the authority to order us to remediate a site that has not been used for 15 years. Accordingly, we must respectfully decline your request to submit a work plan. If you have any legal authority allowing your agency to retroactively impose this proposed requirement, I would appreciate the opportunity to review the same.

Very truly yours,

COTTON, BLEDSOE, TIGHE & DAWSON

By: Rick G. Strange

RGS/sm

RSTRANGE\004802\000050\374718.1

FORM C-101

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

NOTICE OF INTENTION TO DRILL

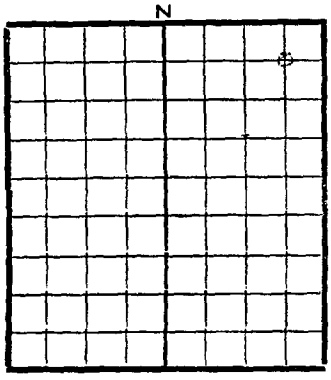
Notice must be given to the Oil Conservation Commission or its proper agent and approval obtained before drilling begins. If changes in the proposed plan are considered advisable, a copy of this notice showing such changes will be returned to the sender. Submit this notice in triplicate. One copy will be returned following approval. See additional instructions in Rules and Regulations of the Commission.

Midland, Texas (PLACE) May 28, 1945 (DATE)

OIL CONSERVATION COMMISSION,
Santa Fe, New Mexico,

Gentlemen:

You are hereby notified that it is our intention to commence the drilling of a well to be known as Ralph Lowe (COMPANY OR OPERATOR) Humble State (LEASE) Well No. 3 in NE of NE of Sec. 36, T. 25, R. 36, N. M. P. M., Jal Field, Lea County.



AREA 640 ACRES
LOCATE WELL CORRECTLY

The well is 660 feet (~~XX~~ (S.) of the North line and 660 feet ~~XXX~~ (E.) (W.) of the East line of 36-25-36

(Give location from section or other legal subdivision lines. Cross out wrong directions.)

If state land the oil and gas lease is No. B-934 Assignment No.

If patented land the owner is

Address

If government land the permittee is

Address

The lessee is Ralph Lowe

Address Midland, Texas

We propose to drill well with drilling equipment as follows: Cable Tools

The status of a bond for this well in conformance with Rule 39 of the General Rules and Regulations of the Commission is as follows: $10,000.00 Blanket Bond Form 39-A1

We propose to use the following strings of casing and to land or cement them as indicated:

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	NEW OR SECOND HAND	DEPTH	LANDED OR CEMENTED	SACKS CEMENT
12½"	10"	40#	2nd	200	Cemented	100
10"	8"	28#	2nd	1500	Cemented	200
6 3/4"	7"	22#	New	3050	Cemented	200

If changes in the above plan become advisable we will notify you before cementing or landing casing. We estimate that the first productive oil or gas sand should occur at a depth of about 3100 feet.

Additional information:

BEFORE EXAMINER
OIL CONSERVATION DIVISION
EXHIBIT NO. 11
CASE NO. 13142

Approved ..... 19.....
Except as follows:

OIL CONSERVATION COMMISSION,
By Roy Yarbrough
Title

Sincerely yours,
Ralph Lowe
(COMPANY OR OPERATOR)
By Ralph Lowe
Position Owner

Send communications regarding well to
Name Ralph Lowe
Address Box 1767, Midland, Texas

DISTRIBUTION	
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FILE	
U.S.G.S.	
LAND OFFICE	
TRANSPORTER — OIL	
TRANSPORTER — GAS	
OPERATOR	
PRORATION OFFICE	

NEW MEXICO OIL CONSERVATION COMMISSION

REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Form C-104
Supersedes Old C-104 and (
Effective 1-1-65

Operator

MARALO, INC.

Address

P. O. Box 832, Midland, Texas 79701

Reason(s) for filing *(Check proper box)*

New Well [ ]
Recompletion [ ]
Change in Ownership [X]

Change in Transporter of:
Oil [ ] Dry Gas [ ]
Casinghead Gas [ ] Condensate [ ]

Other *(Please explain)*

If change of ownership give name and address of previous owner Ralph Lowe, P. O. Box 832, Midland, Texas 79701

DESCRIPTION OF WELL AND LEASE

Lease Name	Well No.	Pool Name, Including Formation	Kind of Lease
Humble State	3	Jalmat Yates 7 Rivers Tansill	State, Federal or Fee State

Location

Unit Letter A : 660 Feet From The North Line and 660 Feet From The East

Line of Section 36, Township 25-S Range 36-E, NMPM, Lea County

DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil [X] or Condensate [ ]	Address *(Give address to which approved copy of this form is to be sent)*
Texas-New Mexico Pipe Line Company	Box 1510, Midland, Texas 79701
Name of Authorized Transporter of Casinghead Gas [X] or Dry Gas [ ]	Address *(Give address to which approved copy of this form is to be sent)*
El Paso Natural Gas Company	Box 1384, Jal, N. Mex. 88252 Attn: D. B. Gill

If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When
		36	25	36	Yes	

If this production is commingled with that from any other lease or pool, give commingling order number:

COMPLETION DATA

Designate Type of Completion – (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res

Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.
Pool	**Name of Producing Formation**	**Top Oil/Gas Pay**	**Tubing Depth**
Perforations			**Depth Casing Shoe**

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT

TEST DATA AND REQUEST FOR ALLOWABLE

(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

OIL WELL

Date First New Oil Run To Tanks	Date of Test	Producing Method *(Flow, pump, gas lift, etc.)*	
Length of Test	**Tubing Pressure**	**Casing Pressure**	**Choke Size**
Actual Prod. During Test	**Oil - Bbls.**	**Water - Bbls.**	**Gas - MCF**

GAS WELL

Actual Prod. Test - MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method *(pitot, back pr.)*	**Tubing Pressure**	**Casing Pressure**	**Choke Size**

CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

E. Murray
(Signature)

Agent
(Title)

April 19, 1974

OIL CONSERVATION COMMISSION

APPROVED JUN 5 19[illegible]
Orig. Signed by
Joe D. Ramey
Dist. I, Supv.

BY

TITLE

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deeper well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out Sections I, II, III, and VI only for changes of own

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ERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State [X] Fee [ ]

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

7. Unit Agreement Name

OIL WELL [X] GAS WELL [ ] OTHER-

me of Operator
Maralo, Inc.

8. Farm or Lease Name
Humble State

ddress of Operator
P. O. Box 832, Midland, Texas 79702 0832

9. Well No.
3

ocation of Well
UNIT LETTER A , 660 FEET FROM THE North LINE AND 660 FEET FROM THE East LINE, SECTION 36 TOWNSHIP 25-S RANGE 36-E NMPM.

10. Field and Pool, or Wildcat
Jalmat Yates 7 Riv.Tan

15. Elevation (Show whether DF, RT, GR, etc.)
3000' GL

12. County
Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
FORM REMEDIAL WORK	[ ]	PLUG AND ABANDON	[X]	REMEDIAL WORK	[ ]	ALTERING CASING	[ ]
IPORARILY ABANDON	[X]			COMMENCE DRILLING OPNS.	[ ]	PLUG AND ABANDONMENT	[ ]
L OR ALTER CASING	[ ]	CHANGE PLANS	[ ]	CASING TEST AND CEMENT JOB	[ ]		
				OTHER			[ ]
OTHER	[ ]						

Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any propos work.)* SEE RULE 1103.

SITUATION: 7 bad collars. Uneconomical to repair
PROPOSAL: Plug and abandon:
PROCEDURE:

1. Notify O.C.C.
2. Set 100' (15sx) cement plug across 7" casing shoe from 2850' to 2950'.
3. Load hole with 10#/gal mud-laden fluid using 25# gel/bbl.
4. Set 100' (15sx) plug across top of Yates from 2686' to 2786'.
5. Set 100' (15sx) cmt. plug across top of Tansill from 2523' to 2623'.
6. Set 100' (15sx) cement plug across top of salt from 1160' to 1260'. → WILL NEED TO PERFORATE SQ @ 12
7. Set 100' (15sx) cement plug across 10 3/4" surface casing shoe from 355' to 455'.
8. Using 10 sacks cement, set surface plug.
9. Remove wellhead, cut off casing and weld plate on casing. → WILL NEED TO PERF THRU BOTH STRINGS OF PIPE
0. Clean up location.
1. Place a metal dry hole marker at location signifying operators' name, well location and well footage from section boundary.

#NOTE: THE 7" CSG & 8 5/8" CSG DO NOT APPEAR TO HAVE CEMENT CIRC.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

D Brenda Coffman TITLE Agent DATE 10-9-86

VED BY Jerry Sexton TITLE DATE OCT 14 1986

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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LAND OFFICE		
OPERATOR		

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

API 30-025-098[illegible]

Form C-103
Revised 10-1

5a. Indicate Type of Lease
State [..] Fee [ ]

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL [ ] GAS WELL [ ] OTHER-

7. Unit Agreement Name

2. Name of Operator
Marsalo, Inc. 14007

8. Farm or Lease Name
Rumole State 6343

3. Address of Operator
P.O. Box 832 Midland, TX 79702

9. Well No.
3

4. Location of Well
UNIT LETTER [illegible], 660 FEET FROM THE [illegible] LINE AND 660 FEET FROM THE East LINE, SECTION 16 TOWNSHIP 25-S RANGE 36-E NMPM.

10. Field and Pool, or Wildcat
~~Jalmat~~ Langlie ~~Yates 7 Riv~~

15. Elevation (Show whether DF, RT, GR, etc.)
3000 GL

12. County
Lea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [X]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER [ ]	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

10-12-88 1. Set 7" TBP @2700' - 35' cement on top
10-12-88 2. Spot 35 sxs @2693' - 2533'
10-13-88 3. Pull 1800' of 7" casing
10-13-88 4. Spot 55 sxs @1310' - tag @1230'
10-14-88 5. Spot 55 sxs @1230' - tag @1100'
10-14-88 6. Perf 3 3/8" @455' - squeeze 65 sxs - no tag
10-15-88 7. Perf 4 3/8" @355' - Spot 65 sxs @455' - no tag
10-15-88 8. Spot 70 sxs @455' - tag @300'
9. Spot 5 sxs @surface

Install dry hole marker
Hole Circulated with 10 # mud

ILLEGIBLE

Cut off anchors

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Brenda Coffman TITLE Agent DATE Oct 28, 1988

APPROVED BY [signature] TITLE OIL & GAS INSPECTOR DEC 11 1989