1R - 421

REPORTS

DATE:

2006

1R421

KANE
ENVIRONMENTAL ENGINEERING, INC.

December 1, 2006

Wayne Price
Oil Conservation Division
1220 South St. Francis Drive
Sante Fe, NM 87505

RE: Mattie Price Site Monitoring Report

Enclosed please find the Site Monitoring Report for the Mattie Price Tank Battery. This facility is located in Lea County, New Mexico.

Please review and provide comments or concurrence for the proposed actions described in Section 3.0, therein.

If you have any questions, please don't hesitate to give me a call at (318) 256-0660, or send me an e-mail at debpennington@cebridge.net. Please forward all written correspondence for this site investigation plan to me at the following address:

Deb Pennington
Kane Environmental Engineering, Inc.
97 First Point Rd.
Many, LA 71449

Sincerely,

D. Pennington

Deb Pennington

Enclosure

CC: With Enclosure:

Larry Johnson
Oil Conservation Division
1625 N. French Dr
Hobbs, NM 88240

Joyce Swayze, Osborn Heirs Company

Phase III ESA

Site Monitoring Report

Mattie Price Tank Battery

Lea County, New Mexico

Prepared for:

Osborn Heirs Company
1250 NE Loop 410 Suite 1100
San Antonio, TX 78209

December 2006

Prepared by:

KANE

Kane Environmental Engineering, Inc.
5307 Oakdale Creek Court
Spring, Texas 77379
Project No. 04-631

TABLE OF CONTENTS

SECTIONS

FIGURES

TABLES

APPENDICES

1.0 SITE HISTORY

The Mattie Price Tank Battery, owned and operated by Osborn Heirs Company (Osborn), is located in Section 6, T17S R38E, Lea County, New Mexico, at a global position of North 32° 52' 3.4'', West 103° 10' 45.8'' (NAD 27 datum). A topographic map of the location is shown as **Figure 1**.

Phase I and II ESAs prepared by R.E. Environmental Services, Inc. and Larson & Associated, Inc. in 2003 identified hydrocarbon impacted soils in the vicinity of the tank battery, with impact alleged to 14' in depth, and surface contamination at the following locations:

- near the free water knockout.
- at an area reported as a buried pit.
- near the west end of the tank battery.
- near the flare.
- around the produced water injection points.

Kane Environmental Engineering Inc. (Kane Environmental) prepared a subsequent Phase II Site Investigation Plan (September 2003), detailing areas of investigation and determining a hydrocarbon remediation threshold site ranking score of 10.

Upon acceptance of the Plan by the NMOCD, Kane Environmental installed 16 borings designed to horizontally and vertically delineate potential impact around the tanks and equipment. Boring placements were designed to confirm or refute hydrocarbon impacts reported in the R.E. Environmental Services, Inc. and Larson & Associated, Inc. ESAs, and to further delineate any hydrocarbon impacted areas. Boring locations are depicted in **Figure 2**. TPH concentrations were found to exceed the site specific remediation threshold of 1,000 mg/kg in six borings.

Following submission of the site investigation report, NMOCD personnel requested additional vertical delineation at three boring locations (Borings 1, 9 and 10). Kane Environmental submitted and was granted approval for a Supplemental Work Plan to execute this delineation, which was conducted during the Supplemental Phase II ESA on June 14, 2005. This site investigation demonstrated the maximum depth of hydrocarbons in excess of the TPH threshold to be limited to 20'. A Phase II Supplemental Site Investigation Report and Remediation Work Plan was submitted to NMOCD in June 2005.

The Phase II ESA Supplemental Site Investigation Report and Remediation Work Plan, detailing the investigations to-date, the proposed soil removal and *in-situ* remediation procedures was sent for signature by the landowner in June of 2005. On December 1, 2005 Osborn, NMOCD and landowner representatives met on site, and approval for the Remediation Work Plan was granted with the following NMOCD requests:

1.0 SITE HISTORY, Continued

- Installation of at least one temporary monitoring well to confirm or refute allegations of groundwater hydrocarbon and chloride contamination, and demonstrate groundwater depth and flow direction.
- Extent excavation boundaries as close as practicable (limited by safety concerns) to AST #4.

A completed C-141 did not accompany this site remediation report, as the areas of impact are the result of historical oil and gas operations, with no specific time of release identified.

Upon receipt of NMOCD approval, Kane Environmental directed the execution of the Remediation Work Plan during January 2006, with submission of the Phase III Site Remediation Report & Monitoring Plan in March 2006. This report and monitoring plan detailed:

- plans for excavation of hydrocarbon impacted soils.
- *in-situ* remediation of unexcavated materials by adding soil amendments.
- installation of three monitoring wells.
- installation of an air sparge system for *in-situ* remediation of soils below the depth of excavation.

Excavation was performed to the extent practical to preserve safe operations, keeping the integrity of the supporting foundations of the surface equipment and underground utilities intact. In most areas, excavation was completed to a depth of 10', with areas of excavation shown on **Figure 3**. A summary table of soil analyses performed during the site remediation excavation is included in **Table 1.** Following completion of excavation, approximately 332 yd^3 of contaminated soil was transported to J & L Landfarm in Hobbs, NM (Permit #NM-01-0023) for treatment and disposal.

Three monitoring wells were installed (shown on **Figures 3 and 4**). Well northing and easting, ground surface elevations, static water levels and groundwater elevations are shown in **Table 2**. Groundwater flow has been determined to be to the east-southeast.

BTEX analyses of monitoring well samples showed concentrations below drinking water thresholds. Chloride analyses for the monitoring well samples were below the Secondary drinking water threshold. A summary table of the analytical results is included in **Table 3.** Based on these analyses, operations at the Mattie Price have not impacted groundwater on-site. Following receipt of analyses, the wells were plugged as per previous agreement with NMOCD.

An 11-well air sparge system was installed, with each well drilled to a depth of 25'. Wells were spaced approximately 15' apart and a PVC pipe manifold system (shown in **Figure 4**) was constructed to connect the air sparge wells together. This manifold system was connected to an air compressor, with the air pressure on the manifold system maintained at 10 PSI for approximately 12 hours per day.

2.0 REMEDIATION MONITORING RESULTS

On November 21, 2006, Kane Environmental directed the installation of four soil borings using an air/rotary drilling rig (John Scarborough Drilling Inc., Lamesa, TX) to monitor the status of *in-situ* remediation in areas where soil containing hydrocarbons above NMOCD site specific thresholds remain (MPB-1, MPB-7 and MPB-9, and MPB-10, 10-20'). At each location, air/rotary drilling was used to a depth of 10', with no samples collected, as these materials were backfill soils from previous excavation. At depths greater than 10', undisturbed cores were collected in 2.5' intervals to a total depth of 20'.

Field headspace analyses were performed using a hand-held PID instrument to screen samples for submittal to the laboratory. Sample collection and headspace readings were conducted according to the procedures outlined in NMOCD's Guidelines for Remediation of Leaks, Spills and Releases. The sample interval with the highest headspace reading and the terminal sample interval from each boring were submitted for laboratory TPH analyses. Soil boring logs are included in **Table 4**, with field headspace readings included in **Table 5** and boring sample analysis summarized in **Table 6**. Complete laboratory reports, including Chain of Custody documentation, are included in **Appendix A**.

In the area represented by MPB-1, boring MPB-1 11/06 was placed in the center of the former excavation area adjacent to the existing air sparge well to evaluate the soils below the former excavation floor. Samples from the 12.5-15' and 17.5-20' depth intervals were submitted for laboratory TPH analyses, with non-detect results for both samples.

In the area represented by MPB-7, boring MPB-7 11/06 was placed approximately 1' south of the former excavation area south sidewall to evaluate the strip of soil containing 1,070 mg/kg TPH that remained after site remedial excavation. Samples from the 12.5-15' and 17.5-20' depth intervals were submitted for laboratory TPH analyses, with non-detect and 44.2 mg/kg TPH concentrations, respectively.

At the area represented by MPB-9, boring MPB-9 11/06 was placed approximately adjacent to the former excavation area east sidewall to evaluate the soil containing 1870 mg/kg TPH that remained after site remedial excavation in the east sidewall, with boring completed to a depth of 20' to evaluate the soils below the former excavation floor. Samples from the 12.5-15' and 17.5-20' depth intervals were submitted for laboratory TPH analyses, with 117 and 184 mg/kg TPH concentrations, respectively.

Boring MPB-10 11/06 was placed in the area represented by MPB-10, with placement in the center of the former excavation area adjacent to the existing air sparge well to evaluate the soils below the former excavation floor. Samples from the 10-12.5' and 17.5-20' depth intervals were submitted for laboratory TPH analyses, with results (4,950 and 1,820 mg/kg, respectively) in excess of NMOCD thresholds.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Based on analytical results from the November 21, 2006 field investigation, remediation of residual hydrocarbons has been completed in areas MPB-1, MPB-7 and MPB-9. Additional remediation is required for area MPB-10, with soil hydrocarbon concentrations of 4,950 mg/kg at 10-12.5' and 1,820 mg/kg at 17.5-20'. To achieve complete remediation at the Mattie Price Tank Battery, Kane Environmental proposes the following remedial and monitoring actions:

- Capping of the 5 air sparge wells in areas MPB-1, MPB-7 and MPB-9 as indicated on Figure 4, reserving plugging operations until completion of site remediation.
- Rerouting of the surface manifold system to include only the 6 air sparging wells in and around area MPB-10 to provide a greater air volume for *in-situ* remediation of residual hydrocarbons in excess of NMOCD thresholds.
- Continued operation of the air sparge system, with the air pressure on the manifold system maintained at 10 PSI for approximately 12 hours per day.
- Continued monitoring of the function of the air sparge system by Kane Environmental personnel on a 90-day schedule.
- Continued monitoring of the status of remediation by collection of one boring in the MPB-10 area on a yearly basis until hydrocarbon concentrations are below the NMOCD site specific threshold of 1,000 mg/kg.

4.0 QUALITY CONTROL AND SAFETY

All sample collection equipment was decontaminated between intervals by washing with soap and water followed by a clean-water rinse. All soil samples to be submitted for laboratory analysis were immediately packed on ice for shipment to the laboratory under a Chain of Custody transport. EPA approved pre-cleaned and certified containers were used for sample collection.

The PID used for headspace analysis was calibrated to assume a benzene response factor prior to arrival on location and the respective calibration sheet for this instrument is included in **Appendix B**.

Laboratory quality control measures used to insure the precision and accuracy of the data included:

- matrix spike analyses to demonstrate the effectiveness of the extraction procedures.
- known standard sample analyses and quality control spike analyses to demonstrate the accuracy of the equipment used for laboratory analyses.
- method blank analyses to demonstrate the purity of reagents used.

All analytical quality control measures were measured within acceptable limits.

All laboratory analyses were completed within required sample holding times, using EPA or NMOCD approved analytical methods.

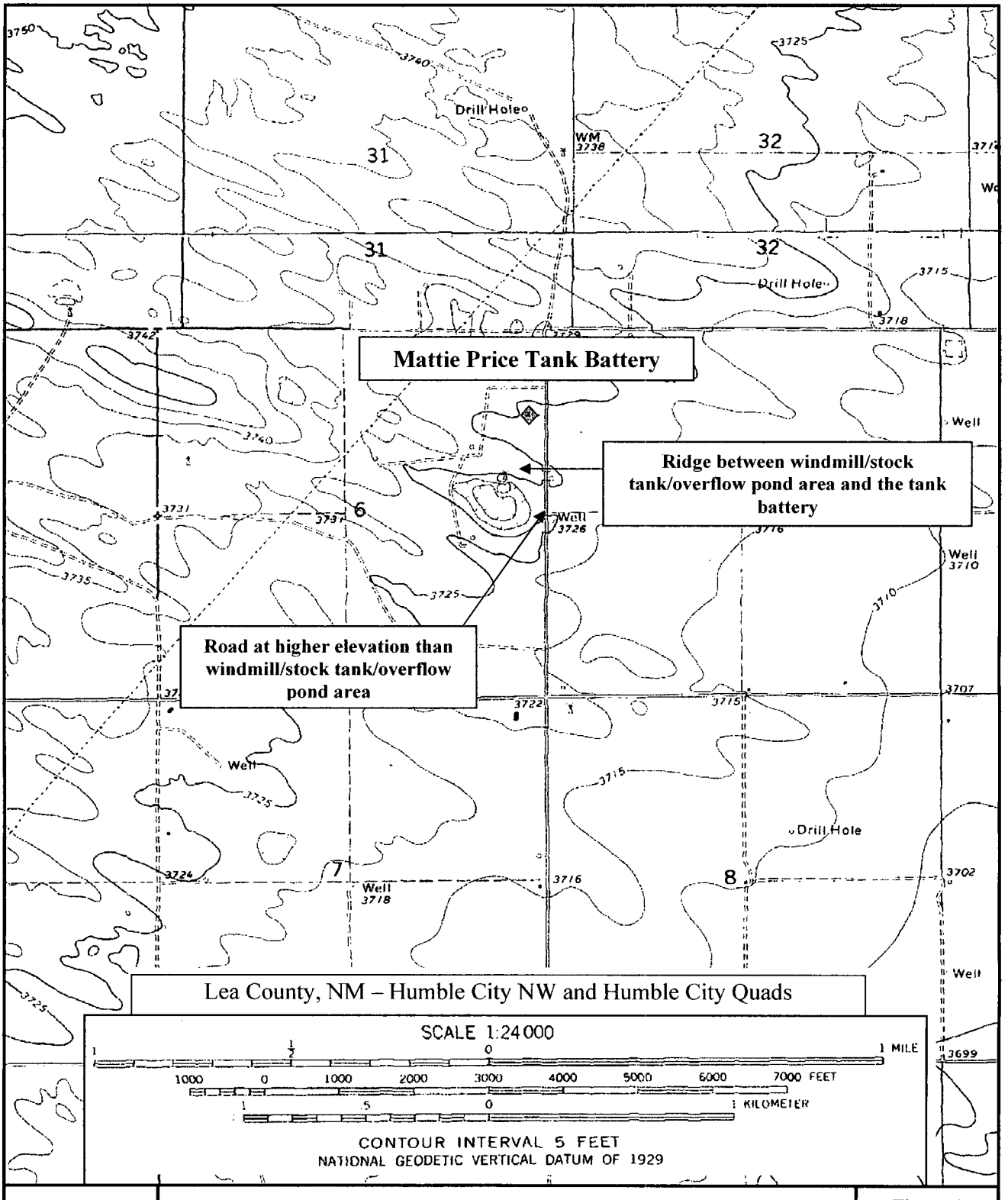
Safety Protocol:

1. All work was performed in a safe manner.
2. A tailgate safety meeting was conducted each morning prior to initiation of work.
3. No excavation or boring was performed without clearing the area of utility lines.
4. Boom up/down was not performed without visual confirmation that the overhead area is clear of obstructions.
5. Call sheet and directions to local hospital was available to all on-site personnel.

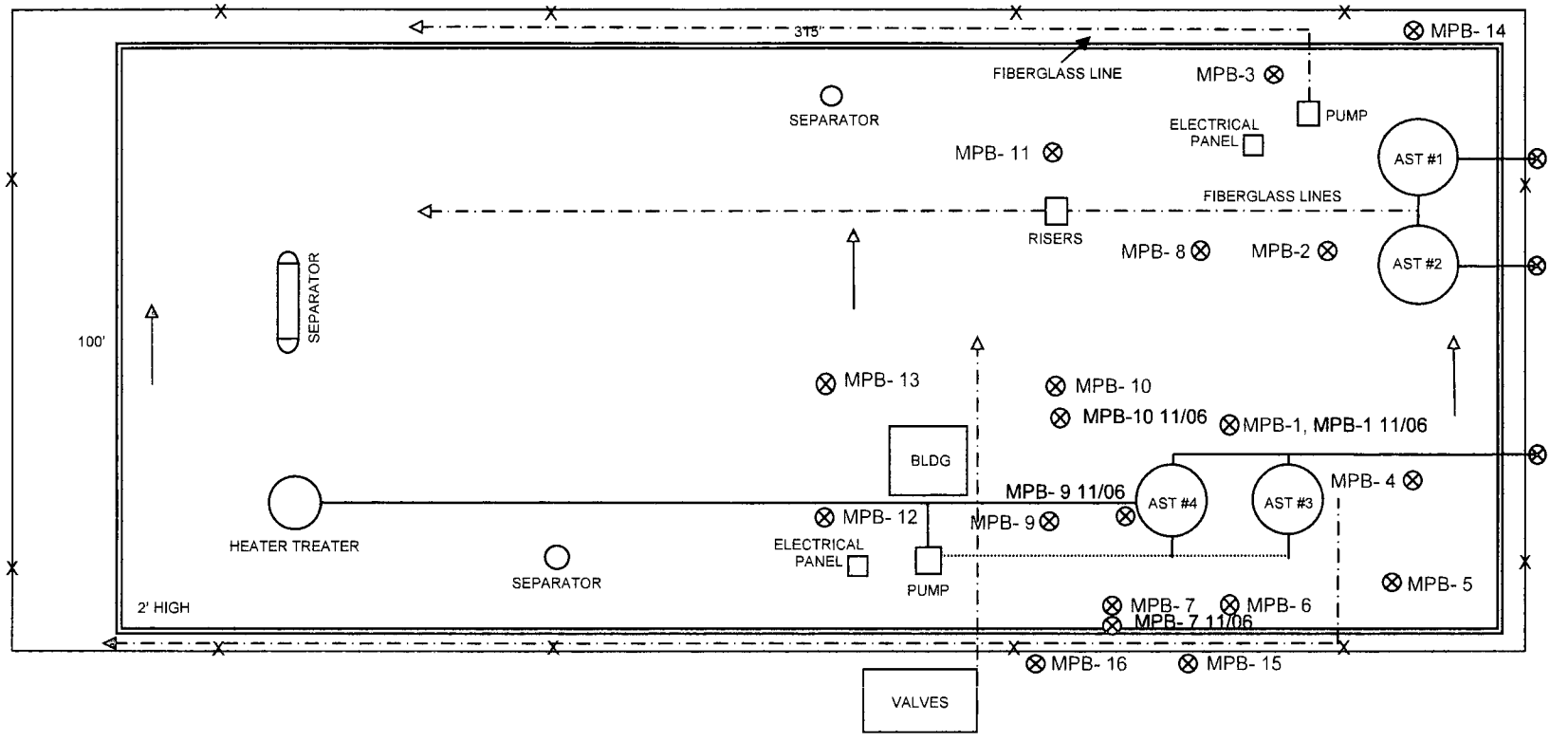
Call Sheet:

Emergency Contacts	Phone number	email
One Call	800-321-2537	jtobin28@qwest.net
Osborn Heirs	210-826-8164	joys@osbornheirs.com
Landowner, Phillip Barry	505-396-6955	---
Shawn Hokanson, Kane Environmental	806-570-3557	shawnhokanson@msn.com
Deb Pennington, Kane Environmental	318-256-0660	debpennington@cebridge.net

Emergency Contacts	Phone number
New Mexico State Police	(505) 392-5588
Lea County Sheriffs Office	(505) 393-2515
Weather and Road Conditions	(800) 432-4269
Hobbs Police Department	(505) 397-9265
Hobbs Fire Department	(505) 397-9308
Hobbs Ambulance	(505) 397-9308
Columbia Lea Regional Medical Center	5419 N Lovington Highway Hobbs, NM 88240 505-392-6581



Area Location Map	Osborn Heirs Company **MATTIE PRICE TANK BATTERY** Lea County, New Mexico	**Figure 1** USGS Topographic Map



BERM DIMENSIONS REFLECT TOP OF BERM

TANK LEGEND

- SURFACE DRAINAGE
- FENCE
- EARTHEN BERM
- BORING
- SURFACE PIPING
- SUBSURFACE PIPING
- PIPING REMOVED FOR EXCAVATION

TANK LEGEND

AST #1 PRODUCED WATER TANK	504 BBL
AST #2 PRODUCED WATER TANK	504 BBL
AST #3 PRODUCED OIL TANK	500 BBL
AST #4 PRODUCED OIL TANK	500 BBL

N, NW, NE, W, E, SW, SE, S

KANE

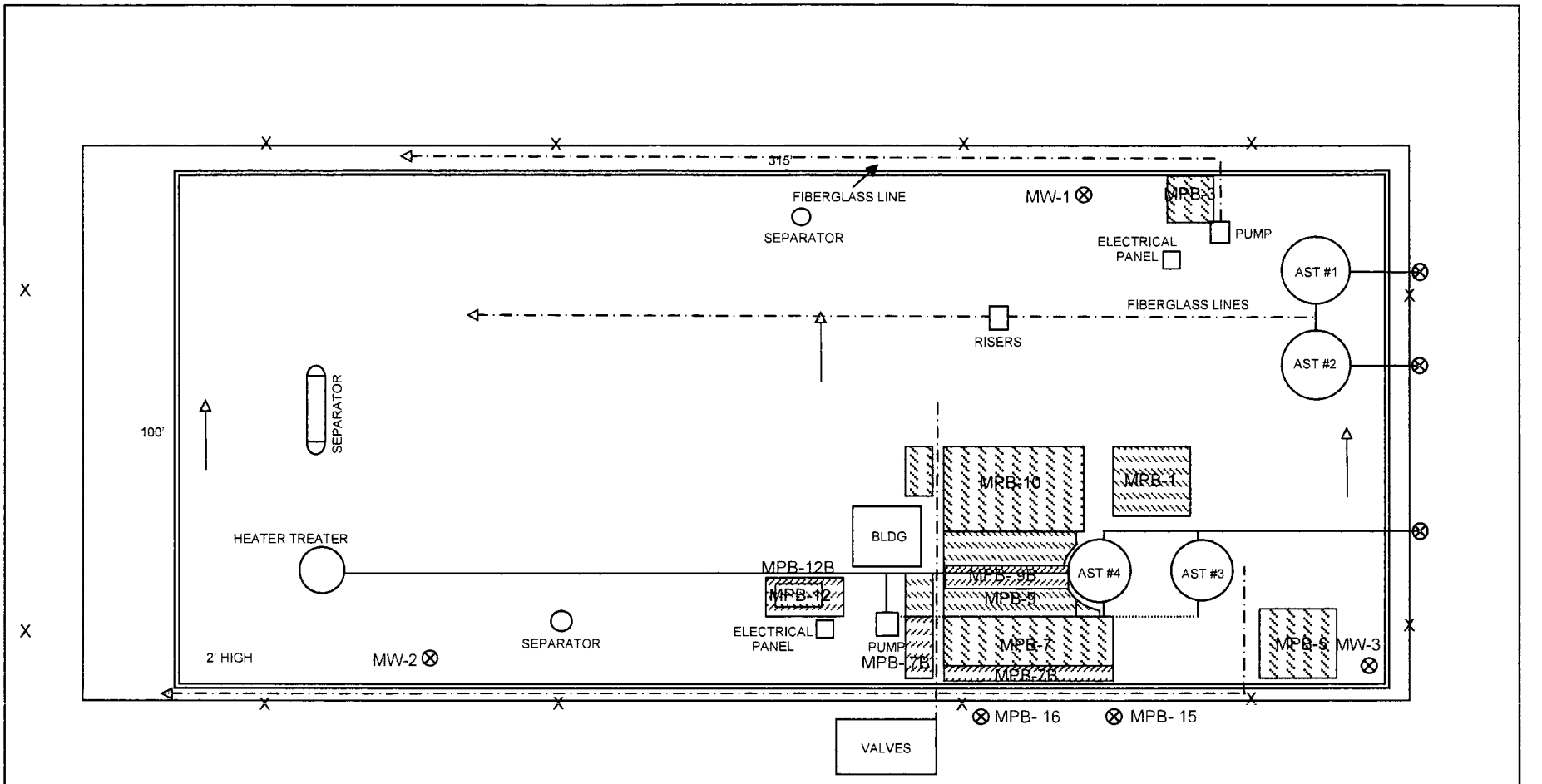
Environmental Engineering Inc.
Spring, Texas

Figure 2

Soil Boring Plot

Lea County, New Mexico

DRAWN BY: SMH	PROJECT: 04-631
DATE: 8/29/2004	APPROVED BY: DCP
REVISED:11/30/06	NOT TO SCALE



BERM DIMENSIONS REFLECT TOP OF BERM

TANK LEGEND

- SURFACE DRAINAGE
- FENCE
- EARTHEN BERM
- INITIAL EXCAVAION AREA
- "B" EXCAVATION AREA
- SURFACE PIPING
- SUBSURFACE PIPING
- PIPING REMOVED FOR EXCAVATION

TANK LEGEND

AST #1 PRODUCED WATER TANK	504 BBL
AST #2 PRODUCED WATER TANK	504 BBL
AST #3 PRODUCED OIL TANK	500 BBL
AST #4 PRODUCED OIL TANK	500 BBL

N, NW, NE, W, E, SW, SE, S

KANE

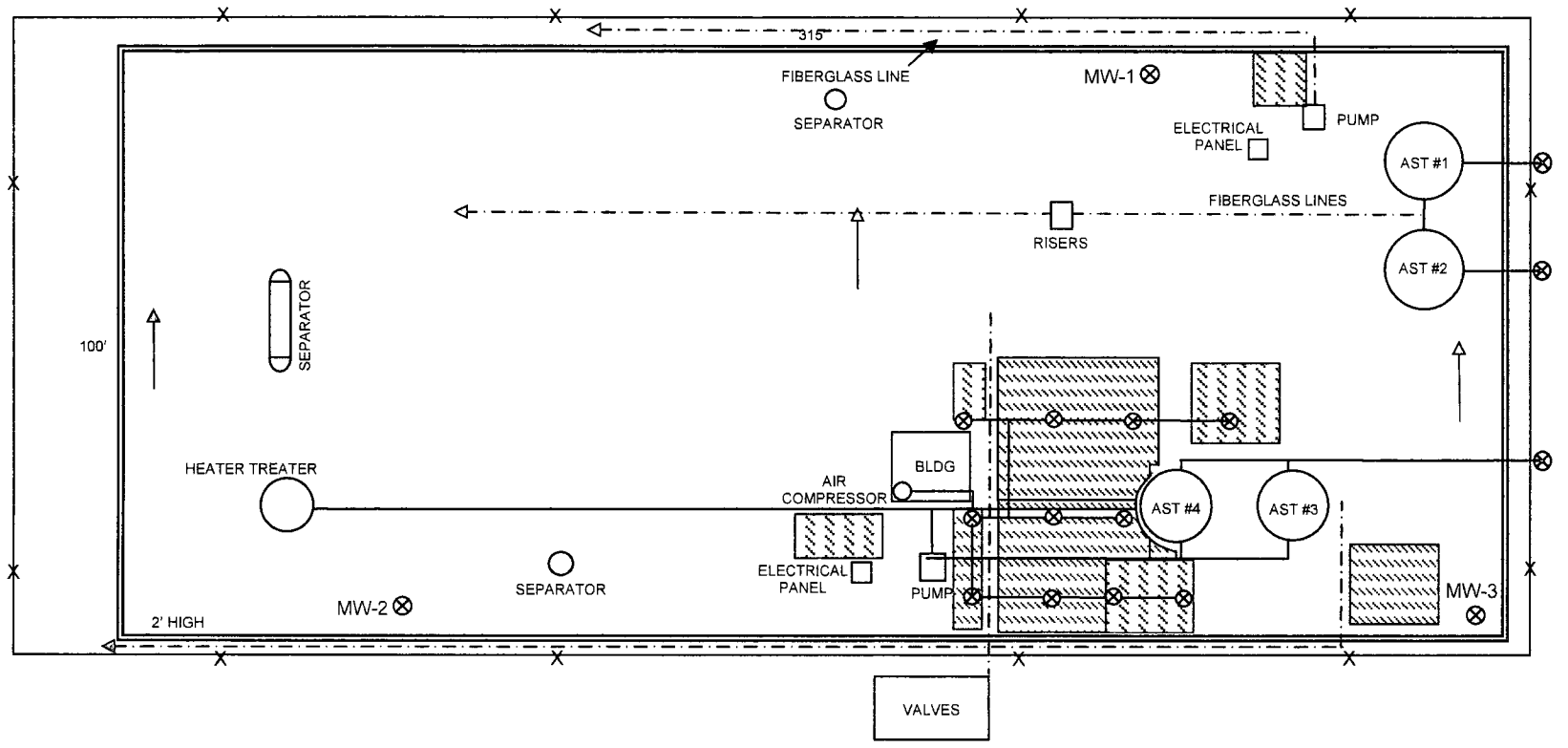
Environmental Engineering Inc.
Spring, Texas

Figure 3

Soil Excavation Plot

Lea County, New Mexico

DRAWN BY: SMH	PROJECT: 04-631
DATE: 2/28/2006	APPROVED BY: DCP
REVISED: 11/30/06	NOT TO SCALE



BERM DIMENSIONS REFLECT TOP OF BERM

TANK LEGEND

- SURFACE DRAINAGE
- FENCE
- EARTHEN BERM
- REMEDIATION COMPLETED
- REMEDIATION INCOMPLETE
- AIR SPARGE WELL/PIPING
- AIR SPARGE BORING/PIPING TO BE DISCONNECTED
- SURFACE PIPING

TANK LEGEND

AST #1 PRODUCED WATER TANK	504 BBL
AST #2 PRODUCED WATER TANK	504 BBL
AST #3 PRODUCED OIL TANK	500 BBL
AST #4 PRODUCED OIL TANK	500 BBL

N NW NE W E SW SE S

KANE

Environmental Engineering Inc.
Spring, Texas

Figure 4

Remediation Progress and Air Sparge System Modifications Plot

Lea County, New Mexico

DRAWN BY: SMH	PROJECT: 04-631
DATE: 3/8/2006	APPROVED BY: DCP
REVISED: 11/30/06	NOT TO SCALE

Table 1 Remediation Sample Laboratory Analyses - January 2006

Excavation Area	Sample	Sample Date	GRO C6-C12	DRO >C12-C35	Total Hydrocarbons
			mg/kg		
MPB-1	Floor 10'	1/9/06	ND	124	124
MPB-1	E SW	1/9/06	ND	181	181
MPB-1	W SW	1/9/06	ND	289	289
MPB-1	N SW	1/9/06	ND	213	213
MPB-1	S SW	1/9/06	ND	259	259
MPB-3	Floor, 4'	1/9/06	5.36J	621	621
MPB-3	E SW	1/9/06	15.3	809	824
MPB-3	W SW	1/9/06	ND	191	191
MPB-3	N SW	1/9/06	13.0	886	899
MPB-3	S SW	1/9/06	8.07J	363	363
MPB-5	Floor, 9'	1/5/06	ND	55.5	55.5
MPB-5	E SW	1/5/06	ND	142	142
MPB-5	W SW	1/5/06	ND	ND	ND
MPB-5	N SW	1/5/06	ND	ND	ND
MPB-5	S SW	1/5/06	ND	ND	ND
MPB-7	Floor 10'	1/6/06	52.9	260	313
MPB-7	E SW	1/6/06	47.2	170	217
MPB-7	W SW	1/6/06	134	927	1060
MPB-7	W SW (B)	1/11/06	ND	751	751
MPB-7	N SW	1/6/06	152	1150	1300
MPB-7	S SW	1/6/06	289	1030	1320
MPB-7	S SW (B)	1/11/06	5.08J	1070	1070
MPB-9	Floor 10'	1/6/06	101	939	1040
MPB-9	E SW	1/6/06	177	1690	1870
MPB-9	W SW	1/6/06	8.69J	16.7	16.7
MPB-9	N SW	1/6/06	149	1550	1700
MPB-9	N SW (B)	1/11/06	6.92J	1500	1500
MPB-9	S SW	1/6/06	192	1810	2000
MPB-9	S SW(B)	1/11/06	5.78J	1303	1303

Table 1 Remediation Sample Laboratory Analyses - January 2006, Continued

Excavation Area	Sample	Sample Date	GRO C6-C12	DRO >C12-C35	Total Hydrocarbons
			mg/kg		
MPB-10	Floor 10'	1/9/06	239	1360	1600
MPB-10	E SW	1/9/06	8.76J	363	363
MPB-10	W SW	1/9/06	11.4	349	360
MPB-10	N SW	1/9/06	10.5	377	388
MPB-10	S SW	1/9/06	9.81J	343	343
MPB-12	Floor 8'	1/9/06	1180	3090	4270
MPB-12	Floor 10' (B)	1/10/06	ND	182	182
MPB-12	E SW	1/9/06	1330	3530	4860
MPB-12	E SW (B)	1/10/06	ND	231	231
MPB-12	W SW	1/9/06	504	1560	2060
MPB-12	W SW (B)	1/10/06	ND	637	637
MPB-12	N SW	1/9/06	421	1430	1850
MPB-12	N SW (B)	1/10/06	ND	183	183
MPB-12	S SW	1/9/06	261	895	1160
MPB-12	S SW (B)	1/10/06	ND	392	392
MP Excavated Soil Pile 1		1/9/06	ND	22100	22100
MP Excavated Soil Pile 2		1/9/06	433	4040	4470
MP Backfill Soil		1/9/06	105	289	394

Table 2 Monitoring Well and Groundwater Data - January 2006

Well ID	Well Location, Northing	Well Location, Easting	TOC* Elevation, ft	Static water level, ft	Groundwater Elevation, ft
MW 1	681334.136	854349.242	3726.31	78.39	3647.92
MW 2	681246.554	854276.844	3725.56	77.50	3648.06
MW 3	681256.234	854416.484	3726.31	78.89	3647.42

Table 3 Groundwater Laboratory Analyses January - 2006

Sample ID	Benzene	Toluene	Ethylbenzene	Xylenes, o	Xylenes, m,p	Chloride
			Mg/l			
MW 1	<0.001	<0.001	<0.001	<0.001	<0.001	25.1
MW 2	<0.001	<0.001	<0.001	<0.001	<0.001	45.1
MW 3	<0.001	<0.001	<0.001	<0.001	<0.001	188
DW Std.*	0.005	1.0	0.7	10 (total)		250
*2004 Edition of the Drinking Water Standards and Health Advisories, US EPA.						

Table 4 Remediation Monitoring Boring Logs – November 2006

Depth Interval, ft	MPB-1 11/06 Boring in center of section 1
0-10'	Mixed fill, drilled with air, not sampled
10-12.5'	Grayish white soft slightly sticky moist caliche with white clay
12.5-15'	Grayish white soft slightly sticky moist caliche with white clay
15-17.5'	Grayish white soft slightly sticky moist caliche with white clay
17.5-20'	White calcified clay and caliche, hard
Depth Interval, ft	MPB-7 11/06 Boring in center of section 7, just inside facility berm
0-10'	Mixed fill, drilled with air, not sampled
10-12.5'	White soft slightly sticky moist caliche with orangeish white clay
12.5-15'	White soft slightly sticky moist caliche with orangeish white clay
15-17.5'	White soft slightly sticky moist caliche with light orange clay
17.5-20'	Orange calcified clay and caliche, hard
Depth Interval, ft	MPB-9 11/06 Boring on east side of section 9, adjacent to production tank
0-10'	Mixed fill, drilled with air, not sampled
10-12.5'	Grayish white soft slightly sticky moist caliche with white clay
12.5-15'	Grayish white soft slightly sticky moist caliche with white clay
15-17.5'	Grayish white soft slightly sticky moist caliche with white clay
17.5-20'	White calcified clay and caliche, hard
Depth Interval, ft	MPB-10 11/06 Boring in center of section 10
0-10'	Mixed fill, drilled with air, not sampled
10-12.5'	Grayish white soft slightly sticky moist caliche with white clay
12.5-15'	Grayish white soft slightly sticky moist caliche with white clay
15-17.5'	Grayish white soft slightly sticky moist caliche with white clay
17.5-20'	White calcified clay and caliche, hard

Table 5 Field Headspace Analyses by PID - November 2006.

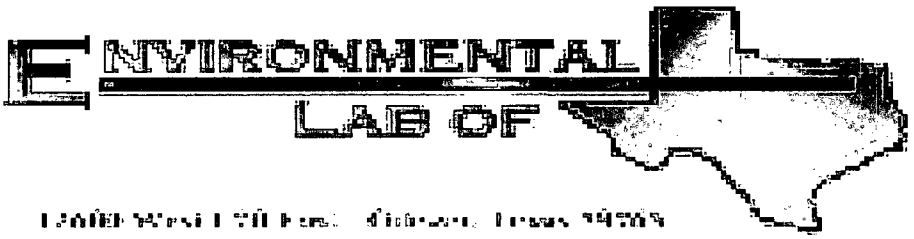
Boring Location	Sample Depth Interval, ft	Field Headspace Reading, ppm
MPB-1	10.0-12.5'	0.0
MPB-1	12.5-15.0'	3.1
MPB-1	15.0-17.5'	2.3
MPB-1	17.5-20.0'	3.9
MPB-7	10.0-12.5'	1.1
MPB-7	12.5-15.0'	2.2
MPB-7	15.0-17.5'	2.0
MPB-7	17.5-20.0'	4.9
MPB-9	10.0-12.5'	2.1
MPB-9	12.5-15.0'	2.4
MPB-9	15.0-17.5'	2.3
MPB-9	17.5-20.0'	3.7
MPB-10	10.0-12.5'	4.2
MPB-10	12.5-15.0'	1.2
MPB-10	15.0-17.5'	2.3
MPB-10	17.5-20.0'	3.7

Table 6 Monitoring Sample Analyses - November 2006

Excavation Area	Depth	C6-C12	C12-C28	C28-C35	Total Hydrocarbons
		mg/kg, dry weight			
MPB-1 11/06	12.5-15'	ND	ND	ND	ND
MPB-1 11/06	17.5-20'	ND	ND	ND	ND
MPB-7 11/06	12.5-15'	ND	ND	ND	ND
MPB-7 11/06	17.5-20'	12.4	31.8	2.01J	44.2
MPB-9 11/06	12.5-15'	7.65J	117	7.79J	117
MPB-9 11/06	17.5-20'	12.5	171	6.92J	184
MPB-10 11/06	12.5-15'	1550	3310	92.4	4950
MPB-10 11/06	17.5-20'	534	1250	36.7	1820

APPENDIX A

Laboratory Analyses and Chain of Custody Forms, November 2006



Analytical Report

Prepared for:

Shawn Hokanson

Kane Environmental (Amarillo)

3509 Lynette

Amarillo, TX 79109

Project: Osborn Heirs Mattie Price

Project Number: 04-631

Location: Lea County, NM

Lab Order Number: 6K22007

Report Date: 11/28/06

Kane Environmental (Amarillo)	Project: Osborn Heirs Mattie Price	Fax: (806) 353-3573
3509 Lynette	Project Number: 04-631	
Amarillo TX, 79109	Project Manager: Shawn Hokanson	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MPB-7-11/06 12.5-15	6K22007-01	Soil	11/21/06 09:25	11-22-2006 12:15
MPB-7-11/06 17.5-20	6K22007-02	Soil	11/21/06 09:30	11-22-2006 12:15
MPB-1-11/06 12.5-15	6K22007-03	Soil	11/21/06 10:25	11-22-2006 12:15
MPB-1-11/06 17.5-20	6K22007-04	Soil	11/21/06 10:30	11-22-2006 12:15
MPB-9-11/06 12.5-15	6K22007-05	Soil	11/21/06 11:25	11-22-2006 12:15
MPB-9-11/06 12.5-20	6K22007-06	Soil	11/21/06 11:30	11-22-2006 12:15
MPB-10-11/06 10-12.5	6K22007-07	Soil	11/21/06 12:25	11-22-2006 12:15
MPB-10-11/06 17.5-20	6K22007-08	Soil	11/21/06 12:30	11-22-2006 12:15

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

Kane Environmental (Amarillo)	Project: Osborn Heirs Mattie Price	Fax: (806) 353-3573
3509 Lynette	Project Number: 04-631	
Amarillo TX, 79109	Project Manager: Shawn Hokanson	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB-7-11/06 12.5-15 (6K22007-01) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EK62401	11/24/06	11/24/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*126 %*	*70-130*		"	"	"	"	
MPB-7-11/06 17.5-20 (6K22007-02) Soil									
Carbon Ranges C6-C12	**12.4**	10.0	mg/kg dry	1	EK62401	11/24/06	11/24/06	EPA 8015M	
Carbon Ranges C12-C28	**31.8**	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	**J [2.01]**	10.0	"	"	"	"	"	"	J
Total Hydrocarbons	**44.2**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*92.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*108 %*	*70-130*		"	"	"	"	
MPB-1-11/06 12.5-15 (6K22007-03) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EK62401	11/24/06	11/24/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*84.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*102 %*	*70-130*		"	"	"	"	
MPB-1-11/06 17.5-20 (6K22007-04) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EK62401	11/24/06	11/24/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*99.2 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*118 %*	*70-130*		"	"	"	"	

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

Kane Environmental (Amarillo)
3509 Lynette
Amarillo TX, 79109

Project: Osborn Heirs Mattie Price
Project Number: 04-631
Project Manager: Shawn Hokanson

Fax: (806) 353-3573

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB-9-11/06 12.5-15 (6K22007-05) Soil									
Carbon Ranges C6-C12	**J [7.65]**	10.0	mg/kg dry	1	EK62401	11/24/06	11/24/06	EPA 8015M	J
Carbon Ranges C12-C28	**117**	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	**J [7.79]**	10.0	"	"	"	"	"	"	J
Total Hydrocarbons	**117**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*92.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*111 %*	*70-130*		"	"	"	"	
MPB-9-11/06 12.5-20 (6K22007-06) Soil									
Carbon Ranges C6-C12	**12.5**	10.0	mg/kg dry	1	EK62401	11/24/06	11/25/06	EPA 8015M	
Carbon Ranges C12-C28	**171**	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	**J [6.92]**	10.0	"	"	"	"	"	"	J
Total Hydrocarbons	**184**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*86.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*105 %*	*70-130*		"	"	"	"	
MPB-10-11/06 10-12.5 (6K22007-07) Soil									
Carbon Ranges C6-C12	**1550**	10.0	mg/kg dry	1	EK62401	11/24/06	11/25/06	EPA 8015M	
Carbon Ranges C12-C28	**3310**	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	**92.4**	10.0	"	"	"	"	"	"	
Total Hydrocarbons	**4950**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*142 %*	*70-130*		"	"	"	"	*S-04*
Surrogate: 1-Chlorooctadecane		*185 %*	*70-130*		"	"	"	"	*S-04*
MPB-10-11/06 17.5-20 (6K22007-08) Soil									
Carbon Ranges C6-C12	**534**	10.0	mg/kg dry	1	EK62401	11/24/06	11/25/06	EPA 8015M	
Carbon Ranges C12-C28	**1250**	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	**36.7**	10.0	"	"	"	"	"	"	
Total Hydrocarbons	**1820**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*146 %*	*70-130*		"	"	"	"	*S-04*

Kane Environmental (Amarillo)	Project: Osborn Heirs Mattie Price	Fax: (806) 353-3573
3509 Lynette	Project Number: 04-631	
Amarillo TX, 79109	Project Manager: Shawn Hokanson	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB-7-11/06 12.5-15 (6K22007-01) Soil									
% Moisture	**14.7**	0.1	%	1	EK62701	11/22/06	11/27/06	% calculation	
MPB-7-11/06 17.5-20 (6K22007-02) Soil									
% Moisture	**8.1**	0.1	%	1	EK62701	11/22/06	11/27/06	% calculation	
MPB-1-11/06 12.5-15 (6K22007-03) Soil									
% Moisture	**13.7**	0.1	%	1	EK62701	11/22/06	11/27/06	% calculation	
MPB-1-11/06 17.5-20 (6K22007-04) Soil									
% Moisture	**10.6**	0.1	%	1	EK62701	11/22/06	11/27/06	% calculation	
MPB-9-11/06 12.5-15 (6K22007-05) Soil									
% Moisture	**11.2**	0.1	%	1	EK62701	11/22/06	11/27/06	% calculation	
MPB-9-11/06 12.5-20 (6K22007-06) Soil									
% Moisture	**8.6**	0.1	%	1	EK62701	11/22/06	11/27/06	% calculation	
MPB-10-11/06 10-12.5 (6K22007-07) Soil									
% Moisture	**6.1**	0.1	%	1	EK62701	11/22/06	11/27/06	% calculation	
MPB-10-11/06 17.5-20 (6K22007-08) Soil									
% Moisture	**7.7**	0.1	%	1	EK62701	11/22/06	11/27/06	% calculation	

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

Kane Environmental (Amarillo)
3509 Lynette
Amarillo TX, 79109

Project: Osborn Heirs Mattie Price
Project Number: 04-631
Project Manager: Shawn Hokanson

Fax: (806) 353-3573

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 EK62401 - Solvent Extraction (GC)										
Blank (EK62401-BLK1)				Prepared & Analyzed: 11/24/06						
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbons	ND	10.0	"							
Surrogate: 1-Chlorooctane	*49.1*		*mg/kg*	*50.0*		*98.2*	*70-130*			
Surrogate: 1-Chlorooctadecane	*57.2*		*"*	*50.0*		*114*	*70-130*			
LCS (EK62401-BS1)				Prepared & Analyzed: 11/24/06						
Carbon Ranges C6-C12	552	10.0	mg/kg wet	500		110	75-125			
Carbon Ranges C12-C28	506	10.0	"	500		101	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	1060	10.0	"	1000		106	75-125			
Surrogate: 1-Chlorooctane	*75.2*		*mg/kg*	*100*		*75.2*	*70-130*			
Surrogate: 1-Chlorooctadecane	*79.7*		*"*	*100*		*79.7*	*70-130*			
Calibration Check (EK62401-CCV1)				Prepared: 11/24/06 Analyzed: 11/25/06						
Carbon Ranges C6-C12	250		mg/kg	250		100	80-120			
Carbon Ranges C12-C28	262		"	250		105	80-120			
Total Hydrocarbons	512		"	500		102	80-120			
Surrogate: 1-Chlorooctane	*54.7*		*"*	*50.0*		*109*	*70-130*			
Surrogate: 1-Chlorooctadecane	*59.3*		*"*	*50.0*		*119*	*70-130*			
Matrix Spike (EK62401-MS1)	**Source: 6K22007-04**			Prepared: 11/24/06 Analyzed: 11/27/06						
Carbon Ranges C6-C12	474	10.0	mg/kg dry	559	ND	84.8	75-125			
Carbon Ranges C12-C28	450	10.0	"	559	ND	80.5	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125			
Total Hydrocarbons	924	10.0	"	1120	ND	82.5	75-125			
Surrogate: 1-Chlorooctane	*54.6*		*mg/kg*	*50.0*		*109*	*70-130*			
Surrogate: 1-Chlorooctadecane	*56.6*		*"*	*50.0*		*113*	*70-130*			

Kane Environmental (Amarillo)	Project: Osborn Heirs Mattie Price	Fax: (806) 353-3573
3509 Lynette	Project Number: 04-631	
Amarillo TX, 79109	Project Manager: Shawn Hokanson	

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 EK62401 - Solvent Extraction (GC)										
Matrix Spike Dup (EK62401-MSD1)	**Source: 6K22007-04**			Prepared: 11/24/06 Analyzed: 11/27/06						
Carbon Ranges C6-C12	497	10.0	mg/kg dry	559	ND	88.9	75-125	4.74	20	
Carbon Ranges C12-C28	457	10.0	"	559	ND	81.8	75-125	1.54	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbons	953	10.0	"	1120	ND	85.1	75-125	3.09	20	
Surrogate: 1-Chlorooctane	*61.9*		*mg/kg*	*50.0*		*124*	*70-130*			
Surrogate: 1-Chlorooctadecane	*63.3*		*"*	*50.0*		*127*	*70-130*			

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

Kane Environmental (Amarillo)
3509 Lynette
Amarillo TX, 79109

Project: Osborn Heirs Mattie Price
Project Number: 04-631
Project Manager: Shawn Hokanson

Fax: (806) 353-3573

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 EK62701 - General Preparation (Prep)										
Blank (EK62701-BLK1)				Prepared: 11/22/06 Analyzed: 11/27/06						
% Solids	100		%							
Duplicate (EK62701-DUP1)		**Source: 6K21007-01**		Prepared: 11/22/06 Analyzed: 11/27/06						
% Solids	90.7		%		89.5			1.33	20	
Duplicate (EK62701-DUP2)		**Source: 6K22003-02**		Prepared: 11/22/06 Analyzed: 11/27/06						
% Solids	95.4		%		95.6			0.209	20	
Duplicate (EK62701-DUP3)		**Source: 6K22012-01**		Prepared: 11/22/06 Analyzed: 11/27/06						
% Solids	92.2		%		91.9			0.326	20	

Kane Environmental (Amarillo)
3509 Lynette
Amarillo TX, 79109

Project: Osborn Heirs Mattie Price
Project Number: 04-631
Project Manager: Shawn Hokanson

Fax: (806) 353-3573

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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: 11/28/2006

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.

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Shawn Hokanson
Company Name: Kane Environmental
Company Address: 3509 Lynette
City/State/Zip: Amarillo TX 79109
Telephone No: 8065703557 Fax No: 8063533127
Sampler Signature:

Project Name: Osborn Heirs Mattie Price
Project #: 04-631
Project Loc: Lea County NM
PO #: 04-631
Report Format: ☒ Standard ☐ TRRP ☐ NPDES
e-mail: shawn.hokansmcmsn.com

(lab use only)
ORDER #: 6K 22007

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	No. of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge	GW=Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	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, 48, 72 hrs	Standard TAT
-01	MPB-7-11/06	12.5	15	11/21/06	925	1	X								S			X											X
-02	MPB-7-11/06	17.5	20		930																								
-03	MPB-1-11/06	12.5	15		1025																								
-04	MPB-1-11/06	17.5	20		1030																								
-05	MPB-9-11/06	12.5	15		1125																								
-06	MPB-9-11/06	17.5	20		1130																								
-07	MPB-10-11/06	10	12.5		1225																								
-08	MPB-10-11/06	17.5	20		1230																								

Special Instructions:
TPH 418.1/8015M Ec State of New Mexico

Relinquished by:	Date	Time	Received by:	Date	Time
	11/21/06	1250			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by: Fed Ex	Date 11/22/06	Time 12:15	Received by ELOT: Carri Lee	Date 11/22/06	Time 12:15

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star
4oz glass
Temperature Upon Receipt: 2.0 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Kane Env.

Date/ Time: 11/22/06 12:15

Lab ID # : 6K22007

Initials: CK

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	2.0 °C	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

APPENDIX B

Field PID Calibration Sheet, November 2006

ASHTEAD Technology RENTALS
The Rental Specialists
Technician: Darwin Alvarez

Date: _____
This piece of equipment has been:
Cleaned ✓
Inspected ✓
Performance Checked ✓
Signature: _____

My goal is to provide you with 100% customer satisfaction. If you have any questions, please contact me or customer service at:

(800) 242-3910 / www.ashtead-technology.com

Calibration Certificate

CERTIFICATE NUMBER: **26805**

ASSET NUMBER:	**R3113**
ASSET DESCRIPTION:	**THERMO ENV 580B**
MANUFACTURER:	**THERMO**
SERIAL NUMBER:	**63156-338**
CALIBRATION DATE:	**16 Nov 2006**
CALIBRATION DUE:	**Refer to manufacturers instructions.**
CALIBRATION PROCEDURE:	**4.155 Hazardous Waste Investigation**
ACCURACY OF UNIT:	**Manufacturers Specifications**
WORKSHOP TEMPERATURE:	**26 *Degrees C***
HUMIDITY:	**49 %**
CALIBRATION ENGINEER:	**DARWIN ALVAREZ**
RESULTS FORM:	**Ref Workshop Manual**

Page 1 of 2

Measurement Equipment	Calibration Reference
100ppm Isobutylene	109318812
Zero air, PC405 Lab cylinder	NONE

The measurement equipment used during the calibration procedure is traceable to National Standards.
Details on any limitations to the use of the equipment:

Calibration Engineer: _____

DARWIN ALVAREZ

Phase III ESA

Site Remediation Report

and Monitoring Plan

Mattie Price Tank Battery

Lea County, New Mexico

Prepared for:

Osborn Heirs Company
1250 NE Loop 410 Suite 1100
San Antonio, TX 78209

March 2006

Prepared by:

KANE

Kane Environmental Engineering, Inc.
5307 Oakdale Creek Court
Spring, Texas 77379
Project No. 04-631

KANE
ENVIRONMENTAL ENGINEERING, INC.

March 20, 2006

Jack Ford
Oil Conservation Division
1220 South St. Francis Drive
Sante Fe, NM 87505

RE: Mattie Price Site Remediation Report

As requested by Osborne Heirs Company, Kane Environmental Engineering, Inc. is forwarding to you the enclosed Site Remediation Report for the Mattie Price Tank Battery. This facility is located in Lea County, New Mexico.

This remediation project has been executed as per your approval. If you have any questions about this remediation project, please contact me at:

Deb Pennington
Kane Environmental Engineering, Inc.
4713 Rosewood Dr.
Midland, TX 79707

Sincerely,

D. Pennington

Deb Pennington

Enclosures

CC: (with enclosure)

Paul Sheeley
Oil Conservation Division
1625 N. French Dr
Hobbs, NM 88240

CC: (without enclosure)

Joyce Swayze
Osborn Heirs Company
1250 NE Loop 410 Suite 1100
San Antonio, TX 78209

KANE
ENVIRONMENTAL ENGINEERING, INC.

March 28, 2006

Paul Sheeley
Oil Conservation Division
1625 N. French Dr
Hobbs, NM 88240

RE: Mattie Price Site Remediation Report

As per your request, Kane Environmental Engineering, Inc. is forwarding to you the enclosed Site Remediation Report for the Mattie Price Tank Battery on CD in Adope PDF format.

Deb Pennington
Kane Environmental Engineering, Inc.
4713 Rosewood Dr.
Midland, TX 79707

Sincerely,

D. Pennington

Deb Pennington

Enclosures

CC: (with enclosure)

Jack Ford
Oil Conservation Division
1220 South St. Francis Drive
Sante Fe, NM 87505

TABLE OF CONTENTS

SECTIONS

FIGURES

TABLES

APPENDICES

1.0 SITE HISTORY

The Mattie Price Tank Battery located in Section 6, T17S R38E, Lea County, New Mexico, at a global position of North 32° 52' 3.4'', West 103° 10' 45.8'' (NAD 27 datum). A topographic map of the location is shown as **Figure 1**.

The Mattie Price Tank Battery was acquired by Osborn Heirs Company on January 1, 1986 as part of a property acquisition from Clemco. Records received during this transaction indicate that the Mattie Price #1 well was drilled in 1970 by the Freeport Oil Company.

A Phase I ESA was prepared by R.E. Environmental Services, Inc. at the request of Maralo, LLC on July 30, 2003. This investigation consisted of four soil borings placed around the tank battery and 5 borings collected in the vicinity of the tank battery and associated well locations. Hydrocarbon impacted soils were reported at the tank battery at depths up to 14', with a maximum reported concentration of 25,900 ppm total petroleum hydrocarbon (TPH) identified at a depth of 7.5' in Test Point A. Chloride concentrations from the four borings at the tank battery were reported below 250 ppm. Chloride concentrations from samples collected in the vicinity of the tank battery and at associated well locations were generally reported at a concentration of 100 ppm, with a maximum of 300 ppm measured at Test Point D. Test Point D is reported to be located adjacent to the onsite injection well. See **Figure 2** for a depiction of these soil boring placements and sampling results, as excerpted from the R.E. Environmental Services Report.

Larson & Associates, Inc. prepared Phase I and Phase II Environmental Site Assessments at the request of Three Span Oil & Gas on October 7, 2003. Visual and olfactory evidence of hydrocarbon impacted soils was reported, with this impact noted from the surface to depths of up to 3' (the point of auger refusal). Impacts were reported in these assessments at the following locations:

- near the Free Water Knockout
- at an area reported as a buried pit
- near the west end of the tank battery
- near the flare
- around the produced water injection points

No soil samples were submitted for laboratory analyses during the Larson & Associates Phase II ESA. The depth to groundwater in the vicinity of the tank battery was reported to range between 80 and 100' below ground surface (bgs).

Kane Environmental Engineering prepared a Phase II Site Investigation Plan at the request of Osborn Heirs Company on September 22, 2004 to confirm or deny allegations of hydrocarbon impacts to soil. Soil boring locations and sampling and analytical guidelines were detailed in this Plant. Hydrologic data from previous investigations, topographic features, and NMOCD Guidelines for Remediation of Leaks, Spills and

Releases site ranking protocol were used to determine the site sensitivity ranking and associated remediation requirements for hydrocarbon-impacted soils at the Mattie Price site. The site sensitivity ranking for Mattie Price Tank Battery is rated at 10. This ranking score yields the following remediation thresholds:

Constituent	Remediation Threshold
Total Petroleum Hydrocarbons	1,000 ppm
Benzene	10 ppm
BTEX	50 ppm

NMOCD accepted the SIP on November 3, 2004. On December 14-15, 2004, Kane Environmental conducted the Phase II ESA according to the September SIP. Under Kane Environmental's supervision, Groundwater Monitoring, Inc. of Grand Prairie, Texas performed 16 borings designed to horizontally and vertically delineate potential impact around the tanks and equipment at the Mattie Price Tank Battery. Initial boring placements (identified as "MPB" borings) were designed to confirm or refute hydrocarbon impact reported around the Test Points A (MPB-1) & B (MPB-2, as identified in the R.E. Environmental Services, Inc. ESA. Additional borings were performed northwest of AST #1 (MPB-3) and south of AST #2 (MPB-4) to provide delineation of potential hydrocarbon impact. Subsequent borings, labeled MPB-5 through MPB-16, were advanced to provide full delineation of hydrocarbon impacted areas as well as delineation around potential hydrocarbon source equipment. Boring locations are depicted in **Figure 3**.

Soil logs (**Table 1**) and field headspace readings (**Table 2**) were collected during boring, with headspace reading collected on each 2.5' sample interval using a photo-ionization detector (PID). Sample collection and headspace readings were conducted according to the procedures outlined in NMOCD's Guidelines for Remediation of Leaks, Spills and Releases. All maximum benzene and total BTEX (benzene, toluene, ethyl benzene and xylene) concentrations measured were below the NMOCD regulatory thresholds of 10 mg/kg for benzene and 50 mg/kg for BTEX. TPH concentrations exceeded the site specific 1000 mg/kg threshold in borings MPB-1, MPB-5, MPB-7, MPB-9, MPB-10 and MPB-12.

Following submission of the site investigation report, New Mexico Oil Conservation Division (NMOCD) personnel requested additional vertical delineation at three boring locations, (Borings 1, 9 and 10). In response to the request for additional delineation, Kane's Site Investigation Report and Supplemental Site Investigation Work Plan were prepared. This Plan, detailing additional depth sampling at locations MPB-1, MPB-9 and MPB-10, was submitted to NOMCD on March 25, 2005 and approved by NMOCD's Jack Ford on March 29, 2005. Kane Environmental conducted the Supplemental Phase II ESA on June 14, 2005 according to the approved work plan. Samples collected during the additional vertical delineation of borings MPB-1, MPB-9, and MPB-10 indicated the

maximum depth of hydrocarbons in excess of the site specific 1000 mg/kg TPH threshold to be 20'.

Kane's Phase II ESA Supplemental Site Investigation Report and Remediation Work Plan detailing the investigations to date and soil removal and *in-situ* remediation procedures was developed and sent for signature by the landowner in June of 2005. On December 1, 2005 Osborne, NMOCD and landowner representatives met on site, and approval for the Remediation Work Plan was granted with the following NMOCD requests:

- Installation of at least one temporary monitoring well to confirm or refute allegations of groundwater hydrocarbon and chloride contamination, demonstrate groundwater depth and flow direction.

- Extension of excavation boundaries as close as practicable (limited by safety concerns) to AST #4.

A completed C-141 does not accompany this site remediation report, as the areas of impact are the result of historical oil and gas operations with no specific time of release identified.

2.0 REMEDIAL EXCAVATION PROCEDURES

Based on analyses performed to-date, total hydrocarbon impact in excess of established NMOCD thresholds is present in certain subsurface soils at the Mattie Price Tank Battery. The most significant impact is found to be focused around and to the west of AST #4.

As discussed in the Remediation Work Plan and approved by NMOCD, complete excavation to remove all subsurface materials with hydrocarbon levels in excess of NMOCD regulatory thresholds was impractical, as this action would have required relocation and/or structural support of surface equipment, including ASTs #3 and #4, the doghouse, separator and electrical panel west of ASTs #3 and #4, as well as the relocation of underground utilities in this area.

The extent of excavation depth and area was determined by the need to preserve safe operations, keeping the integrity of the supporting foundations of the surface equipment and underground utilities intact. These safety determinations were made in-field during the time of excavation. All excavation and sampling was performed using a backhoe, with no personnel entering the excavation areas. In most areas excavation was completed to a depth of 10 feet, with the final excavation depth limited by the presence of bedrock or limit of contamination as determined by field headspace readings and subsequent laboratory analyses. All excavations were backfilled with a mix of uncontaminated overburden soils excavated during the remediation process and native soil and rock collected from a borrow location on Pinson Road approximately 5 miles Southwest of the Mattie Price Tank Battery. Analysis of the stockpile of site soils reserved for backfill materials (394 mg/kg TPH) showed hydrocarbon levels below the NMOCD site specific remediation threshold of 1000 mg/kg. Excavation locations are shown on **Figure 4**. All laboratory analyses and chain of custody forms for this investigation are included in **Appendix A**.

Excavation was initiated in the area represented by boring MPB-5 where site investigations indicated TPH levels of 2740 mg/kg in the 7.5-10' sample interval. An area 12' x 12' centered on MPB-5 was excavated to a depth of 9' where bedrock was encountered. Based on field headspace readings, the surface-5' soils were stockpiled for use as backfill soil. The 5-9' soils were stockpiled separately for disposal. An excavation floor sample (MPB-5 Floor 9') was collected using the backhoe to scrape the excavation floor and retrieve the loosened materials for subsequent sample collection. Each sidewall of the excavation was sampled using the backhoe to scrape the sidewall, catching the loosened materials in the backhoe bucket for subsequent sampling. MPB-5 Excavation Floor and sidewall samples indicated excavation of hydrocarbon contaminated soils in excess of the site specific TPH threshold was complete, with a maximum TPH concentration of 142 mg/kg remaining in the East Sidewall sample (MP5-ESW).

Excavation of the area represented by boring MPB-7 where site investigations indicated TPH levels of 2390 mg/kg in the 7.5-10' sample interval was then performed. An area 12' wide by 28' long was excavated to a depth of 10', with the excavation limited to the west and south to avoid potential disturbance to buried lines reported to be in the area. Based on previous investigations and current field headspace analyses, the surface-5' of soil was reserved for use as backfill soil, with the balance of the excavated soils stockpiled separately for disposal. Excavation floor and East sidewall sample analyses indicated hydrocarbon concentrations below the 1000 mg/kg site specific TPH threshold. North, South and West excavation sidewall sample analyses were above the TPH threshold with a maximum concentration of 1320 mg/kg TPH in the South sidewall sample.

An additional excavation 3' in width running the length of the excavation was performed to the South, extending the excavation to the South berm and fence line. Excavation was discontinued due to proximity to the previously identified buried line. South Sidewall analyses of the limit of additional excavation (MPB7 SSW B sample, 1070 mg/kg) showed a TPH concentration in excess of the site specific threshold. Due to safety constraints, additional excavation in this area was not performed. During the investigation phase, borings performed just outside the fence line immediately adjacent to the MPB 7 excavation (MPB-15, MPB-16) indicated hydrocarbon concentrations below the site specific threshold for all samples, delineating the limit of hydrocarbon contamination. Based on the limits of excavation and the position of MPB-15 and MPB-16, the volume of hydrocarbon contaminated soil remaining in the 7.5-10' zone with TPH concentrations in excess of the 1000 mg/kg threshold is a maximum of 8 yd^3 (28'length x 3' thickness from edge of excavation to MPB-15 and MPB-16 x 2.5' depth from 7.5-10').

Additional excavation in the MPB 7 area was performed west of the initial excavation, with dimension of 6' wide by 12' long by 10' deep, leaving a strip of unexcavated soil approximately 2' thick supporting a buried 4-inch line between the initial and subsequent excavation. West sidewall sample analyses indicated hydrocarbon concentrations below the site specific threshold, with a TPH concentration of 751 mg/kg (MPB 7 WSW B). Additional excavation to the North was limited on the East end by proximity to AST #4, but was performed for the majority of the excavation length as part of excavation for the area represented by MPB-9. Final excavation dimensions for the MPB 7 area were approximately 14' wide x 34' long x 10' deep.

Excavation of the area represented by boring MPB-9 where site investigations indicated TPH levels of 1880 mg/kg in the 7.5-10' and 2430 mg/kg in the 17.5-20' sample interval was performed following completion of the MPB 7 area excavation. An area 14' wide by 26' long was excavated to a depth of 10', with the excavation limited to the east by proximity to AST #4 and to the west by the 4-inch buried line. West of the buried 4-inch line, the excavation was resumed with dimensions of 4' width x 8' long by 10' deep, limited by proximity to a pump on the West and the doghouse to the North. The surface-5' soils were reserved for backfill soils based on previous investigations and current field headspace analyses, with the underlying hydrocarbon contaminated soils stockpiled separately for disposal. An area of soil approximately 5' thick in the middle of the

excavation was left in place to support the surface flow line to AST #4. Excavation sidewall and floor sample analyses indicated hydrocarbon concentrations in excess of the site specific threshold in the excavation floor (1040 mg/kg), East sidewall (1870 mg/kg), on the south side of the soil remaining under the surface flow line (South sidewall, 2000 mg/kg) and on the north side of the soil remaining under the surface flow line (North sidewall, 1700 mg/kg). The west sidewall sample indicated TPH levels within site specific limits (16.7 mg/kg).

Additional depth excavation and excavation to the East was not performed due to bedrock and proximity to AST #4, respectively. Excavation was continued in the vicinity of the surface flow line, removing approximately a 1-foot thick band of soil from each side of the soil bridge under the flow line. Subsequent samples indicated hydrocarbon levels still in excess of site specific limits (MPB9 NSW B, 1500 mg/kg, MPB9 SSW B, 1030 mg/kg) in the soil bridge supporting the surface flow line. After consultation with Osborne personnel, all soil remaining under the surface flow line was excavated across the length of the excavation. Final limits of excavation in area MPB-9 were approximately 14' wide x 30' long x 10' deep.

For area MPB-10, site investigations indicated hydrocarbon levels of 2250 mg/kg in the 17.5-20' depth interval. Based on previous investigations and current field headspace analyses, the surface-5' of soil was reserved for use as backfill soil. Excavation of the MPB-10 area showed substantial hydrocarbon contamination from 5-10' in depth in the vicinity of AST #4 and on the Southwest end of the excavation during initial excavation phases. Materials excavated from these areas were sampled as Excavated Soil Pile 1 (22,100 mg/kg TPH) as a demonstration of the types of materials being set aside for subsequent disposal. As excavation progressed, hydrocarbon levels decreased substantially until sidewall samples indicated TPH levels below the site specific thresholds, with a maximum TPH concentration of 388 mg/kg in the North sidewall. The South sidewall sample was collected from the Southeast and Southwest ends of the excavation, adjacent to AST #4 and the building, and showed a TPH concentration of 343 mg/kg. The excavation floor sample (MPB10 Floor 10', 1600 mg/kg) showed hydrocarbon levels above the site specific threshold, but additional excavation was limited by bedrock. Final limits of excavation in area MPB-10 were approximately 15' wide x 33' long x 10' deep.

Excavation continued in the area represented by boring MPB-1 where site investigations indicated TPH levels of 1360, 1120, and 1690 mg/kg in the 5.0-7.5', 12.5-15' and 15-17.5' sample intervals, respectively. An area 10' x 10' centered on MPB-1 was excavated to a depth of 10'. Based on field headspace readings, the surface-4' soils were stockpiled for use as backfill soil. The 6-10' soils were stockpiled separately for disposal. Excavation floor and sidewall samples indicated excavation of hydrocarbon contaminated soils in excess of the site specific TPH threshold was complete to a depth of 10', with a maximum TPH concentration of 289 mg/kg remaining in the West Sidewall sample (MP1-WSW).

For area MPB-12, site investigations indicated hydrocarbon levels of 2140 mg/kg in the 5-7.5' depth interval. An excavation approximately 8' x 6', centered on boring MPB-12 was completed to a depth of 8'. Based on previous investigations and current field headspace analyses, the surface-4' of soil was reserved for use as backfill soil, with the remainder of excavated soils stockpiled for disposal. Sidewall and floor sample analyses indicated all hydrocarbon levels were above the site specific threshold (maximum concentration of 4860 mg/kg in MPB 12 ESW), so additional excavation was performed. The excavation was expanded to approximately 10' x 10' in size and a depth of 10'. Subsequent excavation floor and sidewall analyses indicated TPH levels below the site specific thresholds, with a maximum TPH concentration of 637 mg/kg in the West sidewall. Final limits of excavation in area MPB-12 were approximately 10' wide x 10' long x 10' deep.

Final excavation was performed in area MPB-3, where site investigations indicated hydrocarbon levels of 4620 mg/kg in the 0-2.5' depth interval. Osborne personnel had previously remediated this area, however NMOCD requested confirmation sampling. An area 5' x 5', centered on MPB-3, was excavated to a depth of 3'. Sidewall and floor sample analyses for this area indicated TPH levels below the site specific thresholds, with a maximum TPH concentration of 899 mg/kg in the North sidewall. All excavated materials were used to backfill the excavation.

Following completion of excavation, a composite sample of the soil stockpiled for disposal was collected (Excavated Soil Pile 2, 433 mg/kg TPH) to demonstrate the type of materials to be disposed. Prior to backfilling all excavations, approximately 250 lb. of 45-0-0 fertilizer was spread on the excavation floor. The excavation was then backfilled to grade with native soils and uncontaminated soils from the excavation (as demonstrated by soil analyses previously discussed), with an additional 200 lb. of 45-0-0 fertilizer distributed in the excavation as backfill progressed. The nitrogen source was provided to encourage bioremediation of residual contaminants in conjunction with the air sparge system.

Following completion of excavation backfill, approximately 332 yd^3 of contaminated soil from the soil stockpiles was transported to J & L Landfarm in Hobbs, NM (Permit #NM-01-0023) for treatment and disposal (see **Appendix B** for disposal paperwork).

3.0 MONITORING WELL INSTALLATION, ANALYSES AND REMOVAL

Following completion of excavation and backfill activities, 3 monitoring wells were installed (shown on **Figures 4 and 5**) to confirm or refute allegations of groundwater contamination and determine the direction of groundwater flow. MW-1 was installed to a depth of 86' on the North side of the site, West of MPB-3. MW-2 was installed to a depth of 86' between the separator and heater treater on the Southwest side of the site. For wells 1 and 2, well screen was installed from 66-86', with solid riser pipe at depths less than 66'. MW-3 was installed to a depth of 91' in the Southeast corner of the site, and was screened from 66-91', with solid riser pipe at depths less than 66'. Screened sand was used to backfill the wells to a depth of two feet above the top of the well screen, with the remainder of the borehole backfilled with bentonite chips to seal the well from the surface.

Prior to collection of water samples, the wells were developed on January 19, 2006 by removing 20 gallons of water per well. On January 20, 2006, static water levels were determined, and then the wells were purged by removing 3 casing volumes of water prior to sampling. Samples for laboratory analyses to included BTEX and chloride analyses were collected, as recommended by NMOCD. To allow determination of groundwater elevation and flow direction, John West Surveying of Hobbs New Mexico was employed to provide well location, ground surface and top of casing elevations for each well. Well northing and easting, ground surface elevations, static water levels (77.50-78.89 ft bgs) and groundwater elevations are shown in Table 6. Based on these measurements, groundwater flow is towards the East-Southeast.

BTEX analyses of monitoring well samples showed concentrations below drinking water thresholds, with all analyses for all samples below the method detection limits of 0.001 mg/l. Chloride analyses for the monitoring well samples were below the Secondary drinking water threshold of 250 mg/l with a maximum concentration of 188 mg/l in MW-3. Laboratory reports including chain of custody documentation are included in **Appendix A**. Based on these analyses, operations at the Mattie Price have not impacted groundwater on-site. Following receipt of analyses, the wells were plugged as per previous agreement with NMOCD. Well drilling and plugging reports are included in **Appendix C**.

4.0 AIR SPARGE SYSTEM INSTALLATION

Following excavation and backfill operations, 11 wells were installed to a depth of for an air sparge system. Each well was drilled to a depth of 25 feet, with well screen installed from 10 to 25 feet and solid riser pipe to at least 2 feet above the surface. Screened sand and 20 lb. of ammonium sulfate was used to backfill each well bore to a depth of two feet above the top of the screen, with the remainder of the borehole backfilled with bentonite chips to seal the well from the surface. Wells were spaced approximately 15' to provide adequate coverage to the area subsurface.

Following well completions, a PVC pipe manifold system (shown in **Figure 5**) was constructed to connect the air sparge wells together. This manifold system was connected to an air compressor, with the air pressure on the manifold system maintained at 10 PSI for approximately 12 hours per day. The nitrogen provided during well sand pack, when coupled with the fresh air supplied by the air sparge system, will allow for rapid bioremediation of the residual hydrocarbons on site. The bentonite seal above the sand pack will insure that the supplied air is forced through the soil column, providing for remediation of hydrocarbons beyond the immediate vicinity of each well.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Extension excavation and disposal of hydrocarbon contaminated soils was completed during the remedial excavation phase of this project. Based on site investigation and remediation phase soil analyses, excavation of all hydrocarbon contaminated soils exceeding the site specific threshold of 1000 mg/kg TPH was completed in areas represented by site investigation phase borings MPB-3, MPB-5, and MPB-12. Further evaluation and monitoring of these areas will not be performed.

In areas represented by site investigation phase borings MPB-1, MPB-7 and MPB-9, and MPB-10, additional remediation of hydrocarbons, generally to depth greater than 10 feet, is required to achieve the site specific TPH threshold. In-situ bioremediation, aided by subsurface applications of fertilizer and pressurized air, distributed through the soil subsurface via the installed air sparge system will serve to complete remediation at this location over time. Based on site investigation phase soil analyses, hydrocarbon contamination in excess of the site specific TPH thresholds remains at a maximum depth of 15.5-17.5' for MPB-1 (1690 mg/kg), 17.5-20.0' for MPB-9 (2430 mg/kg) and 17.5-20' for MPB-10 (2250 mg/kg). A thin strip of soil exceeding the site specific TPH threshold remains along the South sidewall at MPB-7 (1070 mg/kg), and along the East sidewall (1870 mg/kg) of the excavation (under AST #4). Air sparge wells were placed to allow for in-situ bioremediation of these areas.

Samples demonstrating the maximum depth and extent of hydrocarbon contamination in these areas were collected during the investigation phase, demonstrating compliance with the site specific TPH threshold at depths of 22.5-25.0', 17.5-20', 20.5-22.5', 20.5-22.5' in borings MPB-1, MPB-7, MPB-9 and MPB-10, respectively and horizontally at MPB-4, MPB-6, MPB-15 and MPB-16, where all samples collected were below the site specific TPH threshold..

Soil monitoring analyses in the air sparge system areas will be performed on a six-month basis, with boring to maximum depths of 22.5', 17.5', 20.0' and 20.0' at areas represented by MPB-1, MPB-7, MPB-9, and MPB-10, respectively. Samples will be collected from a depth of 10' to the maximum depth, and evaluated by Field PID, with the 2.5' interval having the maximum headspace reading submitted to the laboratory for analysis. Remediation will be considered complete at each location when laboratory samples demonstrate hydrocarbons levels below the site specific TPH threshold, and further evaluation of these areas will be discontinued.

Monitoring wells were installed to determine groundwater depth, direction of flow and confirm or refute allegations of groundwater contamination. Based upon data generated during this project, groundwater depths are approximately 78' below ground surface, with groundwater flow in the East-Southeast direction. Groundwater samples collected from the three wells showed no evidence of BTEX of chloride contamination, with all analyses for all wells below USEPA drinking water standards. The wells were therefore plugged, and no further evaluation of groundwater will be performed.

6.0 QUALITY CONTROL AND SAFETY

All sample collection equipment was decontaminated between intervals by washing with soap and water followed by a clean-water rinse. Dedicated bailers were used for each well during the well sampling process, with VOA samplers used in the bailers to limit the loss of volatiles during sample collection.

All soil samples to be submitted for laboratory analysis were immediately packed on ice for shipment to the laboratory under a Chain of Custody transport. EPA approved pre-cleaned and certified containers were used for sample collection.

The PID used for headspace analysis was calibrated to assume a benzene response factor prior to arrival on location; calibration sheet for the January, 2006 investigation is included in **Appendix D**.

Laboratory quality control measures used to insure the precision and accuracy of the data included:

- matrix spike analyses to demonstrate the effectiveness of the extraction procedures.
- known standard sample analyses and quality control spike analyses to demonstrate the accuracy of the equipment used for laboratory analyses.
- method blank analyses to demonstrate the purity of reagents used.

All analytical quality control measures were measured within acceptable limits.

All laboratory analyses were completed within required sample holding times, using EPA or NMOCD approved analytical methods.

Safety Protocol:

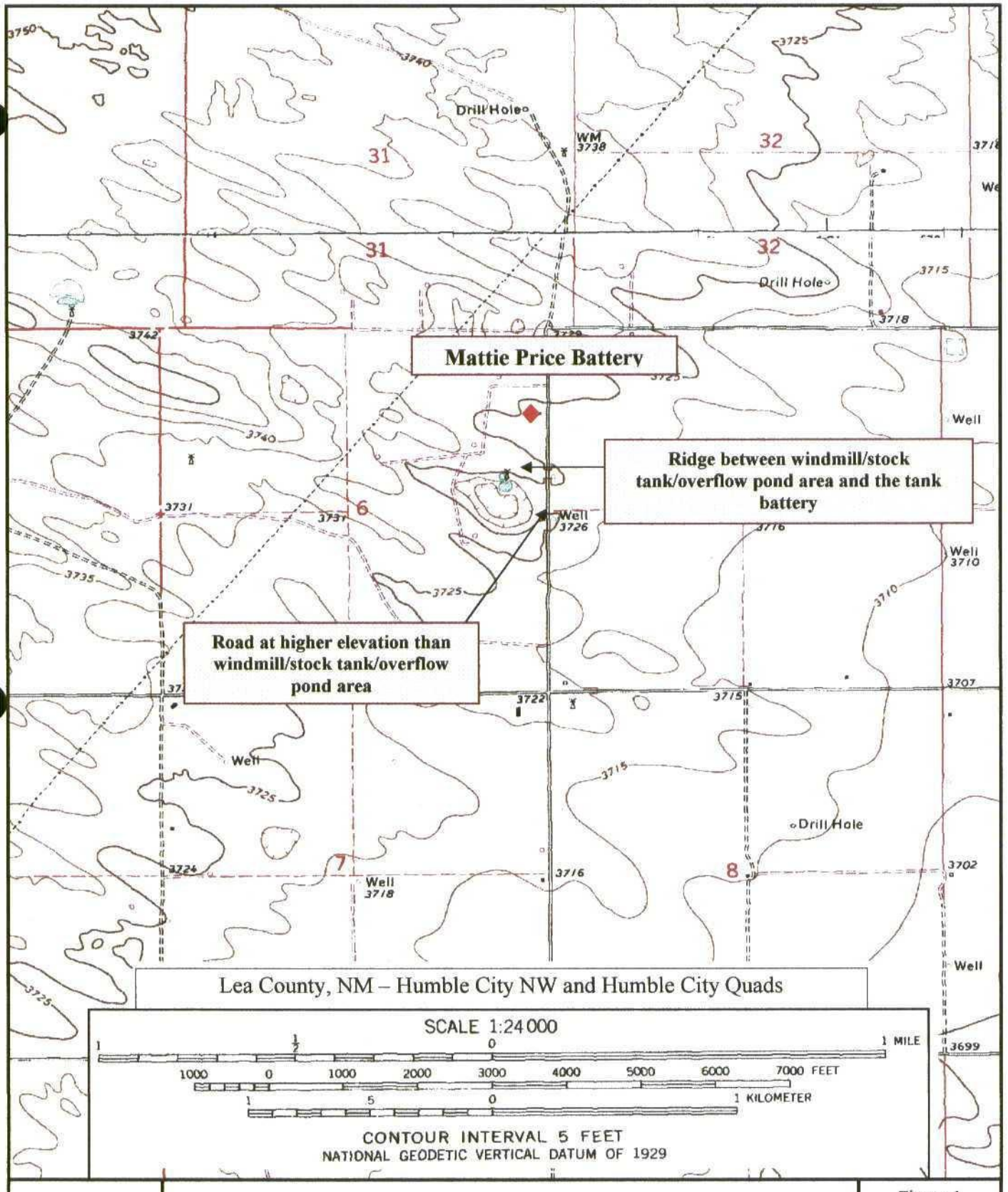
1. All work was performed in a safe manner.
2. A tailgate safety meeting was conducted each morning prior to initiation of work.
3. No excavation or boring was performed without clearing the area of utility lines.
4. Boom up/down was not performed without visual confirmation that the overhead area is clear of obstructions.
5. Call sheet and directions to local hospital was available to all on-site personnel.

A completed site health and safety plan for the January 2006 remedial action is included in **Appendix E**.

Call Sheet:

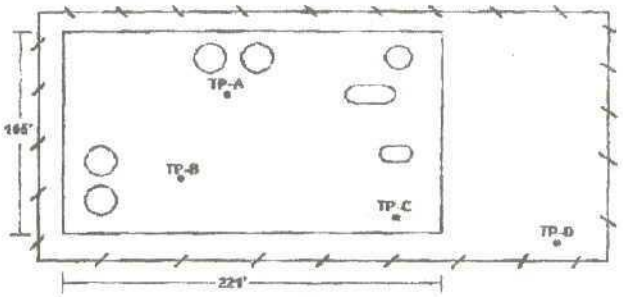
Emergency Contacts	Phone number	email
One Call	800-321-2537	jtobin28@qwest.net
Osborn Heirs	210-826-8164	joys@osbornheirs.com
Landowner, Phillip Barry	505-396-6955	---
Shawn Hokanson, Kane Environmental	979-229-8253	shawnhokanson@msn.com
Deb Pennington, Kane Environmental	432-689-8675	debpennington@earthlink.net

Emergency Contacts	Phone number
New Mexico State Police	(505) 392-5588
Lea County Sheriffs Office	(505) 393-2515
Weather and Road Conditions	(800) 432-4269
Hobbs Police Department	(505) 397-9265
Hobbs Fire Department	(505) 397-9308
Hobbs Ambulance	(505) 397-9308
Columbia Lea Regional Medical Center	5419 N Lovington Highway Hobbs, NM 88240 505-392-6581



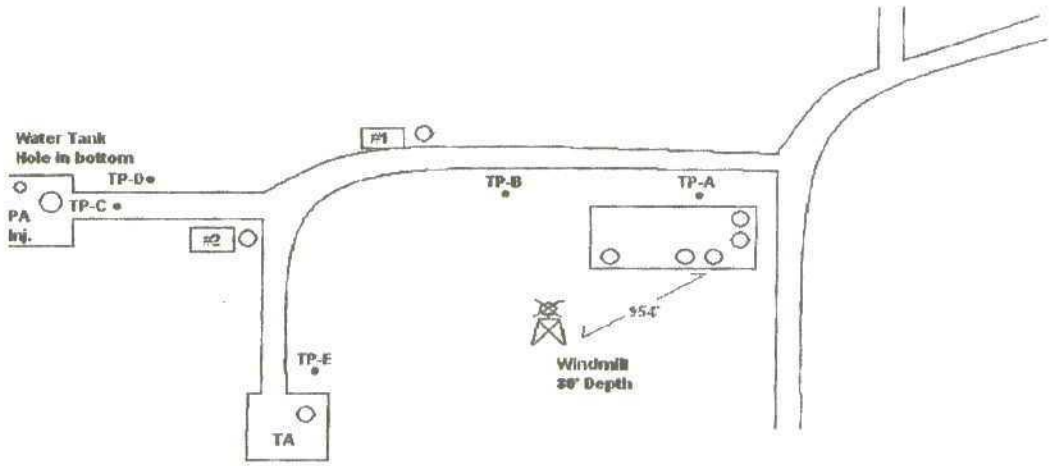
Area Location Map	Osborn Heirs **MATTIE PRICE TANK BATTERY** Lea County, New Mexico	Figure 1 USGS Topographic Map

Mattie Price Tank Battery
West Garrett Devonian Pool
NE ¼ NE ¼
Sec-6 TS-17-S R-38E
Lea Co. New Mexico



Hydrocarbon & Chloride Test Results

Test Point	Results			
A	16,860ppm @ 6'	25,900ppm @ 7 ½'	2,160ppm @ 10'	516ppm @ 14'
B	3,130ppm @ 6'			
C	460ppm @ 6'			
D	18ppm @ 4'			
Chlorides	<250ppm			



Chloride Test Results

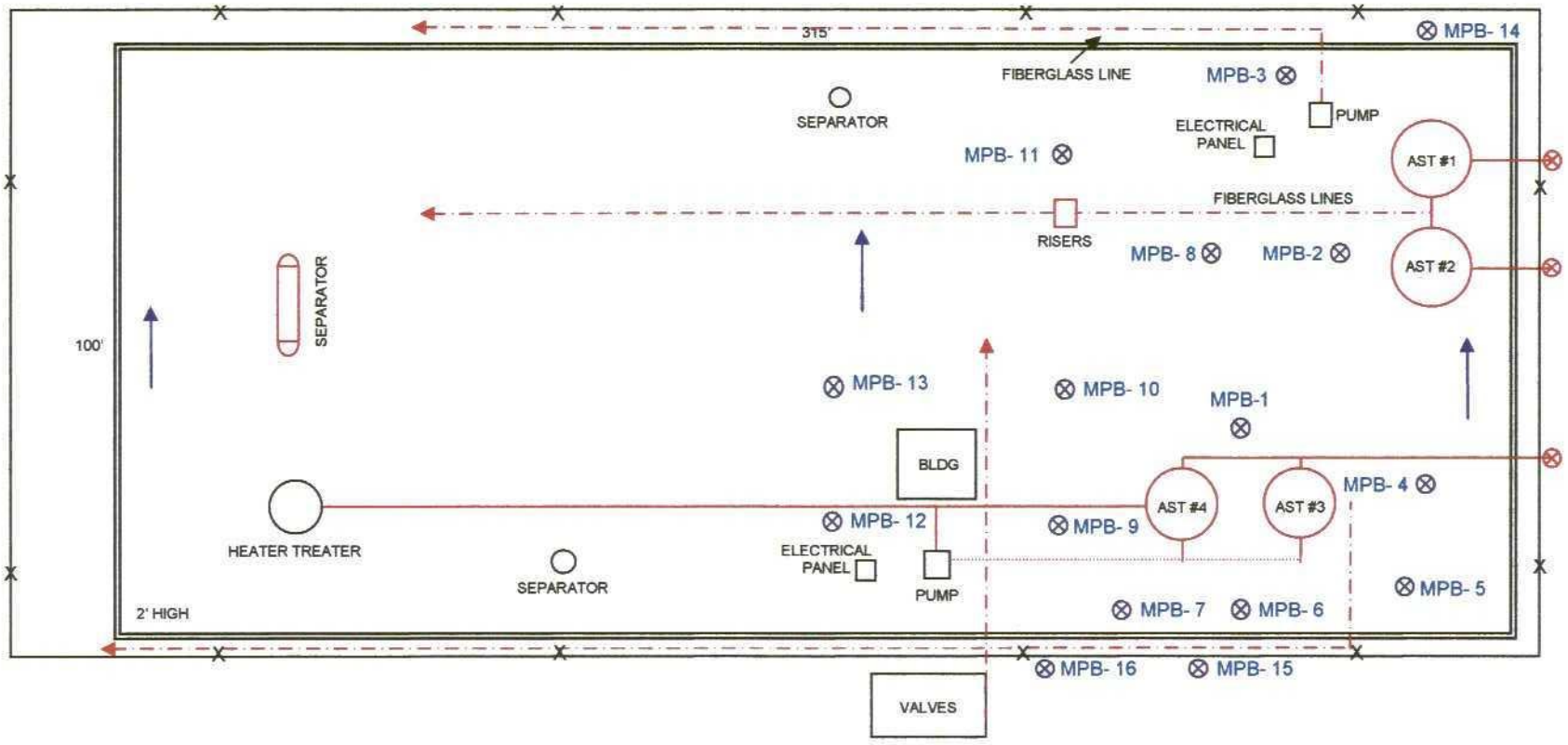
Test Point	Results
A.	100ppm @ Surface
B.	100ppm @ Surface
C.	100ppm @ Surface
D.	300ppm @ Surface
E.	150ppm @ Surface

TP B, eg.

KANE

Environmental Engineering Inc.
Spring Texas

Figure 2
R.E. Environmental Services, Inc.
Sample Locations and Analyses Results



BERM DIMENSIONS REFLECT TOP OF BERM

TANK LEGEND

- SURFACE DRAINAGE
- FENCE
- SPCC-REGULATED STORAGE TANKS OR OIL CONTAINING EQUIPMENT
- EARTHEN BERM
- BORING
- SURFACE PIPING
- SUBSURFACE PIPING
- PIPING REMOVED FOR EXCAVATION

TANK LEGEND

AST #1 PRODUCED WATER TANK	504 BBL
AST #2 PRODUCED WATER TANK	504 BBL
AST #3 PRODUCED OIL TANK	500 BBL
AST #4 PRODUCED OIL TANK	500 BBL

N, NW, NE, W, KANE, E, SW, SE, S

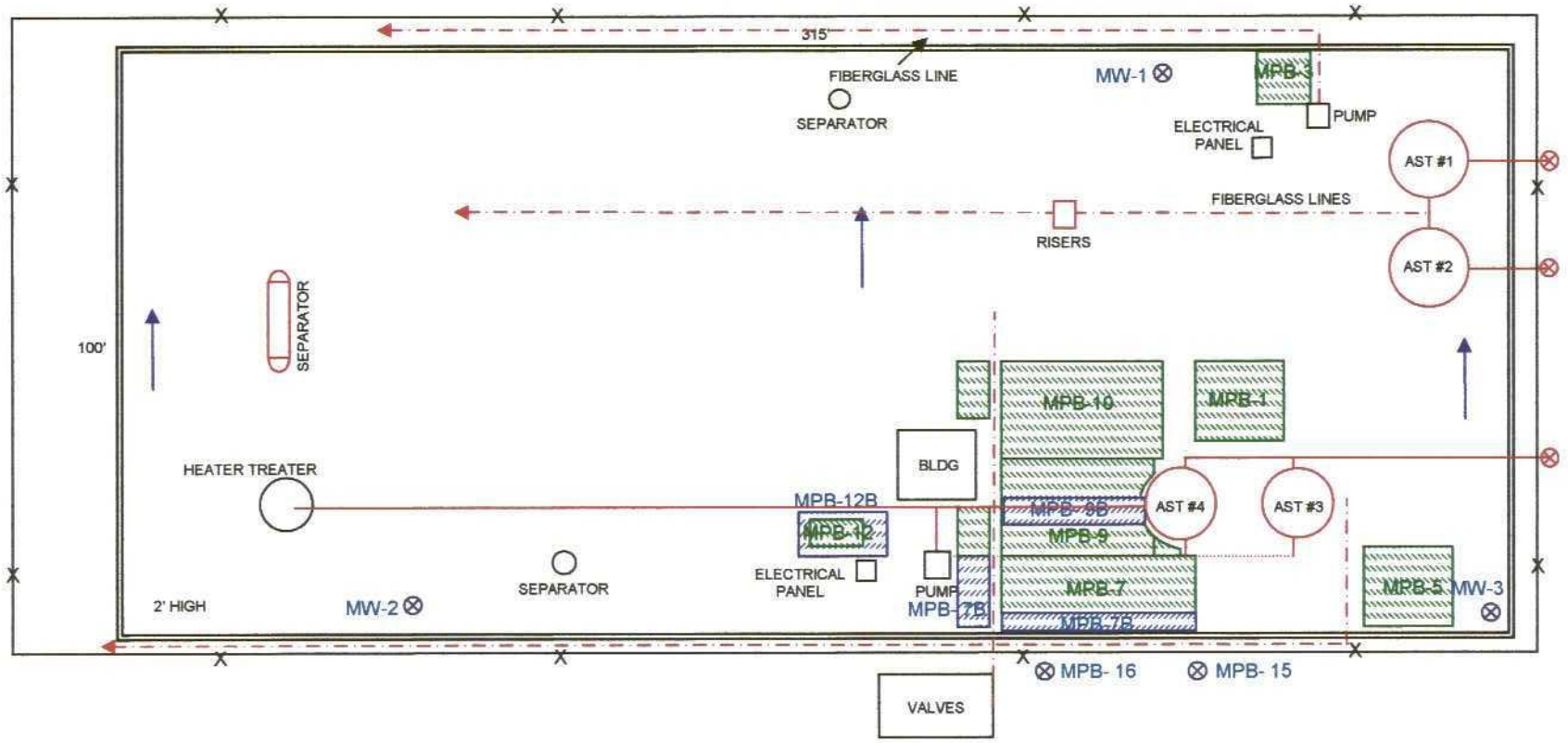
KANE
Environmental Engineering Inc.
Spring, Texas

Figure 3

Mattie Price Battery Soil Boring Plot

Lea County, New Mexico
N 32° 52' 33" W 103° 10' 46.86"

DRAWN BY: SMH	PROJECT: 04-631
DATE: 8/29/2004	APPROVED BY: DCP
REVISED:12/30/2005	NOT TO SCALE



BERM DIMENSIONS REFLECT TOP OF BERM

TANK LEGEND

- SURFACE DRAINAGE
- FENCE
- SPCC-REGULATED STORAGE TANKS OR OIL CONTAINING EQUIPMENT
- EARTHEN BERM
- INITIAL EXCAVAION AREA
- "B" EXCAVATION AREA
- SURFACE PIPING
- SUBSURFACE PIPING
- PIPING REMOVED FOR EXCAVATION

TANK LEGEND

AST #1 PRODUCED WATER TANK	504 BBL
AST #2 PRODUCED WATER TANK	504 BBL
AST #3 PRODUCED OIL TANK	500 BBL
AST #4 PRODUCED OIL TANK	500 BBL

N NW NE W KANE E SW SE S

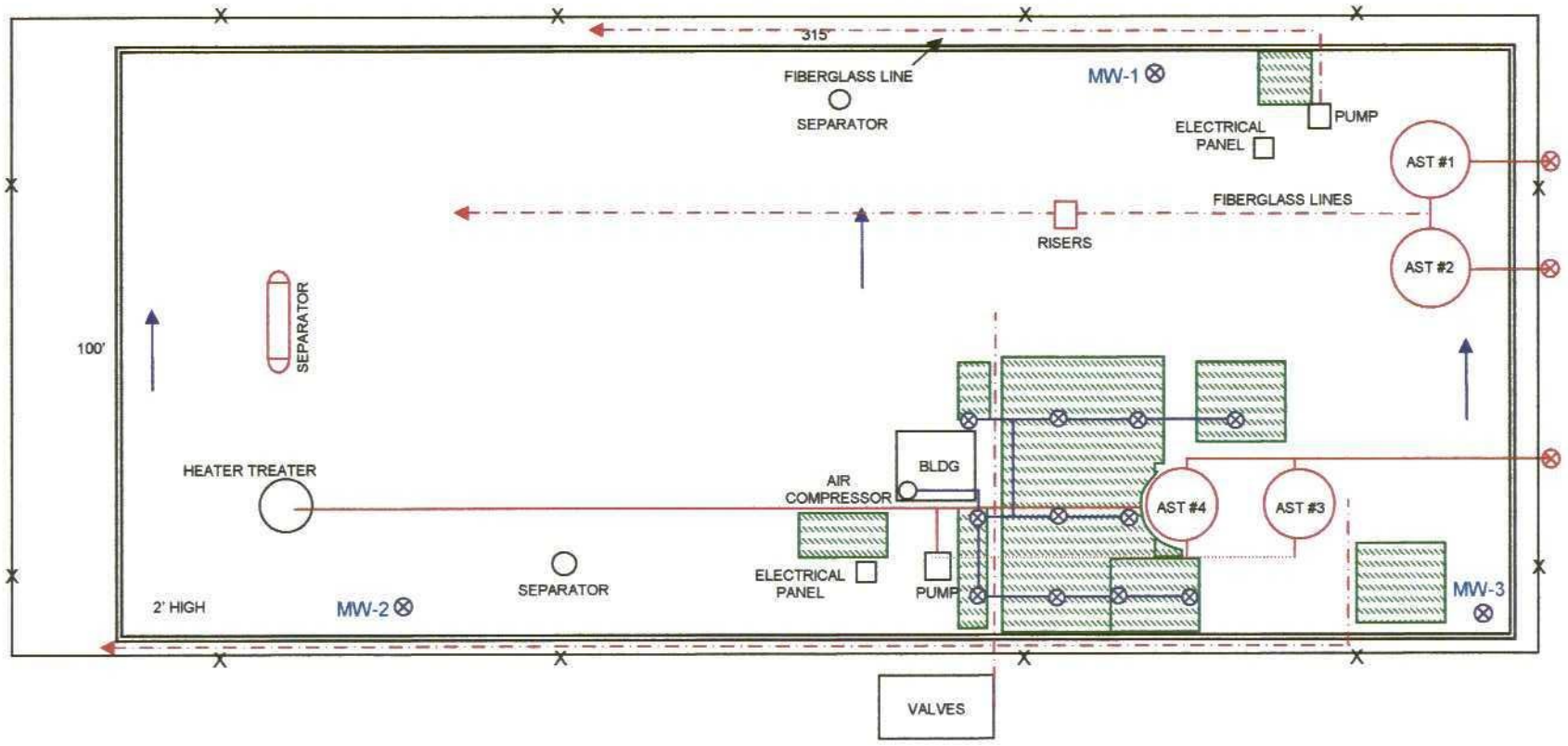
KANE
Environmental Engineering Inc.
Spring, Texas

Figure 4

Mattie Price Battery Soil Excavation Plot

Lea County, New Mexico
N 32° 52' 33" W 103° 10' 46.86"

DRAWN BY: SMH	PROJECT: 04-631
DATE: 2/28/2006	APPROVED BY: DCP
REVISED:	NOT TO SCALE



BERM DIMENSIONS REFLECT TOP OF BERM

TANK LEGEND

- SURFACE DRAINAGE
- FENCE
- SPCC-REGULATED STORAGE TANKS OR OIL CONTAINING EQUIPMENT
- EARTHEN BERM
- EXCAVAION AREA
- AIR SPARGE BORING/PIPING
- SURFACE PIPING
- SUBSURFACE PIPING
- PIPING REMOVED FOR EXCAVATION

TANK LEGEND

AST #1 PRODUCED WATER TANK	504 BBL
AST #2 PRODUCED WATER TANK	504 BBL
AST #3 PRODUCED OIL TANK	500 BBL
AST #4 PRODUCED OIL TANK	500 BBL

N, NW, NE, W, KANE, E, SW, SE, S

KANE
Environmental Engineering Inc.
Spring, Texas

Figure 5

Mattie Price Battery Air Sparge System Plot

Lea County, New Mexico
N 32° 52' 33" W 103° 10' 46.86"

DRAWN BY: SMH	PROJECT: 04-631
DATE: 3/8/2006	APPROVED BY: DCP
REVISED:	NOT TO SCALE

Table 1. Site Investigation Soil Boring Logs – December 2004/June 2005

Boring Location	Depth Interval, ft	Soil Description
MPB-1	0-2.5'	Brown sandy loam with caliche, hydrocarbon odor
	2.5-7.5'	Grayish brown stiff, sticky silty clay with caliche, hydrocarbon odor
	7.5-15.0'	Tan hard to very hard friable caliche with decreasing hydrocarbon odor
	15.0-20.0'	Tan hard to very hard friable caliche with decreasing hydrocarbon odor
	20.0-22.5'	Limestone bedrock, faint hydrocarbon odor
	22.5-25.0'	Limestone bedrock
MPB-2	0-2.5'	Brown sandy loam with caliche, hydrocarbon odor
	2.5-7.5'	Grayish brown stiff, sticky silty clay with caliche, hydrocarbon odor
	7.5-10.0'	Tan soft friable caliche, hydrocarbon odor, moist
	10.0-12.5'	Tan soft friable caliche, hydrocarbon odor, wet at 12.0'
	12.5-15.0'	Tan hard to very hard friable caliche, dry, decreasing hydrocarbon odor
MPB-3	0-2.5'	Black sandy loam with caliche, hydrocarbon odor
	2.5-5.0'	Black stiff, sticky silty clay with caliche, hydrocarbon odor
	5.0-10.0'	Gray to light gray hard to very hard friable caliche with decreasing hydrocarbon odor
	10.0-15.0'	Tan hard to very hard friable caliche
MPB-4	0-2.5'	Tan sandy loam with caliche, gray hydrocarbon staining 1.5-2.5'
	2.5-10.0'	Dark brown stiff, sticky silty clay with caliche, hydrocarbon staining 2.5-2.75', faint hydrocarbon odor
	10.0-15.0'	Tan hard to very hard friable caliche with white crystals
MPB-5	0-2.5'	Tan sandy loam with caliche, gray hydrocarbon staining 1.5-2.5'
	2.5-10.0'	Dark brown stiff, sticky silty clay with caliche, hydrocarbon staining 2.5-2.75', faint hydrocarbon odor
	10.0-15.0'	Tan hard to very hard friable caliche with white crystals
MPB-6	0-2.5'	Tan sandy loam with caliche, gray hydrocarbon staining 1.5-2.5'
	2.5-10.0'	Dark brown stiff, sticky silty clay with caliche, hydrocarbon staining 2.5-2.75', faint hydrocarbon odor
	10.0-15.0'	Tan hard to very hard friable caliche with white crystals

Table 1. Site Investigation Soil Boring Logs – December 2004/June 2005, continued

Boring Location	Depth Interval, ft	Soil Description
MPB-7	0-2.5'	Tan sandy loam with caliche, hydrocarbon odor
	2.5-5.0'	Black to dark gray stiff, sticky silty clay with caliche, hydrocarbon odor
	5.0-10.0'	Dark brown hard to very hard friable caliche, hydrocarbon odor
	10.0-15.0'	Tan hard to very hard friable caliche, decreasing hydrocarbon odor
	15.0-20.0'	Tan sandy loam with caliche, faint light end hydrocarbon odor
MPB-8	0-2.5'	Tan sandy loam with caliche
	2.5-5.0'	Brown stiff silty clay with caliche
	5.0-10.0'	Tan hard to very hard friable caliche with decreasing hydrocarbon odor
	10.0-15.0'	Reddish tan hard to very hard friable caliche, saturated at 11', dry at 12.5'
MPB-9	0-2.5'	Black sandy loam with caliche, hydrocarbon staining 2.0-2.5'
	2.5-5.0'	Black stiff, sticky silty clay with caliche, hydrocarbon staining 2.5-3.5'
	5.0-15.0'	Tan hard to very hard friable caliche, hydrocarbon odor
	15.0-20.0'	Tan hard to very hard friable caliche with decreasing hydrocarbon odor
	20.0-30.0'	Limestone bedrock with decreasing hydrocarbon odor
	30.0-35.0'	Limestone bedrock, faint hydrocarbon odor
	35.0-40.0'	Dry friable sandstone
MPB-10	0-2.5'	Black sandy loam with caliche, hydrocarbon staining 2.0-2.5'
	2.5-5.0'	Black stiff, sticky silty clay with caliche, hydrocarbon saturated 3.0-4.0'
	5.0-10.0'	Tan hard to very hard friable caliche, hydrocarbon odor
	10.0-20.0'	Tan hard to very hard friable caliche with decreasing hydrocarbon odor
	20.0-30.0'	Limestone bedrock with decreasing hydrocarbon odor
	30.0-35.0'	Limestone bedrock, faint hydrocarbon odor
	35.0-42.5'	Dry friable sandstone

Table 1. Site Investigation Soil Boring Logs – December 2004/June 2005, continued

MPB-11	0-2.5'	Tan sandy loam with caliche, hydrocarbon odor
	2.5-5.0'	Brown stiff silty clay with caliche, faint hydrocarbon odor
	5.0-12.5'	Tan hard to very hard friable caliche
MPB-12	0-2.5'	Tan sandy loam with caliche, dark brown hydrocarbon staining from 1.5-2.5'
	2.5-5.0'	Brown stiff, stick silty clay with caliche, hydrocarbon odor
	5.0-10.0'	Tan hard to very hard friable caliche with light end hydrocarbon odor
	10.0-15.0'	Tan hard to very hard friable caliche with light end hydrocarbon odor
MPB-13	0-2.5'	Reddish brown sandy loam with caliche, dark gray hydrocarbon staining from 1.5-2.5'
	2.5-5.0'	Gray stiff, stick silty clay with caliche, hydrocarbon odor
	5.0-15.0'	Tan hard to very hard friable caliche with faint, decreasing light end hydrocarbon odor
MPB-14	0-2.5'	Tan sandy loam with caliche
	2.5-5.0'	Brown stiff silty clay with caliche
	5.0-12.5'	Light gray hard to very hard friable caliche
MPB-15	0-2.5'	Dark brown sandy loam with caliche
	2.5-10.0'	Brown stiff silty clay with caliche
	10.0-15.0'	Tan to reddish brown hard to very hard friable caliche
MPB-16	0-2.5'	Dark brown sandy loam with caliche
	2.5-5.0'	Brown stiff silty clay with caliche
	5.0-15.0'	Tan to reddish brown hard to very hard friable caliche

Table 2. Field Headspace Analysis by PID, December 2004/June 2005.

Boring Location	Sample Depth Interval, ft	Field Headspace Reading, ppm	Boring Location	Sample Depth Interval, ft	Field Headspace Reading, ppm
MPB-1	0-2.5'	60	MPB-6	0-2.5'	1.1
MPB-1	2.5-5.0'	160	MPB-6	2.5-5.0'	1.0
MPB-1	5.0-7.5'	172	MPB-6	5.0-7.5'	28.6
MPB-1	7.5-10.0'	142	MPB-6	7.5-10.0'	2.4
MPB-1	10.0-12.5'	88	MPB-7	0-2.5'	89
MPB-1	12.5-15.0'	28	MPB-7	2.5-5.0'	70
MPB-1	15.0-17.5'	42.9	MPB-7	5.0-7.5'	225
MPB-1	17.5-20.0'	33.3	MPB-7	7.5-10.0'	327
MPB-1	20.0-22.5'	18.8	MPB-7	10.0-12.5'	105
MPB-1	22.5-25.0'	5.6	MPB-7	12.5-15.0'	57
MPB-2	0-2.5'	2.1	MPB-7	15.0-17.5'	1.1
MPB-2	2.5-5.0'	1.1	MPB-7	17.5-20.0'	1.1
MPB-2	5.0-7.5'	0.0	MPB-8	0-2.5'	0.0
MPB-2	7.5-10.0'	0.0	MPB-8	2.5-5.0'	1.0
MPB-2	10.0-12.5'	0.0	MPB-8	5.0-7.5'	1.1
MPB-2	12.5-15.0'	0.0	MPB-8	7.5-10.0'	37.5
MPB-3	0-2.5'	57	MPB-8	10.0-12.5'	2.3
MPB-3	2.5-5.0'	38	MPB-8	12.5-15.0'	1.0
MPB-3	5.0-7.5'	8.0	MPB-9	0-2.5'	98
MPB-3	7.5-10.0'	2.2	MPB-9	2.5-5.0'	102
MPB-3	10.0-12.5'	4.5	MPB-9	5.0-7.5'	179
MPB-3	12.5-15.0'	1.1	MPB-9	7.5-10.0'	289
MPB-4	0-2.5'	1.8	MPB-9	10.0-12.5'	255
MPB-4	2.5-5.0'	1.1	MPB-9	12.5-15.0'	232
MPB-4	5.0-7.5'	0.0	MPB-9	15.0-17.5'	1.8
MPB-4	7.5-10.0'	1.1	MPB-9	17.5-20.0'	1.1
MPB-4	10.0-12.5'	1.3	MPB-9	20.0-22.5'	225
MPB-4	12.5-15.0'	2.0	MPB-9	22.5-25.0'	185
MPB-5	0-2.5'	55.2	MPB-9	25.0-27.5'	110
MPB-5	2.5-5.0'	92.5	MPB-9	27.5-30.0'	64
MPB-5	5.0-7.5'	96.7	MPB-9	30.0-32.5'	8.0
MPB-5	7.5-10.0'	227	MPB-9	32.5-35.0'	4.2
MPB-5	10.0-12.5'	23.0	MPB-9	35.0-37.5'	3.1
MPB-5	12.5-15.0'	15.2	MPB-9	37.5-40.0'	0.8

Table 2. Field Headspace Analysis by PID, December 2004/June 2005, continued.

Boring Location	Sample Depth Interval, ft	Field Headspace Reading, ppm	Boring Location	Sample Depth Interval, ft	Field Headspace Reading, ppm
MPB-10	0-2.5'	289	MPB-13	0-2.5'	50
MPB-10	2.5-5.0'	435	MPB-13	2.5-5.0'	5.7
MPB-10	5.0-7.5'	547	MPB-13	5.0-7.5'	2.5
MPB-10	7.5-10.0'	408	MPB-13	7.5-10.0'	1.5
MPB-10	10.0-12.5'	400	MPB-13	10.0-12.5'	0.0
MPB-10	12.5-15.0'	289	MPB-13	12.5-15.0'	0.0
MPB-10	15.0-17.5'	214	MPB-14	0-2.5'	1.2
MPB-10	17.5-20.0'	87.0	MPB-14	2.5-5.0'	0.0
MPB-10	20.0-22.5'	218	MPB-14	5.0-7.5'	0.0
MPB-10	22.5-25.0'	142	MPB-14	7.5-10.0'	0.0
MPB-10	25.0-27.5'	118	MPB-14	10.0-12.5'	0.0
MPB-10	27.5-30.0'	68	MPB-15	0-2.5'	0.0
MPB-10	30.0-32.5'	39.9	MPB-15	2.5-5.0'	0.0
MPB-10	32.5-35.0'	30.6	MPB-15	5.0-7.5'	0.0
MPB-10	35.0-37.5'	8.0	MPB-15	7.5-10.0'	0.0
MPB-10	37.5-40.0'	0.8	MPB-15	10.0-12.5'	0.0
MPB-10	40.0-42.5'	0.0	MPB-15	12.5-15.0'	0.0
MPB-11	0-2.5'	8.0	MPB-16	0-2.5'	0.0
MPB-11	2.5-5.0'	3.4	MPB-16	2.5-5.0'	0.0
MPB-11	5.0-7.5'	12.4	MPB-16	5.0-7.5'	0.0
MPB-11	7.5-10.0'	2.2	MPB-16	7.5-10.0'	0.0
MPB-11	10.0-12.5'	1.0	MPB-16	10.0-12.5'	0.0
MPB-12	0-2.5'	22	MPB-16	12.5-15.0'	0.0
MPB-12	2.5-5.0'	35			
MPB-12	5.0-7.5'	85			
MPB-12	7.5-10.0'	78			
MPB-12	10.0-12.5'	81			
MPB-12	12.5-15.0'	76			

Table 3. TPH and BTEX Analyses for December 2004/June 2005 Soil Samples.

Sample ID	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	TPH GRO	TPH-DRO	Total Hydrocarbon
				Mg/kg				
MPB-1 5.0-7.5'	0.1750	1.4200	0.4570	2.1510	4.2030	527	828	1360
MPB-1 12.5-15.0'	<0.025	0.1060	0.1540	1.1770	1.4370	311	812	1120
MPB-1 15.5-17.5'	--	--	--	--	--	462	1230	1690
MPB-1 22.5-25.0'	--	--	--	--	--	60.9	271	332
MPB-2 0.0-2.5'	<0.025	0.0248	0.0169	0.0661	0.1078	13.6	26.5	40.1
MPB-2 12.5-15.0'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
MPB-3 0.0-2.5'	<0.025	0.0111	0.0268	0.1214	0.1593	260	4360	4620
MPB-3 12.5-15.0'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	12.5	12.5
MPB-4 0.0-2.5'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
MPB-4 12.5-15.0'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
MPB-5 7.5-10.0'	0.1540	1.4100	0.3880	2.2850	4.2370	1090	1650	2740
MPB-5 12.5-15.0'	<0.025	0.0160	0.0203	0.0325	0.0688	15.5	22	37.5
MPB-6 5.0-7.5'	<0.025	0.0287	0.0542	0.3487	0.4316	29.4	65.6	95
MPB-6 12.5-15.0'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
MPB-7 7.5-10.0	0.0169	0.9660	0.3750	2.7280	4.0859	863	1530	2390
MPB-7 17.5-20.0'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
MPB-8 7.5-10.0'	<0.025	<0.025	0.0455	0.4280	0.4735	52.7	218	271
MPB-8 12.5-15.0'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
NMOCD Regulatory Thresholds	**10**	**--**	**--**	**--**	**50**	**1,000**	**1,000**	**1,000**

Table 3. Total Petroleum Hydrocarbon and Benzene, Toluene, Ethylbenzene, and Xylenes Analyses for Soil Samples.

Sample ID	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	TPH GRO	TPH-DRO	Total Hydrocarbon
				Mg/kg				
MPB-9 2.5-5.0'	0.0215	0.2160	0.2460	2.0920	2.5755	114	293	407
MPB-9 7.5-10.0'	0.0946	1.2200	0.9360	12.7600	15.0106	701	1180	1880
MPB-9 17.5-20.0	0.0361	0.5520	0.2210	1.6180	2.4271	727	1700	2430
MPB-9 20.5-22.5	--	--	--	--	--	163	313	476
MPB-9 27.5-30.0	--	--	--	--	--	31.2	145	176
MPB-9 37.5-40.0	--	--	--	--	--	ND	ND	ND
MPB-10 2.5-5.0	0.2500	1.0300	0.6640	6.7590	8.7030	211	448	659
MPB-10 17.5-20.0	0.1320	1.0800	0.4270	2.5540	4.1930	771	1480	2250
MPB-10 20.5-22.5	--	--	--	--	--	252	717	969
MPB-10 27.5-30.0	--	--	--	--	--	25.4	293	318
MPB-10 40.0-42.5	--	--	--	--	--	ND	ND	ND
MPB-11 0.0-2.5	<0.025	0.0386	0.0581	0.3838	0.4805	<10	<10	<10
MPB-11 10.0-12.5	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
MPB-12 0.0-2.5	<0.025	0.0247	0.0429	0.0929	0.1605	14.9	<10	14.9
MPB-12 5.0-7.5'	0.0201	0.5460	0.2300	2.2060	3.0021	711	1430	2140
MPB-12 12.5-15.0'	<0.025	0.0973	0.0626	1.0270	1.1869	141	408	549
MPB-13 0.0-2.5	<0.025	0.0615	0.1000	0.5690	0.7305	34	347	381
MPB-13 12.5-15.0'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	30	30
MPB-14 0.0-2.5'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
MPB-14 10.0-12.5'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
MPB-15 0.0-2.5'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
MPB-15 12.5-15.0'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
MPB-16 0.0-2.5'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
MPB-16 12.5-15.0'	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
NMOCD Regulatory Thresholds	**10**	--	--	--	**50**	**1,000**	**1,000**	**1,000**

Table 4. Remediation Excavation Field Headspace Analyses, January, 2006.

Excavation Area	Sample	Field Headspace Reading, ppm	Excavation Area	Sample	Field Headspace Reading, ppm
MPB-1	Floor 9'	18	MPB-1	Floor 10'	18
MPB-1	E SW	21	MPB-1	E SW	21
MPB-1	W SW	20	MPB-1	W SW	20
MPB-1	N SW	19	MPB-1	N SW	19
MPB-1	S SW	17	MPB-1	S SW	17
MPB-3	Floor, 4'	2	MPB-3	Floor, 4'	2
MPB-3	E SW	0	MPB-3	E SW	0
MPB-3	W SW	1	MPB-3	W SW	1
MPB-3	N SW	0	MPB-3	N SW	0
MPB-3	S SW	0	MPB-3	S SW	0
MPB-5	Floor, 9'	11	MPB-5	Floor, 9'	11
MPB-5	E SW	7	MPB-5	E SW	7
MPB-5	W SW	2	MPB-5	W SW	2
MPB-5	N SW	5	MPB-5	N SW	5
MPB-5	S SW	7	MPB-5	S SW	7
MPB-7	Floor 10'	24	MPB-7	Floor 10'	24
MPB-7	E SW	22	MPB-7	E SW	22
MPB-7	W SW	65	MPB-7	W SW	65
MPB-7	W SW (B)	35	MPB-7	W SW (B)	35
MPB-7	N SW	48	MPB-7	N SW	48
MPB-7	S SW	85	MPB-7	S SW	85
MPB-7	S SW (B)	41	MPB-7	S SW (B)	41
MPB-9	Floor 10'	56	MPB-9	Floor 10'	56
MPB-9	E SW	82	MPB-9	E SW	82
MPB-9	W SW	2	MPB-9	W SW	2
MPB-9	N SW	62	MPB-9	N SW	62
MPB-9	N SW (B)	37	MPB-9	N SW (B)	37
MPB-9	S SW	58	MPB-9	S SW	58
MPB-9	S SW(B)	24	MPB-9	S SW(B)	24
MPB-10	Floor 10'	65	MPB-10	Floor 10'	65
MPB-10	E SW	17	MPB-10	E SW	17
MPB-10	W SW	20	MPB-10	W SW	20
MPB-10	N SW	18	MPB-10	N SW	18

Table 5. Remediation Sample Laboratory Analyses, January, 2006.

Excavation Area	Sample	Sample Date	GRO C6-C12	DRO >C12-C35	Total Hydrocarbons
			mg/kg		
MPB-1	Floor 10'	1/9/06	ND	124	124
MPB-1	E SW	1/9/06	ND	181	181
MPB-1	W SW	1/9/06	ND	289	289
MPB-1	N SW	1/9/06	ND	213	213
MPB-1	S SW	1/9/06	ND	259	259
MPB-3	Floor, 4'	1/9/06	5.36J	621	621
MPB-3	E SW	1/9/06	15.3	809	824
MPB-3	W SW	1/9/06	ND	191	191
MPB-3	N SW	1/9/06	13.0	886	899
MPB-3	S SW	1/9/06	8.07J	363	363
MPB-5	Floor, 9'	1/5/06	ND	55.5	55.5
MPB-5	E SW	1/5/06	ND	142	142
MPB-5	W SW	1/5/06	ND	ND	ND
MPB-5	N SW	1/5/06	ND	ND	ND
MPB-5	S SW	1/5/06	ND	ND	ND
MPB-7	Floor 10'	1/6/06	52.9	260	313
MPB-7	E SW	1/6/06	47.2	170	217
MPB-7	W SW	1/6/06	134	927	1060
MPB-7	W SW (B)	1/11/06	ND	751	751
MPB-7	N SW	1/6/06	152	1150	1300
MPB-7	S SW	1/6/06	289	1030	1320
MPB-7	S SW (B)	1/11/06	5.08J	1070	1070
MPB-9	Floor 10'	1/6/06	101	939	1040
MPB-9	E SW	1/6/06	177	1690	1870
MPB-9	W SW	1/6/06	8.69J	16.7	16.7
MPB-9	N SW	1/6/06	149	1550	1700
MPB-9	N SW (B)	1/11/06	6.92J	1500	1500
MPB-9	S SW	1/6/06	192	1810	2000
MPB-9	S SW(B)	1/11/06	5.78J	1303	1303

Table 5. Remediation Sample Laboratory Analyses, January, 2006.

Excavation Area	Sample	Sample Date	GRO C6-C12	DRO >C12-C35	Total Hydrocarbons
			mg/kg		
MPB-10	Floor 10'	1/9/06	239	1360	1600
MPB-10	E SW	1/9/06	8.76J	363	363
MPB-10	W SW	1/9/06	11.4	349	360
MPB-10	N SW	1/9/06	10.5	377	388
MPB-10	S SW	1/9/06	9.81J	343	343
MPB-12	Floor 8'	1/9/06	1180	3090	4270
MPB-12	Floor 10' (B)	1/10/06	ND	182	182
MPB-12	E SW	1/9/06	1330	3530	4860
MPB-12	E SW (B)	1/10/06	ND	231	231
MPB-12	W SW	1/9/06	504	1560	2060
MPB-12	W SW (B)	1/10/06	ND	637	637
MPB-12	N SW	1/9/06	421	1430	1850
MPB-12	N SW (B)	1/10/06	ND	183	183
MPB-12	S SW	1/9/06	261	895	1160
MPB-12	S SW (B)	1/10/06	ND	392	392
MP Excavated Soil Pile 1		1/9/06	ND	22100	22100
MP Excavated Soil Pile 2		1/9/06	433	4040	4470
MP Backfill Soil		1/9/06	105	289	394

Table 6. Monitoring Well and Groundwater Information.

Well ID	Well Location, Northing	Well Location, Easting	TOC* Elevation, ft	Static water level, ft	Groundwater Elevation, ft
MW 1	681334.136	854349.242	3726.31	78.39	3647.92
MW 2	681246.554	854276.844	3725.56	77.50	3648.06
MW 3	681256.234	854416.484	3726.31	78.89	3647.42

Table 7. Groundwater Laboratory Analyses, January 2006.

Sample ID	Benzene	Toluene	Ethylbenzene	Xylenes, o	Xylenes, m,p	Chloride
			Mg/l			
MW 1	<0.001	<0.001	<0.001	<0.001	<0.001	25.1
MW 2	<0.001	<0.001	<0.001	<0.001	<0.001	45.1
MW 3	<0.001	<0.001	<0.001	<0.001	<0.001	188
DW Std.*	0.005	1.0	0.7	10 (total)		250
*2004 Edition of the Drinking Water Standards and Health Advisories, US EPA.						

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Shawn Hokanson

Kane Environmental- College Station

607 Peyton Street

College Station, TEXAS 77840

Project: Mattie Price

Project Number: 0

Location: Hobbs, NM

Lab Order Number: 6A07001

Report Date: 01/10/06

Kane Environmental- College Station	Project: Mattie Price	Fax: (979) 693-3231
607 Peyton Street	Project Number: 0	**Reported:**
College Station TEXAS, 77840	Project Manager: Shawn Hokanson	01/10/06 13:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MPB5-SSW	6A07001-01	Soil	01/05/06 14:00	01/07/06 09:40
MPB5-ESW	6A07001-02	Soil	01/05/06 14:10	01/07/06 09:40
MPB5-NSW	6A07001-03	Soil	01/05/06 14:30	01/07/06 09:40
MPB5-WSW	6A07001-04	Soil	01/05/06 14:40	01/07/06 09:40
MPB5-Floor 9'	6A07001-05	Soil	01/05/06 15:10	01/07/06 09:40
MPB7-SSW	6A07001-06	Soil	01/06/06 08:10	01/07/06 09:40
MPB7-ESW	6A07001-07	Soil	01/06/06 08:15	01/07/06 09:40
MPB7-NSW	6A07001-08	Soil	01/06/06 08:25	01/07/06 09:40
MPB7-WSW	6A07001-09	Soil	01/06/06 08:35	01/07/06 09:40
MPB7-Floor 10'	6A07001-10	Soil	01/06/06 08:20	01/07/06 09:40
MPB9-Floor 10'	6A07001-11	Soil	01/06/06 15:00	01/07/06 09:40
MPB9-WSW	6A07001-12	Soil	01/06/06 15:10	01/07/06 09:40
MPB9-ESW	6A07001-13	Soil	01/06/06 15:30	01/07/06 09:40
MPB9-SSW	6A07001-14	Soil	01/06/06 15:50	01/07/06 09:40
MPB9-NSW	6A07001-15	Soil	01/06/06 16:10	01/07/06 09:40

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

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB5-SSW (6A07001-01) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA60907	01/09/06	01/10/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*75.6 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*121 %*	*70-130*		"	"	"	"	
MPB5-ESW (6A07001-02) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA60907	01/09/06	01/09/06	EPA 8015M	
Diesel Range Organics >C12-C35	**142**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**142**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*77.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*82.0 %*	*70-130*		"	"	"	"	
MPB5-NSW (6A07001-03) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA60907	01/09/06	01/09/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*81.6 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*76.6 %*	*70-130*		"	"	"	"	
MPB5-WSW (6A07001-04) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA60907	01/09/06	01/09/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*77.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*73.0 %*	*70-130*		"	"	"	"	
MPB5-Floor 9' (6A07001-05) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA60907	01/09/06	01/09/06	EPA 8015M	
Diesel Range Organics >C12-C35	**55.5**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**55.5**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*99.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*106 %*	*70-130*		"	"	"	"	

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

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB7-SSW (6A07001-06) Soil									
Gasoline Range Organics C6-C12	**289**	10.0	mg/kg dry	1	EA60907	01/09/06	01/09/06	EPA 8015M	
Diesel Range Organics >C12-C35	**1030**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**1320**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*94.4 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*292 %*	*70-130*		"	"	"	"	*S-04*
MPB7-ESW (6A07001-07) Soil									
Gasoline Range Organics C6-C12	**47.2**	10.0	mg/kg dry	1	EA60907	01/09/06	01/09/06	EPA 8015M	
Diesel Range Organics >C12-C35	**170**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**217**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*84.6 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*82.8 %*	*70-130*		"	"	"	"	
MPB7-NSW (6A07001-08) Soil									
Gasoline Range Organics C6-C12	**152**	10.0	mg/kg dry	1	EA60907	01/09/06	01/09/06	EPA 8015M	
Diesel Range Organics >C12-C35	**1150**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**1300**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*90.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*318 %*	*70-130*		"	"	"	"	*S-04*
MPB7-WSW (6A07001-09) Soil									
Gasoline Range Organics C6-C12	**134**	10.0	mg/kg dry	1	EA60907	01/09/06	01/09/06	EPA 8015M	
Diesel Range Organics >C12-C35	**927**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**1060**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*83.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*276 %*	*70-130*		"	"	"	"	*S-04*
MPB7-Floor 10' (6A07001-10) Soil									
Gasoline Range Organics C6-C12	**52.9**	10.0	mg/kg dry	1	EA60907	01/09/06	01/09/06	EPA 8015M	
Diesel Range Organics >C12-C35	**260**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**313**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*82.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*147 %*	*70-130*		"	"	"	"	*S-04*

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB9-Floor 10' (6A07001-11) Soil									
Gasoline Range Organics C6-C12	**101**	10.0	mg/kg dry	1	EA60907	01/09/06	01/09/06	EPA 8015M	
Diesel Range Organics >C12-C35	**939**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**1040**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*81.2 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*272 %*	*70-130*		"	"	"	"	*S-04*
MPB9-WSW (6A07001-12) Soil									
Gasoline Range Organics C6-C12	**J [8.69]**	10.0	mg/kg dry	1	EA60907	01/09/06	01/09/06	EPA 8015M	J
Diesel Range Organics >C12-C35	**16.7**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**16.7**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*83.4 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*73.0 %*	*70-130*		"	"	"	"	
MPB9-ESW (6A07001-13) Soil									
Gasoline Range Organics C6-C12	**177**	10.0	mg/kg dry	1	EA60907	01/09/06	01/10/06	EPA 8015M	
Diesel Range Organics >C12-C35	**1690**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**1870**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*91.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*384 %*	*70-130*		"	"	"	"	*S-04*
MPB9-SSW (6A07001-14) Soil									
Gasoline Range Organics C6-C12	**192**	10.0	mg/kg dry	1	EA60907	01/09/06	01/10/06	EPA 8015M	
Diesel Range Organics >C12-C35	**1810**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**2000**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*93.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*418 %*	*70-130*		"	"	"	"	*S-04*
MPB9-NSW (6A07001-15) Soil									
Gasoline Range Organics C6-C12	**149**	10.0	mg/kg dry	1	EA60907	01/09/06	01/10/06	EPA 8015M	
Diesel Range Organics >C12-C35	**1550**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**1700**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*91.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*414 %*	*70-130*		"	"	"	"	*S-04*

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB5-SSW (6A07001-01) Soil									
% Moisture	**9.0**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
MPB5-ESW (6A07001-02) Soil									
% Moisture	**11.1**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
MPB5-NSW (6A07001-03) Soil									
% Moisture	**9.4**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
MPB5-WSW (6A07001-04) Soil									
% Moisture	**8.5**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
MPB5-Floor 9' (6A07001-05) Soil									
% Moisture	**5.7**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
MPB7-SSW (6A07001-06) Soil									
% Moisture	**8.5**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
MPB7-ESW (6A07001-07) Soil									
% Moisture	**9.8**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
MPB7-NSW (6A07001-08) Soil									
% Moisture	**4.9**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
MPB7-WSW (6A07001-09) Soil									
% Moisture	**5.5**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
MPB7-Floor 10' (6A07001-10) Soil									
% Moisture	**11.7**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
MPB9-Floor 10' (6A07001-11) Soil									
% Moisture	**3.7**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB9-WSW (6A07001-12) Soil									
% Moisture	**2.1**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
MPB9-ESW (6A07001-13) Soil									
% Moisture	**1.9**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
MPB9-SSW (6A07001-14) Soil									
% Moisture	**1.7**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	
MPB9-NSW (6A07001-15) Soil									
% Moisture	**2.4**	0.1	%	1	EA61001	01/09/06	01/10/06	% calculation	

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 EA60907 - Solvent Extraction (GC)										
Blank (EA60907-BLK1)				Prepared: 01/09/06 Analyzed: 01/10/06						
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	*38.6*		*mg/kg*	*50.0*		*77.2*	*70-130*			
Surrogate: 1-Chlorooctadecane	*36.2*		"	*50.0*		*72.4*	*70-130*			
LCS (EA60907-BS1)				Prepared & Analyzed: 01/09/06						
Gasoline Range Organics C6-C12	426	10.0	mg/kg wet	500		85.2	75-125			
Diesel Range Organics >C12-C35	395	10.0	"	500		79.0	75-125			
Total Hydrocarbon C6-C35	821	10.0	"	1000		82.1	75-125			
Surrogate: 1-Chlorooctane	*42.5*		*mg/kg*	*50.0*		*85.0*	*70-130*			
Surrogate: 1-Chlorooctadecane	*45.9*		"	*50.0*		*91.8*	*70-130*			
Calibration Check (EA60907-CCV1)				Prepared: 01/09/06 Analyzed: 01/10/06						
Gasoline Range Organics C6-C12	416		mg/kg	500		83.2	80-120			
Diesel Range Organics >C12-C35	400		"	500		80.0	80-120			
Total Hydrocarbon C6-C35	816		"	1000		81.6	80-120			
Surrogate: 1-Chlorooctane	*51.8*		"	*50.0*		*104*	*70-130*			
Surrogate: 1-Chlorooctadecane	*43.9*		"	*50.0*		*87.8*	*70-130*			
Matrix Spike (EA60907-MS1)	**Source: 6A07001-01**			Prepared & Analyzed: 01/09/06						
Gasoline Range Organics C6-C12	455	10.0	mg/kg dry	549	ND	82.9	75-125			
Diesel Range Organics >C12-C35	518	10.0	"	549	ND	94.4	75-125			
Total Hydrocarbon C6-C35	973	10.0	"	1100	ND	88.5	75-125			
Surrogate: 1-Chlorooctane	*52.3*		*mg/kg*	*50.0*		*105*	*70-130*			
Surrogate: 1-Chlorooctadecane	*45.3*		"	*50.0*		*90.6*	*70-130*			
Matrix Spike Dup (EA60907-MSD1)	**Source: 6A07001-01**			Prepared & Analyzed: 01/09/06						
Gasoline Range Organics C6-C12	450	10.0	mg/kg dry	549	ND	82.0	75-125	1.10	20	
Diesel Range Organics >C12-C35	506	10.0	"	549	ND	92.2	75-125	2.34	20	
Total Hydrocarbon C6-C35	956	10.0	"	1100	ND	86.9	75-125	1.76	20	
Surrogate: 1-Chlorooctane	*51.6*		*mg/kg*	*50.0*		*103*	*70-130*			
Surrogate: 1-Chlorooctadecane	*47.9*		"	*50.0*		*95.8*	*70-130*			

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 EA61001 - General Preparation (Prep)										
Blank (EA61001-BLK1)				Prepared: 01/09/06 Analyzed: 01/10/06						
% Solids	100		%							
Duplicate (EA61001-DUP1)		**Source: 6A07001-01**		Prepared: 01/09/06 Analyzed: 01/10/06						
% Solids	90.1		%		91.0			0.994	20	
Duplicate (EA61001-DUP2)		**Source: 6A09001-13**		Prepared: 01/09/06 Analyzed: 01/10/06						
% Solids	78.8		%		81.3			3.12	20	

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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: 1/10/2006

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.

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: Shawn Hopkinson
Company Name: Kane Environmental
Company Address: 607 Peyton St
City/State/Zip: College Station, TX 77840
Telephone No: 9792298253
Fax No: 9796933231
Sampler Signature:
Email: shawnhopkinson@msn.com

Project Name: Mattie Rice
Project #: 0
Project Loc: Hobbs, NM
PO #:

6A0701

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: TCLP: TOTAL: 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) 48hr.	Standard TAT
-01	MPBS - S SW	11/5/05	1400	1	X											X													X	
-02	MPBS - E SW	11/5/05	1410	1	X											X														
-03	MPBS - N SW	11/5/05	1430	1	X											X														
-04	MPBS - W SW	11/5/05	1440	1	X											X														
-05	MPBS - Floor 9'	11/5/05	1510	1	X											X														
-06	MPB 7 - S SW	11/6/05	810	1	X											X														
-07	MPB 7 - E SW	11/6/05	815		X											X														
-08	MPB 7 - N SW	11/6/05	825		X											X														
-09	MPB 7 - W SW	11/6/05	835		X											X														
-10	MPB 9 - Floor 10'	11/6/05	820		X											X														

Special Instructions:

Sample Containers Intact? (Y) N
Labels on container? (Y) N
Custody Seals: Containers / (Cooler)
Temperature Upon Receipt: 1.0°C

Laboratory Comments: 4oz glass once

Relinquished by:	Date	Time	Received by:	Date	Time
	11/7/05	600PM			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
Drop Box			Jeanne McMurry	01-07-06	0940

Environmental Lab of Texas

1[illegible] West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS R[illegible]ST

Project Manager: Shawn Hokanson
Company Name: Kane Environmental
Company Address: 607 Peyton St
City/State/Zip: College Station TX 77840
Telephone No: 979 229 8253
Fax No:
Sampler Signature:
Email: shawnhokanson@msn.com

Project Name: Mattie Price
Project #:
Project Loc: Hobbs, NM
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: TCLP: TPH: 418.1 8015M 1005 1006	TOTAL: 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) 48 Hr	Standard TAT
600700																																
-11	MPB9 FSW @ 10'	1/6/05	1510		X											X															X	
-12	MPB9 WSW		1510		X											X																
-13	MPB9 ESW		1530		X											X																
-14	~~MPB10~~ MPB9 S SW		1550		X											X																
-15	MPB9 NSW		1610													X																

Special Instructions:

Sample Containers Intact? Y N
Labels on container? Y N
Custody Seals: Containers / Cooler
Temperature Upon Receipt: 1.0°C

Laboratory Comments: 4oz glass on ice

Relinquished by:	Date	Time	Received by:	Date	Time
	1/7/05	600/PM			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Joanne McMurry	01-07-06	0940

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

Client: Kane Environmental

Date/Time: 01-07-06 @ 0940

Order #: 601007001

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	1.0 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)	see attached e-mail
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	
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:

Shawn Hokanson

Kane Environmental- College Station

607 Peyton Street

College Station, TEXAS 77840

Project: Mattie Price

Project Number: 04-631

Location: Hobbs, NM

Lab Order Number: 6A10011

Report Date: 01/18/06

Kane Environmental- College Station	Project: Mattie Price	Fax: (979) 693-3231
607 Peyton Street	Project Number: 04-631	**Reported:**
College Station TEXAS, 77840	Project Manager: Shawn Hokanson	01/18/06 11:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MPB 3 Floor 4'	6A10011-01	Soil	01/09/06 07:40	01/10/06 14:30
MPB 3 E SW	6A10011-02	Soil	01/09/06 07:50	01/10/06 14:30
MPB 3 W SW	6A10011-03	Soil	01/09/06 07:52	01/10/06 14:30
MPB 3 N SW	6A10011-04	Soil	01/09/06 07:44	01/10/06 14:30
MPB 3 S SW	6A10011-05	Soil	01/09/06 07:42	01/10/06 14:30
MPB 12 Floor 8'	6A10011-06	Soil	01/09/06 10:00	01/10/06 14:30
MPB 12 E SW	6A10011-07	Soil	01/09/06 10:05	01/10/06 14:30
MPB 12 W SW	6A10011-08	Soil	01/09/06 10:10	01/10/06 14:30
MPB 12 N SW	6A10011-09	Soil	01/09/06 10:12	01/10/06 14:30
MPB 12 S SW	6A10011-10	Soil	01/09/06 10:15	01/10/06 14:30
MPB 1 Floor 10'	6A10011-11	Soil	01/09/06 11:50	01/10/06 14:30
MPB 1 N SW	6A10011-12	Soil	01/09/06 11:54	01/10/06 14:30
MPB 1 E SW	6A10011-13	Soil	01/09/06 11:56	01/10/06 14:30
MPB 1 S SW	6A10011-14	Soil	01/09/06 11:58	01/10/06 14:30
MPB 1 W SW	6A10011-15	Soil	01/09/06 12:02	01/10/06 14:30
MP Backfill Soil	6A10011-16	Soil	01/09/06 12:40	01/10/06 14:30
MP Excavated Soil Pile 2	6A10011-17	Soil	01/09/06 12:33	01/10/06 14:30
MP Excavated Soil Pile 1	6A10011-18	Soil	01/09/06 12:30	01/10/06 14:30
MPB 10 Floor 10'	6A10011-19	Soil	01/09/06 12:20	01/10/06 14:30
MPB 10 N SW	6A10011-20	Soil	01/09/06 12:25	01/10/06 14:30
MPB 10 S SW	6A10011-21	Soil	01/09/06 12:27	01/10/06 14:30
MPB 10 E SW	6A10011-22	Soil	01/09/06 12:22	01/10/06 14:30
MPB 10 W SW	6A10011-23	Soil	01/09/06 12:24	01/10/06 14:30

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

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB 3 Floor 4' (6A10011-01) Soil									
Gasoline Range Organics C6-C12	**J [5.36]**	10.0	mg/kg dry	1	EA61119	01/11/06	01/11/06	EPA 8015M	J
Diesel Range Organics >C12-C35	**621**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**621**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*122 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*110 %*	*70-130*		"	"	"	"	
MPB 3 E SW (6A10011-02) Soil									
Gasoline Range Organics C6-C12	**15.3**	10.0	mg/kg dry	1	EA61119	01/11/06	01/11/06	EPA 8015M	
Diesel Range Organics >C12-C35	**809**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**824**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*94.2 %*	*70-130*		"	"	"	"	
MPB 3 W SW (6A10011-03) Soil									
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA61119	01/11/06	01/11/06	EPA 8015M	
Diesel Range Organics >C12-C35	**191**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**191**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*89.6 %*	*70-130*		"	"	"	"	
MPB 3 N SW (6A10011-04) Soil									
Gasoline Range Organics C6-C12	**13.0**	10.0	mg/kg dry	1	EA61119	01/11/06	01/11/06	EPA 8015M	
Diesel Range Organics >C12-C35	**886**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**899**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*97.0 %*	*70-130*		"	"	"	"	
MPB 3 S SW (6A10011-05) Soil									
Gasoline Range Organics C6-C12	**J [8.07]**	10.0	mg/kg dry	1	EA61119	01/11/06	01/11/06	EPA 8015M	J
Diesel Range Organics >C12-C35	**363**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**363**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*111 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*98.6 %*	*70-130*		"	"	"	"	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB 12 Floor 8' (6A10011-06) Soil									
Gasoline Range Organics C6-C12	**1180**	10.0	mg/kg dry	1	EA61119	01/11/06	01/11/06	EPA 8015M	
Diesel Range Organics >C12-C35	**3090**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**4270**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*126 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*92.8 %*	*70-130*		"	"	"	"	
MPB 12 E SW (6A10011-07) Soil									
Gasoline Range Organics C6-C12	**1330**	10.0	mg/kg dry	1	EA61119	01/11/06	01/11/06	EPA 8015M	
Diesel Range Organics >C12-C35	**3530**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**4860**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*136 %*	*70-130*		"	"	"	"	*S-04*
Surrogate: 1-Chlorooctadecane		*104 %*	*70-130*		"	"	"	"	
MPB 12 W SW (6A10011-08) Soil									
Gasoline Range Organics C6-C12	**504**	10.0	mg/kg dry	1	EA61119	01/11/06	01/11/06	EPA 8015M	
Diesel Range Organics >C12-C35	**1560**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**2060**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*119 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*112 %*	*70-130*		"	"	"	"	
MPB 12 N SW (6A10011-09) Soil									
Gasoline Range Organics C6-C12	**421**	10.0	mg/kg dry	1	EA61119	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**1430**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**1850**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*117 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*109 %*	*70-130*		"	"	"	"	
MPB 12 S SW (6A10011-10) Soil									
Gasoline Range Organics C6-C12	**261**	10.0	mg/kg dry	1	EA61119	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**895**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**1160**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*110 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*97.2 %*	*70-130*		"	"	"	"	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB 1 Floor 10' (6A10011-11) Soil									
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA61119	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**124**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**124**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*88.0 %*	*70-130*		"	"	"	"	
MPB 1 N SW (6A10011-12) Soil									
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA61119	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**213**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**213**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*92.0 %*	*70-130*		"	"	"	"	
MPB 1 E SW (6A10011-13) Soil									
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA61119	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**181**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**181**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*111 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*97.4 %*	*70-130*		"	"	"	"	
MPB 1 S SW (6A10011-14) Soil									
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA61119	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**259**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**259**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*88.6 %*	*70-130*		"	"	"	"	
MPB 1 W SW (6A10011-15) Soil									
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA61119	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**289**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**289**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*111 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*97.2 %*	*70-130*		"	"	"	"	

Kane Environmental- College Station	Project: Mattie Price	Fax: (979) 693-3231
607 Peyton Street	Project Number: 04-631	**Reported:**
College Station TEXAS, 77840	Project Manager: Shawn Hokanson	01/18/06 11:20

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MP Backfill Soil (6A10011-16) Soil									
Gasoline Range Organics C6-C12	**105**	10.0	mg/kg dry	1	EA61119	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**289**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**394**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*90.2 %*	*70-130*		"	"	"	"	
MP Excavated Soil Pile 2 (6A10011-17) Soil									
Gasoline Range Organics C6-C12	**433**	10.0	mg/kg dry	1	EA61119	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**4040**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**4470**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*113 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*103 %*	*70-130*		"	"	"	"	
MP Excavated Soil Pile 1 (6A10011-18) Soil									
Gasoline Range Organics C6-C12	**ND**	100	mg/kg dry	10	EA61119	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**22100**	100	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**22100**	100	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*10.6 %*	*70-130*		"	"	"	"	*S-06*
Surrogate: 1-Chlorooctadecane		*15.2 %*	*70-130*		"	"	"	"	*S-06*
MPB 10 Floor 10' (6A10011-19) Soil									
Gasoline Range Organics C6-C12	**239**	10.0	mg/kg dry	1	EA61119	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**1360**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**1600**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*118 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*103 %*	*70-130*		"	"	"	"	
MPB 10 N SW (6A10011-20) Soil									
Gasoline Range Organics C6-C12	**10.5**	10.0	mg/kg dry	1	EA61119	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**377**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**388**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*91.8 %*	*70-130*		"	"	"	"	

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

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB 10 S SW (6A10011-21) Soil									
Gasoline Range Organics C6-C12	**J [9.81]**	10.0	mg/kg dry	1	EA61120	01/11/06	01/12/06	EPA 8015M	J
Diesel Range Organics >C12-C35	**343**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**343**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*101 %*	*70-130*		"	"	"	"	
MPB 10 E SW (6A10011-22) Soil									
Gasoline Range Organics C6-C12	**J [8.76]**	10.0	mg/kg dry	1	EA61120	01/11/06	01/12/06	EPA 8015M	J
Diesel Range Organics >C12-C35	**363**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**363**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*108 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*94.6 %*	*70-130*		"	"	"	"	
MPB 10 W SW (6A10011-23) Soil									
Gasoline Range Organics C6-C12	**11.4**	10.0	mg/kg dry	1	EA61120	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**349**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**360**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*108 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*95.0 %*	*70-130*		"	"	"	"	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB 3 Floor 4' (6A10011-01) Soil									
% Moisture	**2.5**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 3 E SW (6A10011-02) Soil									
% Moisture	**3.4**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 3 W SW (6A10011-03) Soil									
% Moisture	**2.8**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 3 N SW (6A10011-04) Soil									
% Moisture	**2.5**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 3 S SW (6A10011-05) Soil									
% Moisture	**5.9**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 12 Floor 8' (6A10011-06) Soil									
% Moisture	**10.0**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 12 E SW (6A10011-07) Soil									
% Moisture	**9.3**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 12 W SW (6A10011-08) Soil									
% Moisture	**6.4**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 12 N SW (6A10011-09) Soil									
% Moisture	**4.8**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 12 S SW (6A10011-10) Soil									
% Moisture	**5.5**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 1 Floor 10' (6A10011-11) Soil									
% Moisture	**12.6**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB 1 N SW (6A10011-12) Soil									
% Moisture	**12.7**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 1 E SW (6A10011-13) Soil									
% Moisture	**12.1**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 1 S SW (6A10011-14) Soil									
% Moisture	**12.1**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 1 W SW (6A10011-15) Soil									
% Moisture	**11.8**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MP Backfill Soil (6A10011-16) Soil									
% Moisture	**15.1**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MP Excavated Soil Pile 2 (6A10011-17) Soil									
% Moisture	**9.8**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MP Excavated Soil Pile 1 (6A10011-18) Soil									
% Moisture	**5.5**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 10 Floor 10' (6A10011-19) Soil									
% Moisture	**11.3**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 10 N SW (6A10011-20) Soil									
% Moisture	**7.6**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 10 S SW (6A10011-21) Soil									
% Moisture	**8.0**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	
MPB 10 E SW (6A10011-22) Soil									
% Moisture	**7.1**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB 10 W SW (6A10011-23) Soil									
% Moisture	**8.7**	0.1	%	1	EA61105	01/10/06	01/11/06	% calculation	

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 EA61119 - Solvent Extraction (GC)										
Blank (EA61119-BLK1)				Prepared & Analyzed: 01/11/06						
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	*51.8*		*mg/kg*	*50.0*		*104*	*70-130*			
Surrogate: 1-Chlorooctadecane	*43.6*		"	*50.0*		*87.2*	*70-130*			
LCS (EA61119-BS1)				Prepared & Analyzed: 01/11/06						
Gasoline Range Organics C6-C12	476	10.0	mg/kg wet	500		95.2	75-125			
Diesel Range Organics >C12-C35	497	10.0	"	500		99.4	75-125			
Total Hydrocarbon C6-C35	973	10.0	"	1000		97.3	75-125			
Surrogate: 1-Chlorooctane	*58.4*		*mg/kg*	*50.0*		*117*	*70-130*			
Surrogate: 1-Chlorooctadecane	*48.7*		"	*50.0*		*97.4*	*70-130*			
Calibration Check (EA61119-CCV1)				Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	482		mg/kg	500		96.4	80-120			
Diesel Range Organics >C12-C35	528		"	500		106	80-120			
Total Hydrocarbon C6-C35	1010		"	1000		101	80-120			
Surrogate: 1-Chlorooctane	*59.4*		"	*50.0*		*119*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.3*		"	*50.0*		*101*	*70-130*			
Matrix Spike (EA61119-MS1)	**Source: 6A10011-11**			Prepared & Analyzed: 01/11/06						
Gasoline Range Organics C6-C12	538	10.0	mg/kg dry	572	ND	94.1	75-125			
Diesel Range Organics >C12-C35	607	10.0	"	572	124	84.4	75-125			
Total Hydrocarbon C6-C35	1140	10.0	"	1140	124	89.1	75-125			
Surrogate: 1-Chlorooctane	*56.8*		*mg/kg*	*50.0*		*114*	*70-130*			
Surrogate: 1-Chlorooctadecane	*44.9*		"	*50.0*		*89.8*	*70-130*			
Matrix Spike Dup (EA61119-MSD1)	**Source: 6A10011-11**			Prepared & Analyzed: 01/11/06						
Gasoline Range Organics C6-C12	535	10.0	mg/kg dry	572	ND	93.5	75-125	0.559	20	
Diesel Range Organics >C12-C35	609	10.0	"	572	124	84.8	75-125	0.329	20	
Total Hydrocarbon C6-C35	1140	10.0	"	1140	124	89.1	75-125	0.00	20	
Surrogate: 1-Chlorooctane	*56.4*		*mg/kg*	*50.0*		*113*	*70-130*			
Surrogate: 1-Chlorooctadecane	*44.8*		"	*50.0*		*89.6*	*70-130*			

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 EA61120 - Solvent Extraction (GC)										
Blank (EA61120-BLK1)				Prepared: 01/11/06 Analyzed: 01/12/06						
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	*53.3*		*mg/kg*	*50.0*		*107*	*70-130*			
Surrogate: 1-Chlorooctadecane	*45.8*		*"*	*50.0*		*91.6*	*70-130*			
LCS (EA61120-BS1)				Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	479	10.0	mg/kg wet	500		95.8	75-125			
Diesel Range Organics >C12-C35	530	10.0	"	500		106	75-125			
Total Hydrocarbon C6-C35	1010	10.0	"	1000		101	75-125			
Surrogate: 1-Chlorooctane	*59.0*		*mg/kg*	*50.0*		*118*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.0*		*"*	*50.0*		*100*	*70-130*			
Calibration Check (EA61120-CCV1)				Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	485		mg/kg	500		97.0	80-120			
Diesel Range Organics >C12-C35	544		"	500		109	80-120			
Total Hydrocarbon C6-C35	1030		"	1000		103	80-120			
Surrogate: 1-Chlorooctane	*59.6*		*"*	*50.0*		*119*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.4*		*"*	*50.0*		*101*	*70-130*			
Matrix Spike (EA61120-MS1)	**Source: 6A10012-01**			Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	521	10.0	mg/kg dry	553	8.36	92.7	75-125			
Diesel Range Organics >C12-C35	608	10.0	"	553	138	85.0	75-125			
Total Hydrocarbon C6-C35	1130	10.0	"	1110	138	89.4	75-125			
Surrogate: 1-Chlorooctane	*60.0*		*mg/kg*	*50.0*		*120*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.7*		*"*	*50.0*		*103*	*70-130*			
Matrix Spike Dup (EA61120-MSD1)	**Source: 6A10012-01**			Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	524	10.0	mg/kg dry	553	8.36	93.2	75-125	0.574	20	
Diesel Range Organics >C12-C35	620	10.0	"	553	138	87.2	75-125	1.95	20	
Total Hydrocarbon C6-C35	1140	10.0	"	1110	138	90.3	75-125	0.881	20	
Surrogate: 1-Chlorooctane	*60.2*		*mg/kg*	*50.0*		*120*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.8*		*"*	*50.0*		*104*	*70-130*			

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 EA61105 - General Preparation (Prep)										
Blank (EA61105-BLK1)				Prepared: 01/10/06 Analyzed: 01/11/06						
% Solids	100		%							
Duplicate (EA61105-DUP1)		**Source: 6A10001-01**		Prepared: 01/10/06 Analyzed: 01/11/06						
% Solids	83.2		%		84.6			1.67	20	
Duplicate (EA61105-DUP2)		**Source: 6A10005-01**		Prepared: 01/10/06 Analyzed: 01/11/06						
% Solids	90.0		%		90.0			0.00	20	
Duplicate (EA61105-DUP3)		**Source: 6A10011-10**		Prepared: 01/10/06 Analyzed: 01/11/06						
% Solids	95.4		%		94.5			0.948	20	

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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: 1/18/2006

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.

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: [illegible]
Company Name: [illegible] Environmental
Company Address: 607 Peyton St.
City/State/Zip: College Station TX 77840
Telephone No: 979-[illegible] 8253
Fax No: 979 693 [illegible]
Sampler Signature: [signature]
Email: [illegible]

Project Name: Mallon Price
Project #: [illegible]
Project Loc: Hobbs NM
PO #:

48hr.

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
6A10011 -01	MPB 3 Floor 4'	1/9	740	1	X											X										X	
-02	MPB 3 E SW	↓	750	↓	↓											↓										↓	
-03	MPB 3 W SW	↓	752	↓	↓											↓										↓	
-04	MPB 3 N SW	↓	744	↓	↓											↓										↓	
-05	MPB 3 S SW	↓	742	↓	↓											↓										↓	
-06	MPB 12 Floor 8'	↓	1000	↓	↓											↓										↓	
-07	MPB 12 E SW	↓	1005	↓	↓											↓										↓	
-08	MPB 12 W SW	↓	1010	↓	↓											↓										↓	
-09	MPB 12 N SW	↓	1012	↓	↓											↓										↓	
-10	MPB 12 S SW	↓	1015	↓	↓											↓										↓	

Special Instructions:

8560 7908 1859

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	1/9	1420	Fed EX		
Relinquished by: Fed EX	1/10/06	2:30	**Received by ELOT:** Carrie [illegible]	1/10/06	2:30

Sample Containers Intact? (Y) N
Labels on container? (Y) N
Custody Seals: Containers / (Cooler) —
Temperature Upon Receipt: 1.5

Laboratory Comments:
4oz glass

Environmental Lab of Texas

12600 West [illegible] East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

2 of 2

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Shawn Holcaslr
Company Name: Kerr Environmental
Company Address: 6607 Raylor ST
City/State/Zip: College Station TX 77840
Telephone No: 9792279553
Fax No: 9796933231
Sampler Signature: [signature]
Email: shawn.holcasler@[illegible].com

Project Name: Mattie Price
Project #: 04-631
Project Loc: Hobbs, NM
PO #:

6A10011

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)	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) 48hr	Standard TAT
-11	MPB 1 Floor 10'	1/5/[illegible]	1150	1	✓											X															X	
-12	MPB 1 N SW	↓	1154	↓	↓											↓															↓	
-13	MPB 1 E SW		1156	↓	↓											↓															↓	
-14	MPB 1 S SW		1158	↓	↓											↓															↓	
-15	MPB 1 W SW		1202	↓	↓											↓															↓	
-18	MP Excavated Soil Pile 1		1230	↓	↓											↓															↓	
-17	MP Excavated Soil Pile 2		1233	↓	↓											↓															↓	
-16	MP Backfill Soil		1240	↓	↓											↓															↓	
-19	MPB 1D Floor 10'		1220	↓	↓											↓															↓	
-20	MPB 1D N SW	↓	1225	↓	↓											↓															↓	

Special Instructions:

Sample Containers Intact? (Y) N
Labels on container? (Y) N
Custody Seals: Containers / (Cooler)
Temperature Upon Receipt: 1.5

Laboratory Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	1/7	1920	Fed Ex		
Fed Ex	1/10/06	2:30	Received by ELOT: Cecili Kelly	1/10/06	2:30

Environmental Lab of Texas

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

1 of 3

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Shawn Hokanson
Company Name: Tetra Environmental
Company Address: 607 Leyton St
City/State/Zip: College Station TX 77840
Telephone No: 979 229 6253
Fax No: 979 693-3231
Sampler Signature:
Email: shawn.hokanson@msa.com

Project Name: Mattie Price
Project #: 04631
Project Loc: Hobbs, NM
PO #:

6A10011

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 / 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) 48 HR	Standard TAT
-21	MPB 10 S SW	1/9	1227	1	X											X												X	
-22	MPB 10 E SW	1/9	1222	1	X											X													
-23	MPB 10 W SW	1/9	1224	1	X											X													

Special Instructions:

Sample Containers Intact? Y N
Labels on container? Y N
Custody Seals: Containers / Coolers
Temperature Upon Receipt: 1.5

Laboratory Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
	1/9	1420	Fed EX		
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
Fed EX	1/10/06	2:30	Cecelia Keely	1/10/06	1430

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

Client: Kane Environ.

Date/Time: 1/10/16 2:30

Order #: 16A10011

Initials: CR

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	1.5 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:

Shawn Hokanson

Kane Environmental- College Station

607 Peyton Street

College Station, TEXAS 77840

Project: Mattie Price

Project Number: 04-631

Location: Hobbs, NM

Lab Order Number: 6A18008

Report Date: 01/19/06

Kane Environmental- College Station	Project: Mattie Price	Fax: (979) 693-3231
607 Peyton Street	Project Number: 04-631	**Reported:**
College Station TEXAS, 77840	Project Manager: Shawn Hokanson	01/19/06 12:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MPB12 Floor 10' B	6A18008-01	Soil	01/10/06 12:40	01/18/06 10:00
MPB12 ESW B	6A18008-02	Soil	01/10/06 12:45	01/18/06 10:00
MPB12 NSW B	6A18008-03	Soil	01/10/06 12:55	01/18/06 10:00
MPB12 WSW B	6A18008-04	Soil	01/10/06 12:58	01/18/06 10:00
MPB12 SSW B	6A18008-05	Soil	01/10/06 13:10	01/18/06 10:00

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

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB12 Floor 10' B (6A18008-01) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA61808	01/18/06	01/18/06	EPA 8015M	
Diesel Range Organics >C12-C35	**182**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**182**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*114 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*105 %*	*70-130*		"	"	"	"	
MPB12 ESW B (6A18008-02) Soil									
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA61808	01/18/06	01/19/06	EPA 8015M	
Diesel Range Organics >C12-C35	**231**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**231**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*127 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*115 %*	*70-130*		"	"	"	"	
MPB12 NSW B (6A18008-03) Soil									
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA61808	01/18/06	01/19/06	EPA 8015M	
Diesel Range Organics >C12-C35	**183**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**183**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*110 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*101 %*	*70-130*		"	"	"	"	
MPB12 WSW B (6A18008-04) Soil									
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA61808	01/18/06	01/19/06	EPA 8015M	
Diesel Range Organics >C12-C35	**637**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**637**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*112 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*107 %*	*70-130*		"	"	"	"	
MPB12 SSW B (6A18008-05) Soil									
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA61808	01/18/06	01/19/06	EPA 8015M	
Diesel Range Organics >C12-C35	**392**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**392**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*113 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*108 %*	*70-130*		"	"	"	"	

Kane Environmental- College Station	Project: Mattie Price	Fax: (979) 693-3231
607 Peyton Street	Project Number: 04-631	**Reported:**
College Station TEXAS, 77840	Project Manager: Shawn Hokanson	01/19/06 12:14

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB12 Floor 10' B (6A18008-01) Soil									
% Moisture	**2.0**	0.1	%	1	EA61901	01/18/06	01/19/06	% calculation	
MPB12 ESW B (6A18008-02) Soil									
% Moisture	**2.2**	0.1	%	1	EA61901	01/18/06	01/19/06	% calculation	
MPB12 NSW B (6A18008-03) Soil									
% Moisture	**2.2**	0.1	%	1	EA61901	01/18/06	01/19/06	% calculation	
MPB12 WSW B (6A18008-04) Soil									
% Moisture	**1.6**	0.1	%	1	EA61901	01/18/06	01/19/06	% calculation	
MPB12 SSW B (6A18008-05) Soil									
% Moisture	**1.5**	0.1	%	1	EA61901	01/18/06	01/19/06	% calculation	

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 EA61808 - Solvent Extraction (GC)										
Blank (EA61808-BLK1)				Prepared & Analyzed: 01/18/06						
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	*55.5*		*mg/kg*	*50.0*		*111*	*70-130*			
Surrogate: 1-Chlorooctadecane	*48.9*		"	*50.0*		*97.8*	*70-130*			
LCS (EA61808-BS1)				Prepared & Analyzed: 01/18/06						
Gasoline Range Organics C6-C12	474	10.0	mg/kg wet	500		94.8	75-125			
Diesel Range Organics >C12-C35	573	10.0	"	500		115	75-125			
Total Hydrocarbon C6-C35	1050	10.0	"	1000		105	75-125			
Surrogate: 1-Chlorooctane	*61.3*		*mg/kg*	*50.0*		*123*	*70-130*			
Surrogate: 1-Chlorooctadecane	*52.4*		"	*50.0*		*105*	*70-130*			
Calibration Check (EA61808-CCV1)				Prepared: 01/18/06 Analyzed: 01/19/06						
Gasoline Range Organics C6-C12	462		mg/kg	500		92.4	80-120			
Diesel Range Organics >C12-C35	558		"	500		112	80-120			
Total Hydrocarbon C6-C35	1020		"	1000		102	80-120			
Surrogate: 1-Chlorooctane	*63.3*		"	*50.0*		*127*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.6*		"	*50.0*		*103*	*70-130*			
Matrix Spike (EA61808-MS1)	**Source: 6A18004-01**			Prepared & Analyzed: 01/18/06						
Gasoline Range Organics C6-C12	509	10.0	mg/kg dry	551	ND	92.4	75-125			
Diesel Range Organics >C12-C35	624	10.0	"	551	ND	113	75-125			
Total Hydrocarbon C6-C35	1130	10.0	"	1100	ND	103	75-125			
Surrogate: 1-Chlorooctane	*64.5*		*mg/kg*	*50.0*		*129*	*70-130*			
Surrogate: 1-Chlorooctadecane	*55.7*		"	*50.0*		*111*	*70-130*			
Matrix Spike Dup (EA61808-MSD1)	**Source: 6A18004-01**			Prepared & Analyzed: 01/18/06						
Gasoline Range Organics C6-C12	515	10.0	mg/kg dry	551	ND	93.5	75-125	1.17	20	
Diesel Range Organics >C12-C35	632	10.0	"	551	ND	115	75-125	1.27	20	
Total Hydrocarbon C6-C35	1150	10.0	"	1100	ND	105	75-125	1.75	20	
Surrogate: 1-Chlorooctane	*64.6*		*mg/kg*	*50.0*		*129*	*70-130*			
Surrogate: 1-Chlorooctadecane	*56.5*		"	*50.0*		*113*	*70-130*			

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 EA61901 - General Preparation (Prep)										
Blank (EA61901-BLK1)				Prepared: 01/18/06 Analyzed: 01/19/06						
% Solids	100		%							
Duplicate (EA61901-DUP1)		**Source: 6A18001-01**		Prepared: 01/18/06 Analyzed: 01/19/06						
% Solids	87.2		%		87.1			0.115	20	
Duplicate (EA61901-DUP2)		**Source: 6A18005-13**		Prepared: 01/18/06 Analyzed: 01/19/06						
% Solids	92.2		%		91.8			0.435	20	

Notes and Definitions

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: 1/19/2006

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.

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: ~~Mattie~~ Price Shawn Hakanson
Company Name: Kane Environmental
Company Address: 607 Peyton St
City/State/Zip: College Station TX 77840
Telephone No: 979 2298253
Fax No: 979 731 8554
Sampler Signature: [signature]
Email: shawnhakanson@msn.com

Project Name: Mattie Price
Project #: 04-631
Project Loc: Hobbs, NM
PO #:

LAB # (lab use only) 6A18008	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: / TOTAL:): 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	MPB12 Floor 10' "B"	1/16/06	1240	1	X									X		X										X	
-02	MPB12 ESW "B"	↓	1245	1	X									X		X										↓	
-03	MPB12 NSW "B"	↓	1247	1	X									X		X										↓	
-04	MPB12 WSW "B"	↓	1258	1	X									X		X										↓	
-05	MPB12 SSW "B"	↓	1310	1	X									X		X										↓	

Special Instructions:

Fed EX #8550 3881 8668

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	1/17/06	1230	Fed EX		
Relinquished by: Fed Ex	1/18/06	10:00	Received by ELOT: Carrie Kelly	1/18/06	10:00

Sample Containers Intact? (Y) N
Labels on container? (Y) N
Custody Seals: (Containers) (Cooler)
Temperature Upon Receipt: 3.5

Laboratory Comments:
4oz glass

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

Client: Kane Env.

Date/Time: 1/18/06 10:00

Order #: 6A18008

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	3.5 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:

Shawn Hokanson

Kane Environmental- College Station

607 Peyton Street

College Station, TEXAS 77840

Project: Mattie Price

Project Number: 04-631

Location: Hobbs, NM

Lab Order Number: 6A13021

Report Date: 01/20/06

Kane Environmental- College Station	Project: Mattie Price	Fax: (979) 693-3231
607 Peyton Street	Project Number: 04-631	**Reported:**
College Station TEXAS, 77840	Project Manager: Shawn Hokanson	01/20/06 10:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MPB 7 SSW B	6A13021-01	Soil	01/11/06 08:05	01/13/06 15:45
MPB 7 WSW B	6A13021-02	Soil	01/11/06 08:10	01/13/06 15:45
MPB 9 NSW B	6A13021-03	Soil	01/11/06 08:15	01/13/06 15:45
MPB 9 SSW B	6A13021-04	Soil	01/11/06 08:18	01/13/06 15:45

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

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB 7 SSW B (6A13021-01) Soil									
Gasoline Range Organics C6-C12	**J [5.08]**	10.0	mg/kg dry	1	EA61611	01/16/06	01/16/06	EPA 8015M	J
Diesel Range Organics >C12-C35	**1070**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**1070**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*93.4 %*	*70-130*		"	"	"	"	
MPB 7 WSW B (6A13021-02) Soil									
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA61611	01/16/06	01/17/06	EPA 8015M	
Diesel Range Organics >C12-C35	**751**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**751**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*91.8 %*	*70-130*		"	"	"	"	
MPB 9 NSW B (6A13021-03) Soil									
Gasoline Range Organics C6-C12	**J [6.92]**	10.0	mg/kg dry	1	EA61611	01/16/06	01/16/06	EPA 8015M	J
Diesel Range Organics >C12-C35	**1500**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**1500**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*80.6 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*76.0 %*	*70-130*		"	"	"	"	
MPB 9 SSW B (6A13021-04) Soil									
Gasoline Range Organics C6-C12	**J [5.78]**	10.0	mg/kg dry	1	EA61611	01/16/06	01/16/06	EPA 8015M	J
Diesel Range Organics >C12-C35	**1030**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**1030**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*94.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*86.2 %*	*70-130*		"	"	"	"	

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

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MPB 7 SSW B (6A13021-01) Soil									
% Moisture	**2.0**	0.1	%	1	EA61603	01/13/06	01/16/06	% calculation	
MPB 7 WSW B (6A13021-02) Soil									
% Moisture	**13.8**	0.1	%	1	EA61603	01/13/06	01/16/06	% calculation	
MPB 9 NSW B (6A13021-03) Soil									
% Moisture	**1.7**	0.1	%	1	EA61603	01/13/06	01/16/06	% calculation	
MPB 9 SSW B (6A13021-04) Soil									
% Moisture	**8.1**	0.1	%	1	EA61603	01/13/06	01/16/06	% calculation	

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 EA61611 - Solvent Extraction (GC)										
Blank (EA61611-BLK1)				Prepared & Analyzed: 01/16/06						
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	*50.6*		*mg/kg*	*50.0*		*101*	*70-130*			
Surrogate: 1-Chlorooctadecane	*46.5*		"	*50.0*		*93.0*	*70-130*			
LCS (EA61611-BS1)				Prepared & Analyzed: 01/16/06						
Gasoline Range Organics C6-C12	446	10.0	mg/kg wet	500		89.2	75-125			
Diesel Range Organics >C12-C35	530	10.0	"	500		106	75-125			
Total Hydrocarbon C6-C35	976	10.0	"	1000		97.6	75-125			
Surrogate: 1-Chlorooctane	*51.8*		*mg/kg*	*50.0*		*104*	*70-130*			
Surrogate: 1-Chlorooctadecane	*41.5*		"	*50.0*		*83.0*	*70-130*			
Calibration Check (EA61611-CCV1)				Prepared: 01/16/06 Analyzed: 01/17/06						
Gasoline Range Organics C6-C12	475		mg/kg	500		95.0	80-120			
Diesel Range Organics >C12-C35	567		"	500		113	80-120			
Total Hydrocarbon C6-C35	1040		"	1000		104	80-120			
Surrogate: 1-Chlorooctane	*58.6*		"	*50.0*		*117*	*70-130*			
Surrogate: 1-Chlorooctadecane	*47.3*		"	*50.0*		*94.6*	*70-130*			
Matrix Spike (EA61611-MS1)	**Source: 6A13021-02**			Prepared: 01/16/06 Analyzed: 01/17/06						
Gasoline Range Organics C6-C12	574	10.0	mg/kg dry	580	ND	99.0	75-125			
Diesel Range Organics >C12-C35	1420	10.0	"	580	751	115	75-125			
Total Hydrocarbon C6-C35	1990	10.0	"	1160	751	107	75-125			
Surrogate: 1-Chlorooctane	*59.9*		*mg/kg*	*50.0*		*120*	*70-130*			
Surrogate: 1-Chlorooctadecane	*48.7*		"	*50.0*		*97.4*	*70-130*			
Matrix Spike Dup (EA61611-MSD1)	**Source: 6A13021-02**			Prepared: 01/16/06 Analyzed: 01/17/06						
Gasoline Range Organics C6-C12	599	10.0	mg/kg dry	580	ND	103	75-125	4.26	20	
Diesel Range Organics >C12-C35	1420	10.0	"	580	751	115	75-125	0.00	20	
Total Hydrocarbon C6-C35	2020	10.0	"	1160	751	109	75-125	1.50	20	
Surrogate: 1-Chlorooctane	*58.8*		*mg/kg*	*50.0*		*118*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.2*		"	*50.0*		*102*	*70-130*			

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 EA61603 - General Preparation (Prep)										
Blank (EA61603-BLK1)				Prepared: 01/13/06 Analyzed: 01/16/06						
% Solids	100		%							
Duplicate (EA61603-DUP1)		**Source: 6A13003-01**		Prepared: 01/13/06 Analyzed: 01/16/06						
% Solids	97.0		%		97.3			0.309	20	
Duplicate (EA61603-DUP2)		**Source: 6A13007-06**		Prepared: 01/13/06 Analyzed: 01/16/06						
% Solids	93.1		%		93.4			0.322	20	
Duplicate (EA61603-DUP3)		**Source: 6A13009-01**		Prepared: 01/13/06 Analyzed: 01/16/06						
% Solids	97.5		%		97.8			0.307	20	
Duplicate (EA61603-DUP4)		**Source: 6A13014-01**		Prepared: 01/13/06 Analyzed: 01/16/06						
% Solids	78.0		%		79.0			1.27	20	

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: 1/20/2006

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.

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: Shawn Hokanson
Company Name: Kane Environmental
Company Address: 607 Peyton St
City/State/Zip: Colleyville, TX 76034
Telephone No: 979 229 8253
Fax No: 979 731 8554
Sampler Signature:
Email: shawnhokanson@msn.com

Project Name: Maddie Price
Project #: 04-1631
Project Loc: Hobbs, NM
PO #:

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	Preservative: HNO_3	Preservative: HCl	Preservative: NaOH	Preservative: H_2SO_4	Preservative: None	Preservative: Other (Specify)	Matrix: Water	Matrix: Sludge	Matrix: Soil	Matrix: Other (specify)	Analyze For: TCLP: TPH: 418.1 / 8015M / 1005 / 1006	Analyze For: TOTAL: 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	MPB 7 SSW "B"	1/11	805	1	X									X		X											
02	MPB 7 WSW "B"		810													X											
03	MPB 9 NSW "B"		815													X											
04	MPB 9 SSW "B"		818													X											
05	MPB 10 ESW "B"		820														X	X									
06	MPB 10 NSW "B"		825																								
07	MPB 10 WSW "B"		830																								
08	MPB 10 SSW "B"		835	↓	↓																						

Special Instructions:

FedEX#855038818657

Sample Containers Intact? Y N
Labels on container? Y N
Custody Seals: Containers / Cooler
Temperature Upon Receipt: 4.6

Laboratory Comments: 402

Relinquished by:	Date	Time	Received by:	Date	Time
	1/12/06	0900	Fed Ex		
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
Fed Ex	1/13/06	3:45	Cerin Kelly	1/13/06	3:45

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

Client: Kane Env.

Date/Time: 1/13/16 3:45

Order #: 6A13021

Initials: CK

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	
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:

Shawn Hokanson

Kane Environmental- College Station

607 Peyton Street

College Station, TEXAS 77840

Project: Mattie Price

Project Number: 04-631

Location: Hobbs, NM

Lab Order Number: 6A20019

Report Date: 01/23/06

Kane Environmental- College Station	Project: Mattie Price	Fax: (979) 693-3231
607 Peyton Street	Project Number: 04-631	**Reported:**
College Station TEXAS, 77840	Project Manager: Shawn Hokanson	01/23/06 15:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	6A20019-01	Water	01/20/06 09:05	01/20/06 16:05
MW-2	6A20019-02	Water	01/20/06 09:10	01/20/06 16:05
MW-3	6A20019-03	Water	01/20/06 09:14	01/20/06 16:05

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

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (6A20019-01) Water									
Benzene	ND	0.00100	mg/L	1	EA62304	01/23/06	01/23/06	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*95.5 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*83.8 %*	*80-120*		"	"	"	"	
MW-2 (6A20019-02) Water									
Benzene	ND	0.00100	mg/L	1	EA62304	01/23/06	01/23/06	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*92.0 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*86.5 %*	*80-120*		"	"	"	"	
MW-3 (6A20019-03) Water									
Benzene	ND	0.00100	mg/L	1	EA62304	01/23/06	01/23/06	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*92.5 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*80.0 %*	*80-120*		"	"	"	"	

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

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (6A20019-01) Water									
Chloride	**25.1**	2.50	mg/kg	5	EA62303	01/21/06	01/23/06	EPA 300.0	
MW-2 (6A20019-02) Water									
Chloride	**45.1**	5.00	mg/kg	10	EA62303	01/21/06	01/23/06	EPA 300.0	
MW-3 (6A20019-03) Water									
Chloride	**188**	5.00	mg/kg	10	EA62303	01/21/06	01/23/06	EPA 300.0	

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 EA62304 - EPA 5030C (GC)										
Blank (EA62304-BLK1)				Prepared & Analyzed: 01/23/06						
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	*37.5*		*ug/l*	*40.0*		*93.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*32.6*		"	*40.0*		*81.5*	*80-120*			
LCS (EA62304-BS1)				Prepared & Analyzed: 01/23/06						
Benzene	0.0461	0.00100	mg/L	0.0500		92.2	80-120			
Toluene	0.0462	0.00100	"	0.0500		92.4	80-120			
Ethylbenzene	0.0427	0.00100	"	0.0500		85.4	80-120			
Xylene (p/m)	0.0846	0.00100	"	0.100		84.6	80-120			
Xylene (o)	0.0451	0.00100	"	0.0500		90.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	*38.5*		*ug/l*	*40.0*		*96.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*37.9*		"	*40.0*		*94.8*	*80-120*			
Calibration Check (EA62304-CCV1)				Prepared & Analyzed: 01/23/06						
Benzene	44.4		ug/l	50.0		88.8	80-120			
Toluene	45.2		"	50.0		90.4	80-120			
Ethylbenzene	42.5		"	50.0		85.0	80-120			
Xylene (p/m)	83.1		"	100		83.1	80-120			
Xylene (o)	44.5		"	50.0		89.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	*35.8*		"	*40.0*		*89.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*35.5*		"	*40.0*		*88.8*	*80-120*			
Matrix Spike (EA62304-MS1)	**Source: 6A20019-01**			Prepared & Analyzed: 01/23/06						
Benzene	0.0455	0.00100	mg/L	0.0500	ND	91.0	80-120			
Toluene	0.0452	0.00100	"	0.0500	ND	90.4	80-120			
Ethylbenzene	0.0417	0.00100	"	0.0500	ND	83.4	80-120			
Xylene (p/m)	0.0829	0.00100	"	0.100	ND	82.9	80-120			
Xylene (o)	0.0445	0.00100	"	0.0500	ND	89.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	*38.2*		*ug/l*	*40.0*		*95.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*36.2*		"	*40.0*		*90.5*	*80-120*			

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 EA62304 - EPA 5030C (GC)										
Matrix Spike Dup (EA62304-MSD1)	**Source: 6A20019-01**			Prepared & Analyzed: 01/23/06						
Benzene	0.0427	0.00100	mg/L	0.0500	ND	85.4	80-120	6.35	20	
Toluene	0.0428	0.00100	"	0.0500	ND	85.6	80-120	5.45	20	
Ethylbenzene	0.0404	0.00100	"	0.0500	ND	80.8	80-120	3.17	20	
Xylene (p/m)	0.0802	0.00100	"	0.100	ND	80.2	80-120	3.31	20	
Xylene (o)	0.0427	0.00100	"	0.0500	ND	85.4	80-120	4.13	20	
Surrogate: a,a,a-Trifluorotoluene	*37.2*		*ug/l*	*40.0*		*93.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*35.4*		*"*	*40.0*		*88.5*	*80-120*			

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 EA62303 - General Preparation (WetChem)										
Blank (EA62303-BLK1)				Prepared: 01/21/04 Analyzed: 01/23/06						
Chloride	ND	0.500	mg/kg							
LCS (EA62303-BS1)				Prepared: 01/21/04 Analyzed: 01/23/06						
Chloride	8.54		mg/L	10.0		85.4	80-120			
Calibration Check (EA62303-CCV1)				Prepared: 01/21/04 Analyzed: 01/23/06						
Chloride	9.04		mg/L	10.0		90.4	80-120			
Duplicate (EA62303-DUP1)		**Source: 6A20019-01**		Prepared: 01/21/04 Analyzed: 01/23/06						
Chloride	24.5	2.50	mg/kg		25.1			2.42	20	

Notes and Definitions

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: 1/23/2006

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.

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: Shawn Hokanson
Company Name: Bare
Company Address: 607 Royston St
City/State/Zip: College Station TX 77840
Telephone No: 979-229-8253 Fax No: 979 693 3231
Sampler Signature:
Email: shawn@hokanson.nmsu.com

Project Name: Mattie Price
Project #: 04-631
Project Loc: Hobbs, NM
PO #: 04-631

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 8015M 1005 1006	TOTAL: 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
QA2009																												
-01	MW1	1/20/06	905	3	X		X					X							X					X			X	
-02	MW2	1/20/06	910	3	X		X					X							X					X			X	
-03	MW3	1/20/06	914	3	X		X					X							X					X			X	

Special Instructions: Cl only for anions
Drinking water DL on BTEX

Sample Containers Intact? Y N
Labels on container? Y N
Custody Seals: ~~Containers~~ / Cooler
Temperature Upon Receipt: 4.0

Laboratory Comments:
2-VOA
1-500mL-poly

Relinquished by:	Date	Time	Received by:	Date	Time
	1/20/06	1605			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Cerrin Kelly	1/20/06	16:05

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

Client: Kane

Date/Time: 1/20/00 16:05

Order #: 6A20019

Initials: CR

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:

J & L LANDFARM, INC.

P.O. BOX 356
HOBBS, NEW MEXICO 88241-0356
PHONE (505) 392-9697 • PERMIT # NM-01-0023

0541

Generator/Company OSBORN HEIRS CO

Authorized Representative ROGER GRAVES

Originating Site MATTIE PRICE TANK BATTERY 'A'

Transporter ROAD RUNNER TRUCKING

Authorized Representative [signature]

Brief Description of Material NON-HAZ SOIL

Estimated Volume 332 YARDS

TPH SEE TEST

BE-TEX SEE TEST

CERTIFICATE OF CHEMICAL ANALYSIS (if required) N/A

Lee M. Roberts
FACILITY AUTHORIZED REPRESENTATIVE

JAN. 10, 11, 2006
DATE

B-3186

Certificate of Waste Status

NMOCD 711 FACILITY: J&L LANDFARM, INC.

GENERATOR OSBORN HEIRS CO.

GENERATING SITE MATTIE PRICE (TANK BATTERY) 'A'

SEC 6 TOWNSHIP 17S RANGE 38E

COUNTY LEA STATE N. MEX

WASTE DESCRIPTION NON-HAZ-SOIL WASTE QTY. 332 YARDS

TRUCKING COMPANY ROAD RUNNER TRUCKING

EXEMPT WASTE ✓

As a condition of acceptance for disposal, I hereby certify that this waste is an exempt waste as defined by the EPA(Environmental Protection Agency). Waste is generated from oil and gas exploration and production operations; exempt from RCRA(Resource Conservation and Recovery Act, Subtitle C regulations. I do certify that hazardous or listed waste pursuant to EPA provisions has not been added or mixed with the waste, nor mixed with any non-exempt material.

NON-EXEMPT WASTE _____

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the EPA's (Environmental Protection Agency) July 1988 Regulatory determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 2613.

I certify that this waste has been surveyed for Naturally Occurring Radioactive Material(NORM) and NORM concentrations do not exceed that listed in 20 NMAC 3.1 Subpart 1402. C and D.

COMPANY AGENT Roger Stamps
(Original Signature)

(Name)

ADDRESS P.O. BOX 17968 SAN ANTONIO TEX. 78286

DATE JAN. 10 2006

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Osborn Heirs Company Work Phone: 979-229-8253
Contact: Shawn Hokanson P.G. Home Phone: _____
Address: 1250 NE Loop 410 Ste 1100
City: San Antonio, TX State: TX Zip: 78209

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. NE 1/4 NE 1/4 NE 1/4 Section: 6 Township: 17S Range: 38E N.M.P.M.
in Lea County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 52 m 3.4 s Longitude: 103 d 10 m 45.4 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: _____

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): _____

3. DRILLING CONTRACTOR

License Number: WD-1488
Name: Groundwater Monitoring Inc Work Phone: 972-986-7003
Agent: Roddy Evalls Home Phone: _____
Mailing Address: P.O. Box 531461
City: Grand Prairie, TX State: TX Zip: 75053

4. DRILLING RECORD

Drilling began: 1/17/06; Completed: 1/20/06; Type tools: Air;
Size of hole: 5 in.; Total depth of well: 86' ft.;
Completed well is: Monitor well (shallow, artesian);
Depth to water upon completion of well: _____ ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2	PVC	4	0	86		PVC Cap	86	66

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
63	2	5	12	8.5	Gravity Feed
2	0	5	1	1	Gravity Feed

8. PLUGGING RECORD

Plugging Contractor: _____

Address: _____

Plugging Method: _____

Date Well Plugged: _____

Plugging approved by: _____

State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1			
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered
0	4	4	Black Silty Clay
4	10	6	Light Brown to Dark Brown Soft Caliche
10	13	3	Light Tan Med hard Caliche
13	24	11	Light Tan Hard Caliche
24	46	22	Medium Brown fine Sand
46	70	24	Light Brown fine Sand
70	86	16	Med Brown Sand Slightly Clayey Med wet

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The well numbers for these two wells are MW-1 & 2

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Jon Storm
Driller

2/3/06
(mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad _____; FWL _____; FSL _____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Osborn Heirs Company Work Phone: 972-279-8253
Contact: Shawn HoKanson P.G. Home Phone: _____
Address: 1250 NE Loop 410 Ste. 1100
City: San Antonio, TX State: TX Zip: 78209

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. NE 1/4 NE 1/4 NE 1/4 Section: 6 Township: 17S Range: 38E N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 52 m 3.4 s Longitude: 103 d 10 m 45.4 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: _____

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): _____

3. DRILLING CONTRACTOR

License Number: WD-1488
Name: Groundwater Monitoring Inc. Work Phone: 972-986-7003
Agent: Roddy Qualls Home Phone: _____
Mailing Address: P.O. Box 531461
City: Grand Prairie, TX State: TX Zip: 75053

4. DRILLING RECORD

Drilling began: 11/17/06 ; Completed: 11/20/06 ; Type tools: Air ;
Size of hole: 5 in.; Total depth of well: 91 ft.;
Completed well is: Monitor Well (shallow, artesian);
Depth to water upon completion of well: _____ ft.

File Number: _____ Trn Number: _____
Form: wr-20 page 1 of 4

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2"	PVC	4	0	91		PVC Cap	91	66

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
63	2	5	12	8.5	Gravity Feed
2	0	5	1	1	Gravity Feed

8. PLUGGING RECORD

Plugging Contractor: _____

Address: _____

Plugging Method: _____

Date Well Plugged: _____

Plugging approved by: _____

State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1			
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered
0	4	4'	Black Silty Clay
4	10'	6	Light Brown To Lt Brown Soft Caliche
10	13'	3	Lt. Tan Med. hard Caliche
13	24	11	Lt. Tan Hard Caliche
24	46	22	Medium Brown Fine Sand
46	70	24	Lt. Brown Fine Sand
70	86	21	Med Brown Sand Slightly Clayey Med Wet

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The well number is MW #3

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Jon Stamm
Driller

2/3/06
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Osborn Heirs Company Work Phone: 972-239-8853
Contact: Shawn Hokanson P.G. Home Phone: _____
Address: 1250 NE Loop 410 Ste 1100
City: San Antonio State: TX Zip: 78209

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. NE 1/4 NE 1/4 NE 1/4 Section: 6 Township: 17S Range: 38E N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 52 m 31.4 s Longitude: 103 d 10 m 45.4 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: _____

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): _____

3. DRILLING CONTRACTOR

License Number: WD-1488
Name: Groundwater Monitoring Inc. Work Phone: 972 986-7003
Agent: Roddy Orvalls Home Phone: _____
Mailing Address: P.O. Box 531421
City: Grand Prairie, State: TX Zip: 75053

4. DRILLING RECORD

Drilling began: 1/17/06 ; Completed: 1/20/06 ; Type tools: Air ;
Size of hole: 5 in.; Total depth of well: 25 ft.;
Completed well is: Monitor Well (shallow, artesian);
Depth to water upon completion of well: _____ ft.

File Number: _____ Trn Number: _____
Form: wr-20 page 1 of 4

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2"	PVC	4	0	25		PVC Cap	25	10

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
8	1	5"	2	1/2	Gravity Feed

8. PLUGGING RECORD

Plugging Contractor: _____
Address: _____
Plugging Method: _____
Date Well Plugged: _____

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1			
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered
0	4'	4'	Black Silty Clay
4	10	6'	Lt. Brown to Pk Tan Soft Caliche
10	13	3'	Lt. Tan med hard Caliche
13	25	12	Lt Tan hard Caliche

File Number: _____ Trn Number: _____

Form: wr-20 page 3 of 4

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

This is For SVE 1 thru 11
11 wells

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Jon Sloan
Driller

2/6/06
(mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad _____; FWL _____; FSL _____; Use _____; Location No. _____

File Number: _____ Trn Number: _____

Form: wr-20 page 4 of 4

File Number: _____

Osborn Heirs Company

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Osborn Heirs Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: 1250 NE Loop 410 - Suite 1100
San Antonio
City: San Antonio State: TX Zip: 78209

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in Lea County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32.52.03.1059 _____d ____m _____s Longitude: 103.10.44.6413 _____d ____m _____s NAD27 NME

D. East _____ (m), North _____ (m), UTM Zone 13, NAD 27 (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: _____

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Osborn Heirs Company

3. DRILLING CONTRACTOR

License Number: _____
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD

Drilling began: _____; Completed: _____; Type tools: _____;
Size of hole: _____ in.; Total depth of well: _____ ft.;
Completed well is: _____ (shallow, artesian);
Depth to water upon completion of well: _____ ft.

File Number: _____

Osborn Heirs Company

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: Alan G. Eades - Eades Drilling & Pump Service WD1044
Address: 1200 E. Bender Blvd., Hobbs, NM 88240
Plugging Method: Bentonite plug from td to 12'bgs, cement plug from 12
Date Well Plugged: February 8, 2006 surface

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0	91	3
2			
3			
4			
5			

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

Osborn Heirs Company

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Allan Eades 02-11-06

Driller (mm/dd/year)

Andrew Eades

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

Osborn Heirs Company

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Osborn Heirs Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: 1250 NE Loop 410 - Suite 1100
_____
City: San Antonio State: TX Zip: 78209

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in Lea County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32.52.03.0252 Longitude: 103.10.46.2795 NAD27 NME
_____d ____m _____s _____d ____m _____s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD 27 (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: _____

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Osborn Heirs Company

3. DRILLING CONTRACTOR

License Number: _____
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD

Drilling began: _____; Completed: _____; Type tools: _____;
Size of hole: _____ in.; Total depth of well: _____ ft.;
Completed well is: _____ (shallow, artesian);
Depth to water upon completion of well: _____ ft.

File Number: _____

Osborn Heirs Company

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: Alan G. Eades - Eades Drilling & Pump Service WD1044

Address: 1200 E. Bender Blvd., Hobbs, NM 88240

Plugging Method: Bentonite plug from td to 12'bgs, cement plug from 12' surface

Date Well Plugged: February 8, 2006

Plugging approved by: _____

State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0	86	3
2			
3			
4			
5			

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

Osborn Heirs Company

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Allan Eades by Andrea Eades
Driller

02-11-06
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

Osborn Heirs Company

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Osborn Heirs Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: 1250 NE Loop 410 - Suite 1100
San Antonio
City: San Antonio State: TX Zip: 78209

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in Lea County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32.52.03.8839 ____d ____m ____s Longitude: 103.10.45.4196 ____d ____m ____s NAD27 NME

D. East _____ (m), North _____ (m), UTM Zone 13, NAD 27 (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: _____

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Osborn Heirs Company

3. DRILLING CONTRACTOR

License Number: _____
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD

Drilling began: _____; Completed: _____; Type tools: _____;
Size of hole: _____ in.; Total depth of well: _____ ft.;
Completed well is: _____ (shallow, artesian);
Depth to water upon completion of well: _____ ft.

File Number: _____

Osborn Heirs Company

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: Alan G. Eades - Eades Drilling & Pump Service WD1044

Address: 1200 E. Bender Blvd., Hobbs, NM 88240

Plugging Method: Bentonite plug from td to 12'bgs, cement plug from 12 surface

Date Well Plugged: February 8, 2006

Plugging approved by: _____

State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0	87	3
2			
3			
4			
5			

Osborn Heirs Company

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

Osborn Heirs Company

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Alan Eades by Andrea Eades
Driller

02-11-06
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

Calibration Certificate

CERTIFICATE NUMBER: **15360**

ASSET NUMBER:	**R2128**
ASSET DESCRIPTION:	**THERMO ENV 580B**
MANUFACTURER:	**THERMO**
SERIAL NUMBER:	**29065-233**
CALIBRATION DATE:	**06 Jan 2006**
CALIBRATION DUE:	**Refer to manufacturers instructions.**
CALIBRATION PROCEDURE:	**4.155 Hazardous Waste Investigation**
ACCURACY OF UNIT:	**Manufacturers Specifications**
WORKSHOP TEMPERATURE:	**22 *Degrees C***
HUMIDITY:	**48 %**
CALIBRATION ENGINEER:	**EDGAR HERNANDEZ**
RESULTS FORM:	**Ref Workshop Manual**

Measurement Equipment	**Calibration Reference**
100 PPM ISOBUTYLENE	10372000

The measurement equipment used during the calibration procedure is traceable to National Standards.
Details on any limitations to the use of the equipment:

Calibration Engineer: _____

EDGAR HERNANDEZ