

District 1
1000 Rio Brazos Rd.
Aztec, NM 87410

Denny S. Faust
DEPUTY OIL & GAS INSPECTOR

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit 1 copy to
Appropriate District
and 1 copy to
Santa Fe Office

APR 10 1998

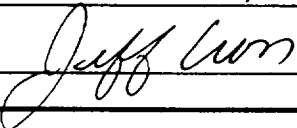
OIL CONSERVATION DIVISION
2040 S. PACHECO
Santa Fe, New Mexico 87505

PIT REMEDIATION AND CLOSURE REPORT

Approved

Operator: <u>Apache Corporation</u>		Telephone: <u>505-325-0318</u>	
Address: <u>2855 Southside River Road, Suite A, Farmington, NM 87401</u>			
Facility or Well Name:		<u>Apache # 144</u>	
Location: Unit or Qtr/Qtr Sec	<u>O</u>	<u>Sec 13</u>	<u>T 24 N R 4W</u> County <u>Rio Arriba</u>
Pit Type: Separator:	<u>Dehydrator</u>	Other	<u>Blow Pit</u>
Land Type:	<u>Jicarilla Tribal</u>		
Beginning Dimensions:			
Pit Location: <u>END</u>	Pit Dimensions:	Length <u>24'</u>	Width <u>21'</u> Depth <u>10'</u>
(Attach diagram)	Reference:	Wellhead <u>X</u>	Other <u> </u>
	Footage from reference:	<u>100'</u>	
	Direction from reference:	<u>155</u> Degrees	<u>X</u> East North West of South <u>X</u>
Depth To Groundwater: (vertical distance from contaminants to seasonal high water elevation of groundwater)		Less than 50 feet (20 points)	<u> </u>
		50 feet to 99 feet (10 points)	<u> </u>
		Greater than 100 feet (0 points)	<u>0</u>
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)		Yes (20 points)	<u> </u>
		No (0 points)	<u>0</u>
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)		Less than 200 feet (20 points)	<u> </u>
		200 feet to 1000 feet (10 points)	<u> </u>
		Greater than 1000 feet (0 points)	<u>0</u>
		RANKING SCORE (TOTAL POINTS) <u>0</u>	

RECEIVED
DEC 10 1997
OIL CON. DIV.
DIST. 3

Date Remediation Started:		<u>9/8/94</u>	Date Completed:		<u>6/24/97</u>
Remediation Method: (Check all appropriate sections)		Excavatio <u>XXX</u>	Approx. cubic yards	<u>138</u>	
		Landfarmed <u>XX</u>	Insitu Bioremediation		
		Other _____			
Remediation Location: (i.e. landfarmed onsite, name and location of offsite facility)		Onsite <u>XX</u>	Offsite		
General Description of Remedial Action:		<u>Excavate pit to 10', took PID readings.</u>			
		<u>Spread soil on location for remediation. Took soil samples.</u>			
Groundwater Encountered:		No <u>X</u>	Yes _____	Depth _____	
Final Pit:	Sample location	<u>5 point composite taken from pit sidewalls and pit bottom center</u>			
Closure Sampling: (in multiple samples, attach sample results and diagram of sample locations and depths)	Sample depth	<u>8 to 10" into pit sidewalls 10" into pit bottom</u>			
	Sample Date	<u>9/15/97</u>	Sample Time	<u>5:00 P.M.</u>	
	Sample results				
	Benzene	(ppm)	<u>ND</u>		
	Total BTEX	(ppm)	<u>ND</u>		
	Field Headspace	(ppm)	<u>7.9</u>		
	TPH		<u>140</u>		
Groundwater Sample:		Yes _____	No <u>X</u>	(If yes attach sample results)	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.					
DATE		<u>November 5, 1997</u>	PRINTED NAME		<u>Jeff Cross</u>
SIGNATURE			AND TITLE		<u>Project Manager</u>

JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
P. O. BOX 507
DULCE, NEW MEXICO 87528

Submit 1 copy to
Natural Resource Dept.
and Oil & Gas Administration

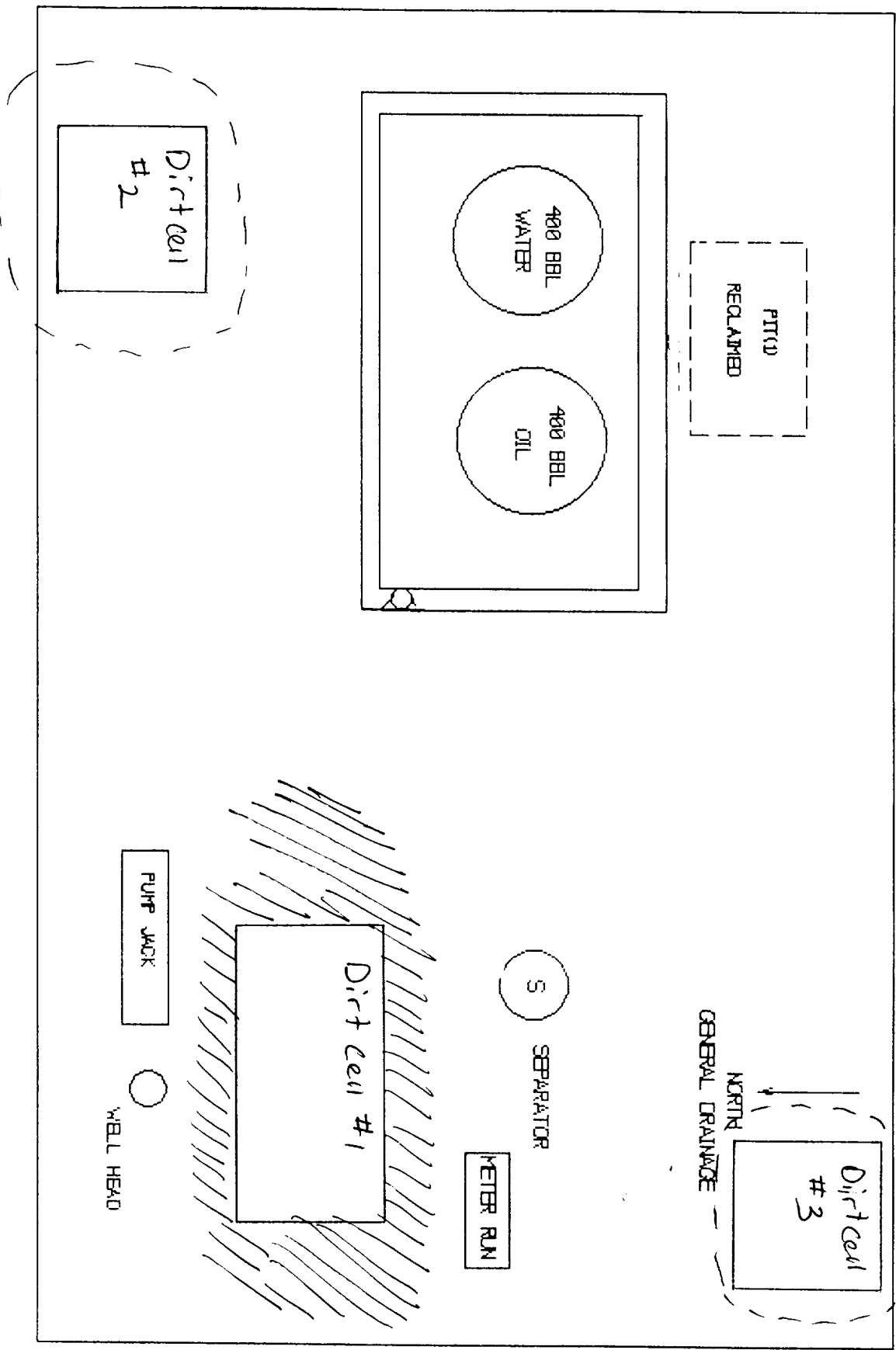
PIT REMEDIATION AND CLOSURE REPORT

Operator: <u>APACHE CORPORATION</u>		Telephone <u>505-325-0318</u>	
Address: <u>304 N. BEHREND, FARMINGTON, N.M. 84701</u>			
Facility or Well Name: <u>APACHE # 144</u>			
Location:	Unit or Qtr/Qtr	Sec <u>O</u>	SEC 13 T 24N R 4W County <u>RIO ARRIBA</u>
Pit Type:	Separator: <u> </u>	Dehydrator <u> </u>	Other <u>BLOW PIT</u>
Land Type: <u>JIC. TRIBAL</u>			
Pit Location: (Attach diagram) Pit Dimensions: Length <u>24'</u> Width <u>21'</u> Depth <u>10'</u> Reference: Wellhead <u>XXX</u> Other <u> </u> Footage from reference: <u>100'</u> Direction from reference: <u>155</u> Degrees <u>X</u> East of North <u> </u> West of South <u>XX</u>			
Depth To Groundwater: (vertical distance from contaminants to seasonal high water elevation of groundwater)		Less than 50 feet 50 feet to 99 feet Greater than 100 feet	(20 points) <u> </u> (10 points) <u> </u> (0 points) <u>0</u>
Distance to an Ephemeral Stream: (Downgradient dry wash greater than ten feet in width)		Less than 100 feet Greater than 100 feet	(10 points) <u> </u> (0 points) <u>0</u>
Distance to Nearest Lake, Playa, or Watering Pond: (Downgradient lakes, playas and livestock or wildlife watering ponds)		Less than 100 feet Greater than 100 feet	(10 points) <u> </u> (0 points) <u>0</u>
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources)		Yes No	(20 points) <u> </u> (0 points) <u>0</u>
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)		Less than 100 feet 100 feet to 1000 feet Greater than 1000 feet	(20 points) <u> </u> (10 points) <u> </u> (0 points) <u>0</u>
		RANKING SCORE (TOTAL POINTS) <u>0</u>	

Date Remediation Started:		<u>9/8/94</u>		Date Completed:		<u>6/24/97</u>	
Remediation Method: (Check all appropriate sections)		Excavation <u>XXX</u>		Approx. cubic yards		<u>138</u>	
		Landfarmed <u>XX</u>		Insitu Bioremediation			
		Other					
Remediation Location: (i.e. landfarmed onsite, name and location of offsite facility)		Onsite <u>XX</u>		Offsite			
General Description of Remedial Action: <u>Excavate pit to 10',took PID readings. spread soil on</u> <u>location for remediation. Took soil samples.</u>							
Groundwater Encountered:		No <u>XXX</u>		Yes		Depth	
Final Pit:		Sample location <u>5 point composite taken from pit sidewalls and pit bottom center.</u>					
Closure Sampling: (in multiple samples, attach sample results and diagram of sample locations and depths)		Sample depth <u>8" to 10" into pit side walls ,10" into pit bottom.</u>					
Sample Date		<u>9/15/95</u>		Sample Time		<u>5:00PM</u>	
Sample results							
Soil:	Benzene	(ppm)	<u>ND</u>	Water:	Benzene	(ppb)	<u>NA</u>
	Total BTEX	(ppm)	<u>ND</u>		Toluene	(ppb)	<u>NA</u>
	Field Headspace	(ppm)	<u>7.9</u>		Ethylbenzene	(ppb)	<u>NA</u>
	TPH	(ppm)	<u>140</u>		Total Xylenes	(ppb)	<u>NA</u>
Groundwater Sample:		Yes		No <u>XXX</u>		(If yes attach sample results)	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.							
DATE		<u>7/25/97</u>		PRINTED NAME		<u>JEFF CROSS</u>	
SIGNATURE		<u>Jeff Cross</u>		AND TITLE		<u>PROJECT MANAGER</u>	
AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.							
APPROVED:		YES <u>X</u>		NO		(REASON)	
SIGNED:		<u>Kevin C. Marshall</u>		DATE:		<u>9-2-97</u>	

SEE 0 AREA
 1/1/1/1 = spread AREA

APACHE
 APACHE NUMBER 144 Lease # JAT 129
 SW/4 SE/4 (0)
 SECTION 13, TOWNSHIP 24N, RANGE 4W
 RIO ARriba COUNTY, NM
 Revised 6/1/97 MC



APACHE CORPORATION FARMINGTON DISTRICT PIT EXCAVATION AND CLOSURE REPORT

JICARILLA APACHE TRIBAL EPO
REVIEW AND APPROVAL

EPO REPRESENTATIVE K.C.M.
DATE OF REVIEW: 11/29/95

LOCATION: APACHE 144
PIT COUNT: 1

DIMENSIONS		EXCAVATION							
		START		FINISH					
	W'	L'	D'		W'	L'	D'	CU.YDS.	
PIT 1	18'	18'	4'	PIT 1	21'	24'	10'	138.0	
PIT 2				PIT 2					
PIT 3				PIT 3					
DATE: 09/08/94		PIT 1@ 07'	PIT 2@	PIT 3@	DATE: 09/15/95		PIT 1@ 10'	PIT 2@	PIT 3@
P. I. D.	CENTER	151.0			P. I. D.	CENTER	7.9		
	NW CORNER	composite				NW CORNER	composite		
	NE CORNER					NE CORNER			
	SW CORNER					SW CORNER			
	SE CORNER					SE CORNER			

NOTES:

09/08/94 Excavate to 10', staining to 7' w/strong odor @ 5'.

SOIL SAMPLING

DATE: 09/08/94		PIT 1@ 07'	PIT 2@	PIT 3@	ANALYSIS RESULTS			PER LAB: ON SITE TECH.	
P. I. D.	CENTER	151.0			PIT NO.	TPH	BTEX	WITNESS	DATE
	NW CORNER	composite			1	812.5	43.48	DG	09/08/94
	NE CORNER								
	SW CORNER								
	SE CORNER								

RE-SAMPLE OR CELL(S) SAMPLE

DATE: 09/15/95		PIT 1@ 10'	PIT 2@	PIT 3@	ANALYSIS RESULTS			PER LAB: ASSAIGAI	
P. I. D.	CENTER	7.9			PIT NO.	TPH	BTEX	WITNESS	DATE
	NW CORNER	composite			1	140.0	ND	JDT	09/15/95
	NE CORNER								
	SW CORNER								
	SE CORNER								

RE-SAMPLE OR CELL(S) SAMPLE

DATE:		PIT 1@	PIT 2@	PIT 3@	ANALYSIS RESULTS			PER LAB:	
P. I. D.	CENTER				PIT NO.	TPH	BTEX	WITNESS	DATE
	NW CORNER								
	NE CORNER								
	SW CORNER								
	SE CORNER								

Apache 144

PR Size: 21'x24'x10'

Condition: O.P.E.D.

11-29-95
Kane

TPH	<u>5000</u> ppm
BTEX	<u>50</u> ppm
Benzene	<u>10</u> ppm

✓ Vulnerable ✓ Non-Vulnerable

[illegible]

Remarks 9-8-94- Samples to 146 @ 7' - Sides of pit saving in - Backhoe operator feels it is unsafe to dig any deeper.

LAB Doc.: On Site Tech. Sample ID 2989/2990 J6E2-091 9/13/94

Psy. & Analytical sub # 9509143 IO# - 21A/21B

Lab ID: 9509143-20B
Sample ID: AP# 111

Collected: 09/15/95 16:40:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
HCs DIESEL/CAL DHS 8015M Diesel	3700	mg/Kg	5.0	100	09/26/95	SLFTD45
HCs DSL XT/CAL DHS 8015M	09/20/95	N/A				

Lab ID: 9509143-21A
Sample ID: AP# 144

Collected: 09/15/95 17:00:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/Kg	0.0010	5.0	09/25/95	SBTXME077
Toluene	ND	mg/Kg	0.0010	5.0	09/25/95	SBTXME077
Ethylbenzene	ND	mg/Kg	0.0010	5.0	09/25/95	SBTXME077
P-&m-Xylene	ND	mg/Kg	0.0010	5.0	09/25/95	SBTXME077
O-Xylene	ND	mg/Kg	0.0010	5.0	09/25/95	SBTXME077

Lab ID: 9509143-21B
Sample ID: AP# 144

Collected: 09/15/95 17:00:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
HCs DIESEL/CAL DHS 8015M Diesel	140	mg/Kg	5.0	10	09/26/95	SLFTD45
HCs DSL XT/CAL DHS 8015M	09/20/95	N/A				

Lab ID: 9509143-22A
Sample ID: AP# 127

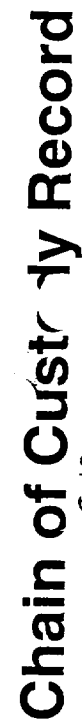
Collected: 09/15/95 17:12:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/Kg	0.0010	250	09/25/95	SBTXME077
Toluene	ND	mg/Kg	0.0010	250	09/25/95	SBTXME077
Ethylbenzene	ND	mg/Kg	0.0010	250	09/25/95	SBTXME077
P-&m-Xylene	1.4	mg/Kg	0.0010	250	09/25/95	SBTXME077
O-Xylene	0.53	mg/Kg	0.0010	250	09/25/95	SBTXME077

Lab ID: 9509143-22B
Sample ID: AP# 127

Collected: 09/15/95 17:12:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
HCs DIESEL/CAL DHS 8015M Diesel	200	mg/Kg	5.0	5.0	09/25/95	SLFTD45
HCs DSL XT/CAL DHS 8015M	09/20/95	N/A				



CIUDAD JUAREZ, CHIHUAHUA MEXICO 32320

COURIER

OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: **Mark McCool**
Company: **Apache Corporation**
Address: **304 N. Behrend**
City, State: **Farmington, NM 87401**

Date: **3/3/95**
Lab ID: **2691**
Sample ID: **5351**
Job No. **2-1091**

Project Name: **Apache Corporation**
Project Location: **AP 144**
Sampled by: **NR** Date: **NR**
Analyzed by: **DLA** Date: **3/3/95**
Sample Matrix: **Soil**

Time: **NR**

Total Petroleum Hydrocarbons

Component	**Measured Concentration mg/Kg
<i>Gasoline Range (C5 - C9)</i>	<i>ND</i>
<i>Diesel Range (C10 - C28)</i>	<i>164</i>
TOTAL	164

ND - Not Detectable

** - Method Detection Limit, 0.5 mg/Kg

Quality Assurance Report

Method Blank

Analytes in Blank	Amount
<i>Average Amount of All Analytes In Blank</i>	<i><0.5ppm</i>

Calibration Check

Calibration Standards	Units of Measure	*True Value	Analyzed Value	% Diff	Limit
<i>Gasoline Range</i>	ppm	625	637	1.9	15%
<i>Diesel Range</i>	ppm	2,500	2,526	1.0	15%

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by: 
Date: **3/3/95**

P. O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-8786



LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn: *Mark McCool*
Company: *Apache Corporation*
Address: *304 N. Behrend*
City, State: *Farmington, NM 87401*

Date: *3/3/95*
COC No. *2691*
Sample ID: *5351*
Job No. *2-1091*

Project Name: *Apache Corporation*
Project Location: *AP 144*
Sampled by: *NR* Date: *NR*
Analyzed by: *DLA* Date: *3/3/95*
Sample Matrix: *Soil*

Time: *NR*

Aromatic Volatile Organics

Component	Measured Concentration mg/kg	Detection Limit Concentration mg/kg
<i>Benzene</i>	<i>ND</i>	<i>0.0002</i>
<i>Toluene</i>	<i>ND</i>	<i>0.0002</i>
<i>Ethylbenzene</i>	<i>ND</i>	<i>0.0002</i>
<i>m,p-Xylene</i>	<i>ND</i>	<i>0.0002</i>
<i>o-Xylene</i>	<i>ND</i>	<i>0.0002</i>
<i>TOTAL 0.0 mg/kg</i>		

ND - Not Detectable

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: *Daly*
Date: *3/3/95*

OFF: (505) 325-8786



LAB: (505) 325-5667

QUALITY ASSURANCE REPORT
for EPA Method 8020

Date Analyzed: 3/3/95

Internal QC No.: 0222-STD

Surrogate QC No.: 0223-STD

Reference Standard QC No.: 0355-STD

Method Blank

Analytes in Blank	Amount
Average Amount of All Analytes In Blank	<0.1 ppb

Calibration Check

Calibration Standards	Units of Measure	*True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20	20	2	15%
Toluene	ppb	20	20	2	15%
Ethylbenzene	ppb	20	18	8	15%
m,p-Xylene	ppb	40	38	4	15%
o-Xylene	ppb	20	18	9	15%

Spike Results

Analyte	1 - Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	101	103	(39-150)	1	20%
Toluene	96	98	(46-148)	1	20%
Ethylbenzene	96	99	(32-160)	2	20%
m,p-Xylene	99	102	(35-145)	2	20%
o-Xylene	95	98	(35-145)	2	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered	S3 Percent Recovered
Limits	(70-130)		
5349-2691	100		

S1: Fluorobenzene

**ON SITE
TECHNOLOGIES, LTD.**
TOTAL PETROLEUM HYDROCARBONS

Attn: *Mark McCool*
Company: *Apache Corporation*
Address: *304 N. Behrend*
City, State: *Farmington, NM 87401*

Date: *9/13/94*
Lab ID: *2081*
Sample ID: *2986*
Job No. *2-1091*

Project Name: *Apache Corporation / Pit Assessment Samples*
Project Location: *Apache 144 @ 3'*
Sampled by: *RF* Date: *9/9/94*
Analyzed by: *DLA* Date: *9/13/94*
Sample Matrix: *Soil*

Time: *14:30*

Total Petroleum Hydrocarbons

Component	**Measured Concentration mg/Kg
Gasoline Range (C5 - C9)	582
Diesel Range (C10 - C28)	2,038
TOTAL	2,620

ND - Not Detectable

** - Method Detection Limit, 0.5 mg/Kg

Quality Assurance Report

Method Blank

Analytes in Blank	Amount
Average Amount of All Analytes in Blank	<0.5ppm

Calibration Check

Calibration Standards	Units of Measure	*True Value	Analyzed Value	% Diff	Limit
Gasoline Range	ppm	563	522	7.2	15%
Diesel Range	ppm	1,250	1,178	5.7	15%

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile
Hydrocarbons by Gas Chromatography

Approved by: *[Signature]*
Date: *9/13/94*

**ON SITE
TECHNOLOGIES, LTD.**
TOTAL PETROLEUM HYDROCARBONS

Attn: *Mark McCool*
Company: *Apache Corporation*
Address: *304 N. Behrend*
City, State: *Farmington, NM 87401*

Date: *9/13/94*
Lab ID: *2081*
Sample ID: *2987*
Job No. *2-1091*

Project Name: *Apache Corporation / Pit Assessment Samples*
Project Location: *Apache 144 @ 4'*
Sampled by: *RF* Date: *9/9/94* Time: *14:30*
Analyzed by: *DLA* Date: *9/13/94*
Sample Matrix: *Soil*

Total Petroleum Hydrocarbons

Component	**Measured Concentration mg/Kg
Gasoline Range (C5 - C9)	634
Diesel Range (C10 - C28)	3,109
	TOTAL 3,743

ND - Not Detectable

** - Method Detection Limit, 0.5 mg/Kg

Quality Assurance Report

Method Blank

Analytes In Blank	Amount
Average Amount of All Analytes In Blank	<0.5ppm

Calibration Check

Calibration Standards	Units of Measure	*True Value	Analyzed Value	% Diff	Limit
Gasoline Range	ppm	563	522	7.2	15%
Diesel Range	ppm	1,250	1,178	5.7	15%

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile
Hydrocarbons by Gas Chromatography

Approved by: *[Signature]*

Date: *9/13/94*

**ON SITE
TECHNOLOGIES, LTD.**

TOTAL PETROLEUM HYDROCARBONS

Attn: **Mark McCool**
 Company: **Apache Corporation**
 Address: **304 N. Behrend**
 City, State: **Farmington, NM 87401**

Date: **9/13/94**
 Lab ID: **2081**
 Sample ID: **2988**
 Job No. **2-1091**

Project Name: **Apache Corporation / Pit Assessment Samples**
 Project Location: **Apache 144 @ 5'**
 Sampled by: **RF** Date: **9/9/94** Time: **14:30**
 Analyzed by: **DLA** Date: **9/13/94**
 Sample Matrix: **Soil**

Total Petroleum Hydrocarbons

Component	**Measured Concentration mg/Kg
Gasoline Range (C5 - C9)	1,473
Diesel Range (C10 - C28)	2,628
TOTAL	4,101

ND - Not Detectable

**** - Method Detection Limit, 0.5 mg/Kg**

Quality Assurance Report

Method Blank

Analytes In Blank	Amount
Average Amount of All Analytes In Blank	<0.5ppm

Calibration Check

Calibration Standards	Units of Measure	*True Value	Analyzed Value	% Diff	Limit
Gasoline Range	ppm	563	522	7.2	16%
Diesel Range	ppm	1,250	1,178	5.7	15%

**Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile
 Hydrocarbons by Gas Chromatography**

Approved by: 
 Date: **9/13/94**

**ON SITE
TECHNOLOGIES, LTD.**
TOTAL PETROLEUM HYDROCARBONS

Attn: **Mark McCool**
Company: **Apache Corporation**
Address: **304 N. Behrend**
City, State: **Farmington, NM 87401**

Date: **9/13/94**
Lab ID: **2081**
Sample ID: **2989**
Job No. **2-1091**

Project Name: **Apache Corporation / Pit Assessment Samples**
Project Location: **Apache 144 @ 6'**
Sampled by: **RF** Date: **9/9/94** Time: **14:30**
Analyzed by: **DLA** Date: **9/13/94**
Sample Matrix: **Soil**

Total Petroleum Hydrocarbons

Component	**Measured Concentration mg/Kg
Gasoline Range (C5 - C9)	18.5
Diesel Range (C10 - C28)	794.0
TOTAL	812.5

ND - Not Detectable

** - Method Detection Limit, 0.5 mg/Kg

Quality Assurance Report

Method Blank

Analytes in Blank	Amount
Average Amount of All Analytes in Blank	<0.5ppm

Calibration Check

Calibration Standards	Units of Measure	*True Value	Analyzed Value	% Diff	Limit
Gasoline Range	ppm	563	522	7.2	15%
Diesel Range	ppm	1,250	1,178	5.7	15%

**Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile
Hydrocarbons by Gas Chromatography**

Approved by: 

Date: **9/13/94**

**ON SITE
TECHNOLOGIES, LTD.**

TOTAL PETROLEUM HYDROCARBONS

Attn: *Mark McCool*
 Company: *Apache Corporation*
 Address: *304 N. Behrend*
 City, State: *Farmington, NM 87401*

Date: *9/13/94*
 Lab ID: *2081*
 Sample ID: *2990*
 Job No. *2-1091*

Project Name: *Apache Corporation / Pft Assessment Samples*
 Project Location: *Apache 144 @ 7'*
 Sampled by: *RF* Date: *9/9/94* Time: *14:30*
 Analyzed by: *DLA* Date: *9/13/94*
 Sample Matrix: *Soil*

Total Petroleum Hydrocarbons

<i>Component</i>	<i>**Measured Concentration mg/Kg</i>
<i>Gasoline Range (C5 - C9)</i>	<i>1498.1</i>
<i>Diesel Range (C10 - C28)</i>	<i>2531.0</i>
<i>TOTAL</i>	<i>4029.1</i>

ND - Not Detectable

*** - Method Detection Limit, 0.5 mg/Kg*

Quality Assurance Report

Method Blank

<i>Analytes in Blank</i>	<i>Amount</i>
<i>Average Amount of All Analytes in Blank</i>	<i><0.5ppm</i>

Calibration Check

<i>Calibration Standards</i>	<i>Units of Measure</i>	<i>*True Value</i>	<i>Analyzed Value</i>	<i>% Diff</i>	<i>Limit</i>
<i>Gasoline Range</i>	<i>ppm</i>	<i>563</i>	<i>522</i>	<i>7.2</i>	<i>15%</i>
<i>Diesel Range</i>	<i>ppm</i>	<i>1,250</i>	<i>1,178</i>	<i>5.7</i>	<i>15%</i>

Method - *SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile
Hydrocarbons by Gas Chromatography*

Approved by: *[Signature]*
 Date: *9/13/94*

**ON SITE
TECHNOLOGIES, LTD.**
AROMATIC VOLATILE ORGANICS

Attn: **Mark McCool**
Company: **Apache Corporation**
Address: **304 N. Behrend**
City, State: **Farmington, NM 87401**

Date: **9/13/94**
Lab ID: **2081**
Sample ID: **2990**
Job No. **2-1091**

Project Name: **Apache Corporation / Pit Assessment Samples**
Project Location: **Apache 144 @ 7'**
Sampled by: **RF** Date: **9/9/94**
Analyzed by: **DLA** Date: **9/13/94**
Sample Matrix: **Soil**

Time: **14:30**

Aromatic Volatile Organics

Component	Measured Concentration mg/kg	Detection Limit Concentration mg/kg
Benzene	0.826	0.0002
Toluene	11.740	0.0002
Ethylbenzene	3.039	0.0002
m,p-Xylene	19.626	0.0002
o-Xylene	7.418	0.0002
	TOTAL 42.650 mg/kg	

ND - Not Detectable

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: 

Date: **9/13/94**

APACHE CORPORATION/FARMINGTON DISTRICT SOIL REMEDIATIONS STATUS REPORT

REMEDIATION SITE APACHE # 144

* AMOUNT OF SOIL UNDERGOING REMEDIATION 158 Yds.

CELL No. <u>#1</u>	SampDATE <u>6/24/97</u>	TPH <u>1700</u>	BTEX <u>ND</u>
DIMENSIONS(LxWxH) <u>100' L X 40' W X 6" H</u>			
CELL LOCATION (dir. from well head) <u>SOUTH</u>			
* DATE BEGAN: <u>9/8/94</u>			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) <u>6/24/97</u>			
CELL No. <u>#2</u>	SampDATE <u>6/24/97</u>	TPH <u>ND</u>	BTEX <u>ND</u>
DIMENSIONS(LxWxH) <u>60' L X 50' W X 6" H</u>			
CELL LOCATION (dir. from well head) <u>NORTH EAST</u>			
* DATE BEGAN: <u>9/8/94</u>			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) <u>6/24/97</u>			
CELL No. <u>#3</u>	SampDATE <u>6/24/97</u>	TPH <u>ND</u>	BTEX <u>ND</u>
DIMENSIONS(LxWxH) <u>40' L X 40' W X 6" H</u>			
CELL LOCATION (dir. from well head) <u>SOUTH WEST</u>			
* DATE BEGAN: <u></u>			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) <u>6/24/97</u>			
REMEDICATION RECORD: (Date, Treatment, Tilling)			
5/27/97 CELL #1 TREAT WITH 46-0-0 FERTILIZER, WATER, TILL SOIL.			
6/16/97 CELLS 2&3 TREAT WITH 46-0-0 FERTILIZER, WATER, TILL SOIL.			
6/17/97 CELLS 1,2,3 WATER AND TILL SOIL.			

From excavation reports.

JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
P. O. BOX 507
DULCE, NEW MEXICO 87528

Submit 1 copy to
Natural Resource Dept.
and Oil & Gas Administration

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>APACHE CORPORATION</u> Telephone <u>505-325-0318</u>	
Address: <u>304 N. BEHREND, FARMINGTON, N.M. 87401</u>	
Facility or Well Name: <u>APACHE # 144</u> CELL #1	
Location: Unit or Qtr/Qtr Sec <u>O</u> Sec <u>13</u> T <u>24N</u> R <u>4W</u> County <u>RIO ARRIBA</u>	
Land Type <u>JIC. TRIBAL</u>	
Date Remediation Started: <u>9/8/94</u> Date Completed: <u>6/24/97</u>	
Remediation Method: Landfarmed <u>XXX</u> Approx. cubic yards <u>74</u>	
Composted _____	
Other _____	
Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling
Distance to an Ephemeral Stream: (pts) <u>0</u>	Sampling Date: <u>6/24/97</u> Time: <u>10:00AM</u>
Distance to Nearest Lake, Playa, or Watering Pond: (pts) <u>0</u>	Sample Results:
Wellhead Protection Area: (pts) <u>0</u>	Field Headspace (ppm) <u>0.7</u>
Distance To Surface Water: (pts) <u>0</u>	TPH (ppm) <u>1700</u> Method <u>M8015</u>
RANKING SCORE (TOTAL POINTS) <u>0</u>	Other <u>BTEX \ SW846, 8020A (ND)</u>
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF	
DATE: <u>8-22-97</u>	PRINTED NAME <u>JEFF CROSS</u>
SIGNATURE <u>Jeff Cross</u>	TITLE <u>PROJECT MANAGER</u>
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION. ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.	
APPROVED: YES <u>X</u> NO _____ (REASON) _____	
SIGNED: <u>Lee C. Marshall</u>	DATE: <u>9-2-97</u>

JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
P. O. BOX 507
DULCE, NEW MEXICO 87528

Submit 1 copy to
Natural Resource Dept.
and Oil & Gas Administration

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>APACHE CORPORATION</u>		Telephone <u>505-325-0318</u>	
Address: <u>304 N. BEHREND, FARMINGTON, N.M. 87401</u>			
Facility or Well Name: <u>APACHE # 144</u>		<u>CELL # 2</u>	
Location:	Unit or Qtr/Qtr Sec <u>O</u>	Sec <u>13</u>	T <u>24N</u> R <u>4W</u> County <u>RIO ARRIBA</u>
Land Type	<u>JIC. TRIBAL</u>		
Date Remediation Started: <u>9/8/94</u>		Date Completed: <u>6/24/97</u>	
Remediation Method:	<u>Landfarmed</u>	<u>XXX</u>	Approx. cubic yards <u>55</u>
	<u>Composted</u>	<u> </u>	
	<u>Other</u>	<u> </u>	
Depth to Groundwater: (pts) <u>0</u>		Final Closure Sampling Sampling Date: <u>6/24/97</u> Time: <u>10:15AM</u> Sample Results: Field Headspace (ppm) <u>0.2</u> TPH (ppm) <u>ND</u> Method <u>M8015</u> Other <u>BTEX \ SW846, 8020A (ND)</u>	
Distance to an Ephemeral Stream: (pts) <u>0</u>			
Distance to Nearest Lake, Playa, or Watering Pond: (pts) <u>0</u>			
Wellhead Protection Area: (pts) <u>0</u>			
Distance To Surface Water: (pts) <u>0</u>			
RANKING SCORE (TOTAL POINTS) <u>0</u>			
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF			
DATE: <u>8-22-97</u>		PRINTED NAME <u>JEFF CROSS</u>	
SIGNATURE <u>Jeff Cross</u>		TITLE <u>PROJECT MANAGER</u>	
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION. ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.			
APPROVED: YES <u>X</u> NO <u> </u> (REASON) <u> </u>			
SIGNED: <u>Keith C. Mamm</u>		DATE: <u>9-2-97</u>	

JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
P. O. BOX 507
DULCE, NEW MEXICO 87528

Submit 1 copy to
Natural Resource Dept.
and Oil & Gas Administration

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>APACHE CORPORATION</u>		Telephone <u>505-325-0318</u>	
Address: <u>304 N. BEHREND, FARMINGTON, N.M. 87401</u>			
Facility or Well Name: <u>APACHE # 144</u>		CELL # <u>3</u>	
Location:	Unit or Qtr/Qtr Sec <u>O</u>	Sec <u>13</u>	T <u>24N</u> R <u>4W</u> County <u>RIO ARRIBA</u>
Land Type	<u>JIC. TRIBAL</u>		
Date Remediation Started: <u>9/8/94</u>		Date Completed: <u>6/24/97</u>	
Remediation Method:	Landfarmed <u>XXX</u>	Approx. cubic yards	<u>29</u>
	Composted <u> </u>		
	Other <u> </u>		
Depth to Groundwater:	(pts) <u>0</u>	Final Closure Sampling Sampling Date: <u>6/24/97</u> Time: <u>10:30AM</u> Sample Results: Field Headspace (ppm) <u>0.8</u> TPH (ppm) <u>ND</u> Method <u>M8015</u> Other <u>BTEX \ SW846, 8020A (ND)</u>	
Distance to an Ephemeral Stream:	(pts) <u>0</u>		
Distance to Nearest Lake, Playa, or Watering Pond:	(pts) <u>0</u>		
Wellhead Protection Area:	(pts) <u>0</u>		
Distance To Surface Water:	(pts) <u>0</u>		
RANKING SCORE (TOTAL POINTS)	<u>0</u>		
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF			
DATE: <u>8-22-97</u>	PRINTED NAME <u>JEFF CROSS</u>		
SIGNATURE <u>Jeff Cross</u>	TITLE <u>PROJECT MANAGER</u>		
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION. ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.			
APPROVED: YES <u>X</u> NO <u> </u> (REASON) <u> </u>			
SIGNED: <u>Kee C. Mamm</u>		DATE: <u>9-2-97</u>	

WELL NAME:

Apache #144 Cell #3

SAMPLE DATE:

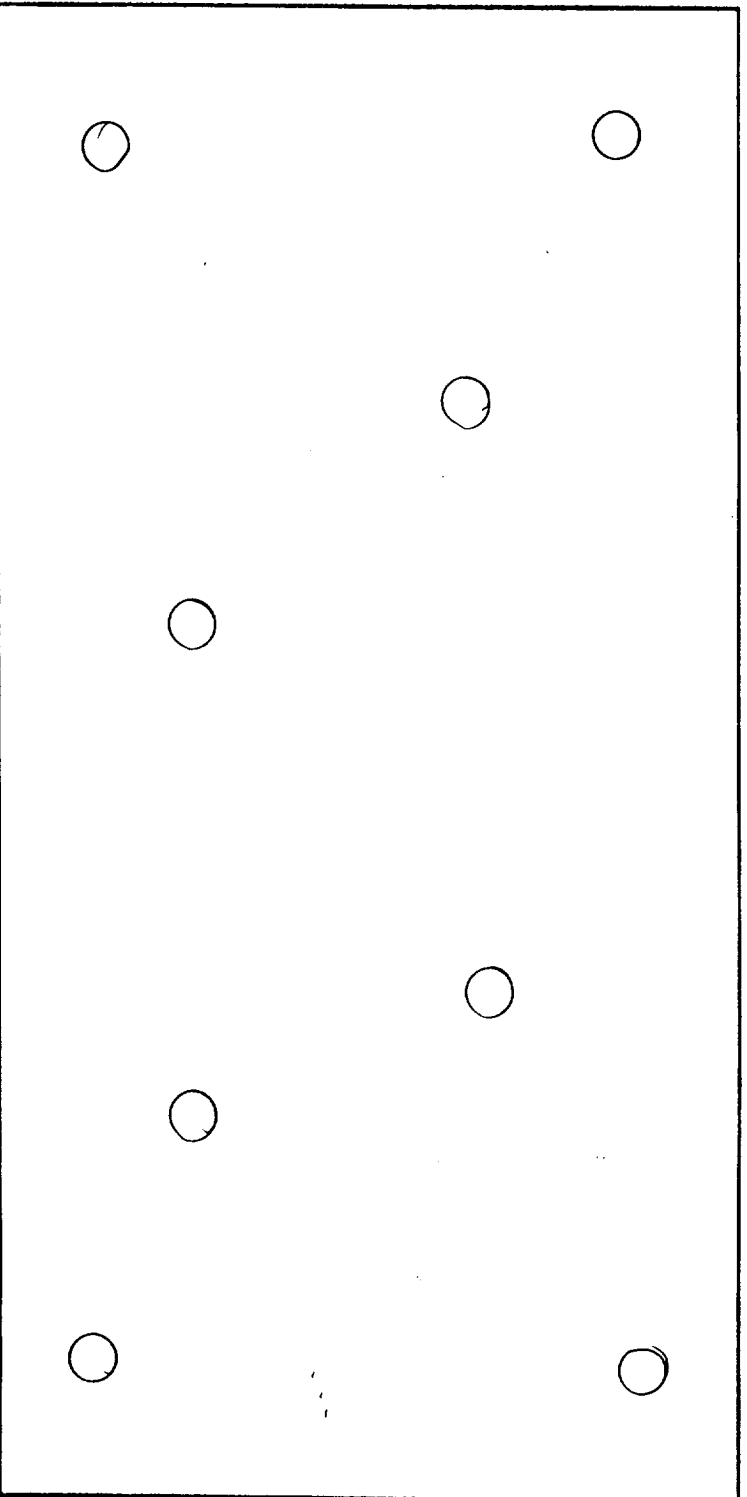
6-24-97

DIMENSIONS:

40' x 40' x 6" H



= SAMPLE AREA



NOTES:

ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

8 point Composite Sample

PID Composite Reading. 0.8 ppm.

WELL NAME:

Apache #144 Cell #1

SAMPLE DATE:

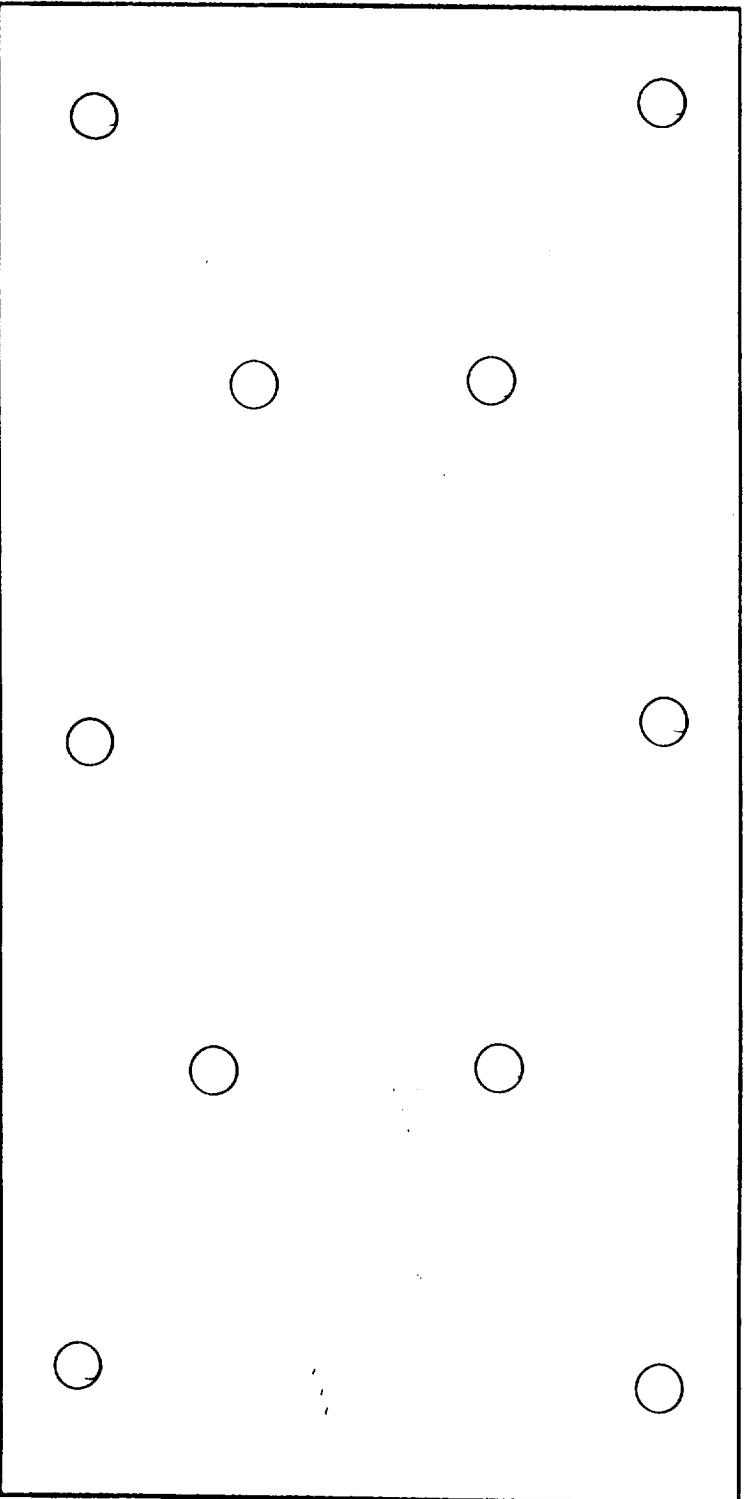
6-24-97

DIMENSIONS:

100' L X 40' W X 6" H



= SAMPLE AREA



NOTES:

ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

10 point Composite Sample

PEO composite Reading 0.7 ppm.

WELL NAME:

Apache #144 Cell #2

SAMPLE DATE:

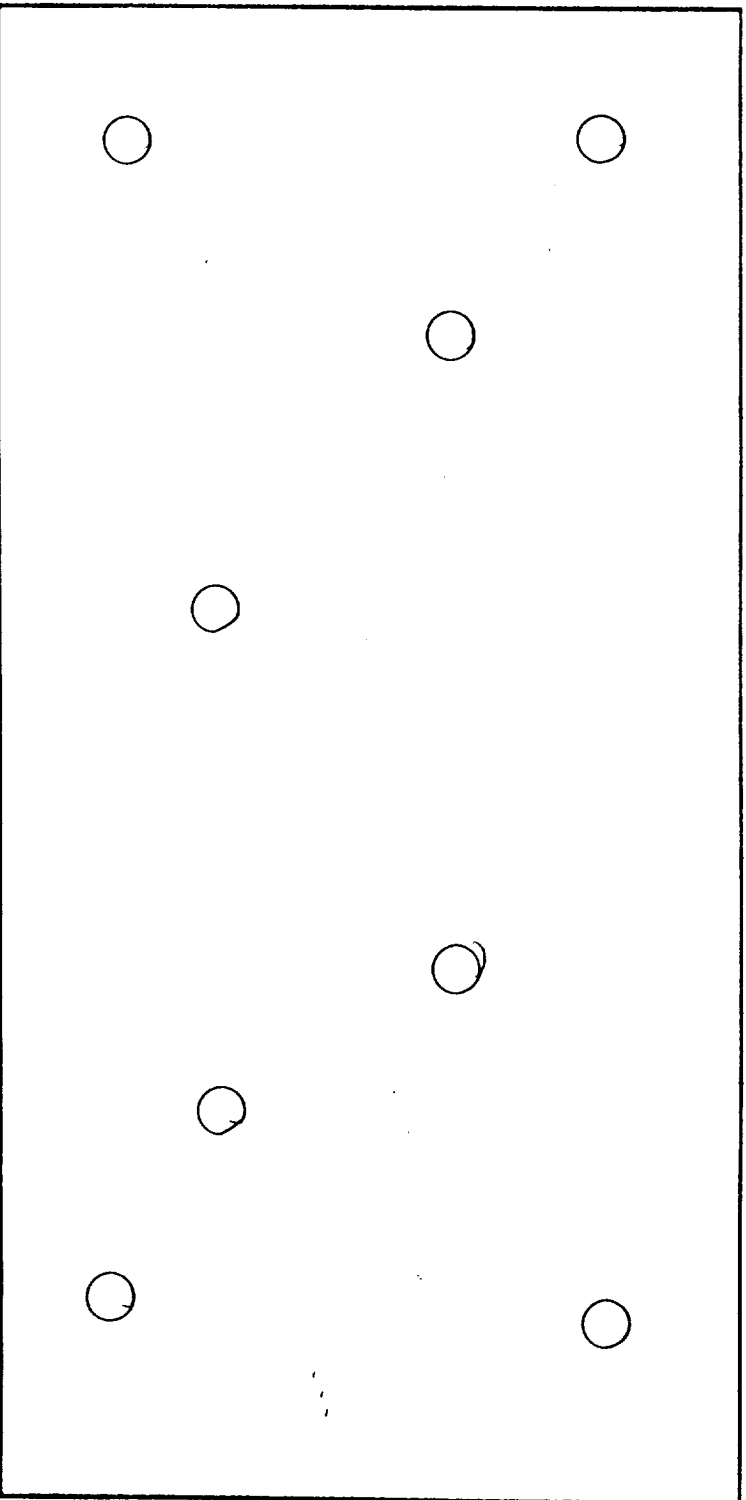
6-24-97

DIMENSIONS:

60' L X 50' W X 6" H



= SAMPLE AREA

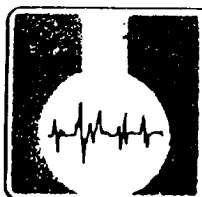


NOTES:

ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

8 point Composite Sample

P.D composite Reading 0.2 ppm.



**ASSAIGAI
ANALYTICAL
LABORATORIES, INC.**

7300 Jefferson, N.E. • Albuquerque, New Mexico 87109 • (505) 345-8964 • FAX (505) 345-7259

3332 Wedgewood, E-5 • El Paso, Texas 79925 • (915) 593-6000 • FAX (915) 593-7820

JUL 21 1997

Report Generated:
July 7, 1997 15:54

**CERTIFICATE OF ANALYSIS
RESULTS BY SAMPLE**

SENT APACHE CORPORATION
TO: 304 N. BEHREND
FARMINGTON, NM 87401

ATTN: JEFF CROSS

WORKORDER # : 9706285
WORK ID : JICARILLA PIT CLOSURES
CLIENT CODE : APA01
DATE RECEIVED : 06/27/97

Page: 1

Lab ID: 9706285-01A
Sample ID: AP #144 CELL #1

Collected: 06/24/97 10:00:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	100	06/30/97	SBTXME173
Toluene	ND	mg/kg	0.0050	100	06/30/97	SBTXME173
Ethylbenzene	ND	mg/kg	0.0050	100	06/30/97	SBTXME173
P-&m-Xylene	ND	mg/kg	0.010	100	06/30/97	SBTXME173
O-Xylene	ND	mg/kg	0.0050	100	06/30/97	SBTXME173

Lab ID: 9706285-01B
Sample ID: AP #144 CELL #1

Collected: 06/24/97 10:00:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
Diesel Range OG Soil/M8015						
Diesel Range OG in Soil	1700	mg/Kg	50	25	06/30/97	SDRO39

Lab ID: 9706285-02A
Sample ID: AP #144 CELL #2

Collected: 06/24/97 10:15:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	100	07/02/97	SBTXME174
Toluene	ND	mg/kg	0.0050	100	07/02/97	SBTXME174
Ethylbenzene	ND	mg/kg	0.0050	100	07/02/97	SBTXME174
P-&m-Xylene	ND	mg/kg	0.010	100	07/02/97	SBTXME174
O-Xylene	ND	mg/kg	0.0050	100	07/02/97	SBTXME174



Lab ID: 9706285-02B
Sample ID: AP #144 CELL #2

Collected: 06/24/97 10:15:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
Diesel Range OG Soil/M8015 Diesel Range OG in Soil	ND	mg/Kg	50	25	06/30/97	SDRO39

Lab ID: 9706285-03A
Sample ID: AP #144 CELL #3

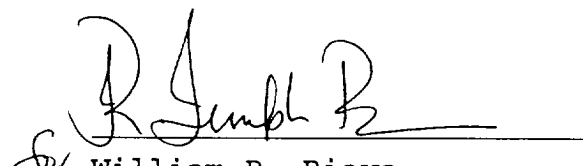
Collected: 06/24/97 10:30:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	100	07/02/97	SBTXME174
Toluene	ND	mg/kg	0.0050	100	07/02/97	SBTXME174
Ethylbenzene	ND	mg/kg	0.0050	100	07/02/97	SBTXME174
P-&m-Xylene	ND	mg/kg	0.010	100	07/02/97	SBTXME174
O-Xylene	ND	mg/kg	0.0050	100	07/02/97	SBTXME174

Lab ID: 9706285-03B
Sample ID: AP #144 CELL #3

Collected: 06/24/97 10:30:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
Diesel Range OG Soil/M8015 Diesel Range OG in Soil	ND	mg/Kg	50	25	06/30/97	SDRO39


for William P. Biava
President

WORKORDER COMMENTS

DATE : 07/07/97

WORKORDER:

DEFINITIONS/DATA QUALIFIERS

The following are definitions, abbreviations, and data qualifiers which may have been utilized in your report:

ND = Analyte "not detected" in analysis at the sample specific detection limit.

D_F = Sample "dilution factor"

NT = Analyte "not tested" per client request.

B = Analyte was also detected in laboratory method QC blank.

E = Analyte concentration (result) is an estimated value or exceeds analysis calibration range.

LIMIT = The minimum amount of the analyte that AAL can detect utilizing the specified analysis.

Please Note: Multiply the "Limit" value (AAL's Detection Limit) by Dilution Factor (D_F) to obtain the sample specific Detection Limit.

REPORT COMMENTS



3332 WEDGEWOOD
EL PASO, TEXAS 79925
(915) 593-6000

MELQUIADES ALANIS
6411 LOCAL UNO
CIUDAD JUAREZ, CHIHUAHUA ME

Address 304 N. Behrend
Telephone No. (505) 774-6643

City/State/Zip Farmington, NM 87401

Project Name / Number	JICARILLA P.I.T. CLOSURES	Samplers: (Signature)
		<i>John M. Miller</i>

Contract / Purchase Order / Quote _____

Relinquished by:	Date	Received by:	Relinquished by:
Signature <u>Jeff Kun</u>	<u>6-27-97</u>	Signature <u>Scott Pratt</u>	Signature <u>Scott Pratt</u>
Printed <u>Jeff Kun</u>	Time	Printed <u>Scott Pratt</u>	Printed <u>Scott Pratt</u>
Company <u>Apache Corp.</u>	<u>11:55</u>	Company <u>ARAL</u>	Company <u>ARAL</u>
Reason _____		Reason _____	Reason _____

Method of Shipment: _____	Comments: _____
Shipment No. _____	_____
Special Instructions: _____	_____
_____	_____

LABORATORY