

District III
1000 Rio Brazos Rd
Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

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

DEPUTY COMMISSIONER INSPECTOR

OIL CONSERVATION DIVISION

2040 S. PACHECO
Santa Fe, New Mexico 87505

FEB 6 8 1999

PIT REMEDIATION AND CLOSURE REPORT

Operator: Apache Corporation \ MW Petroleum Telephone: 505-325-0318

Address: 2855 Southside River Road, Suite A, Farmington, NM 87401

Facility or Well Name: Jic Apache Tribal A118 #24 Pit #1

Location: Unit or Qtr/Qtr Sec P Sec 25 T 26 N R 3W County Rio Arriba

Pit Type: Separator: _____ Dehydrator _____ Other Blow Pit

Land Type: Jicarilla Tribal

Beginning Pit Dimensions: Length 15' Width 15' Depth 3'

Pit Location: Ending Pit Dimensions: Length 20' Width 20' Depth 8'

(Attach diagram)

Reference: Wellhead XX Other _____

Footage from reference: 75'

Direction from reference: 145 Degrees X East North
of West South XX

Depth To Groundwater:
(vertical distance from
contaminants to seasonal
high water elevation of
groundwater)

Less than 50 feet	(20 points)	_____
50 feet to 99 feet	(10 points)	_____
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)	_____
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)	_____
200 feet to 1000 feet	(10 points)	_____
Greater than 1000 feet	(0 points)	<u>0</u>

RANKING SCORE (TOTAL POINTS) 0

Date Remediation Started:

9/11/97

Date Completed:

9/15/97

Remediation Method:

(Check all appropriate sections)

Excavation

XXX

Approx. cubic yards

118

Landfarmed

XX

Insitu Bioremediation

Other

Remediation Location:

(i.e. landfarmed onsite, name and location of offsite facility)

Onsite

XX

Offsite

General Description of Remedial Action:

Excavate pit to 8' , took PID readings. Spread soil on

location for remediation. Took soil samples.

Groundwater Encountered:

No

XX

Yes

Depth

Final Pit:

Sample location

4 point composite sample taken from pit sidewalls. Grab sample

Closure Sampling:

(in multiple samples, attach sample results and diagram of sample locations and depths)

Sample depth

8'

taken from pit bottom center.

8 to 10" into pit sidewalls 10" into pit bottom

Sample Date

9/15/97

Sample Time

9:00 AM

Sample results

Benzene

(ppm)

ND

Total BTEX

(ppm)

ND

Field Headspace

(ppm)

17.46

TPH

Side/ND

Btm/ND

Groundwater Sample:

Yes

No

XX

(If yes attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

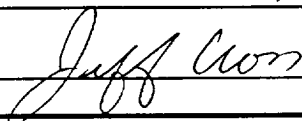
DATE

December 1, 1998

PRINTED NAME

Jeff Cross

SIGNATURE



AND TITLE

Project Manager

District III
1000 Rio Brazos Rd
Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

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

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

PIT REMEDIATION AND CLOSURE REPORT

Operator: Apache Corporation \ MW Petroleum Telephone: 505-325-0318

Address: 2855 Southside River Road, Suite A, Farmington, NM 87401

Facility or Well Name: Jic Apache Tribal A118 #24 Pit #2

Location: Unit or Qtr/Qtr Sec P Sec 25 T 26 N R 3W County Rio Arriba

Pit Type: Separator: _____ Dehydrator _____ Other Separator/Tank Drain

Land Type: Jicarilla Tribal

Beginning Pit Dimensions: Length 15' Width 15' Depth 3'
Pit Location: Ending Pit Dimensions: Length 20' Width 20' Depth 10'
(Attach diagram)
Reference: Wellhead XX Other _____
Footage from reference: 70'
Direction from reference: 220 Degrees _____ East North
_____ West South X

Depth To Groundwater: (vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet	(20 points)	_____
	50 feet to 99 feet	(10 points)	_____
	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)	_____
	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)	_____
	200 feet to 1000 feet	(10 points)	_____
	Greater than 1000 feet	(0 points)	<u>0</u>
RANKING SCORE (TOTAL POINTS)			<u>0</u>

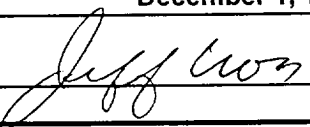
Date Remediation Started:	<u>9/15/97</u>	Date Completed:	<u>9/15/97</u>
Remediation Method: (Check all appropriate sections)	Excavation <u>XXX</u>	Approx. cubic yards	<u>148</u>
	Landfarmed <u>XX</u>	Insitu Bioremediation	
	Other _____		
Remediation Location: (i.e. landfarmed onsite, name and location 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>XX</u>	Yes _____	Depth _____

Final Pit:	Sample location	<u>4 point composite sample taken from pit sidewalls. Grab sample</u>	
Closure Sampling: (in multiple samples, attach sample results and diagram of sample locations and depths)		<u>taken from pit bottom center.</u>	
	Sample depth	<u>10'</u>	<u>8 to 10" into pit sidewalls 10" into pit bottom</u>
	Sample Date	<u>9/15/97</u>	Sample Time <u>3:00 PM</u>
	Sample results		
	Benzene	(ppm)	<u>ND</u>
	Total BTEX	(ppm)	<u>ND</u>
	Field Headspace	(ppm)	<u>23.34</u>
	TPH		<u>Side/ND</u> <u>Btm/800</u>
Groundwater Sample:	Yes _____	No <u>XX</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>December 1, 1998</u>	PRINTED NAME <u>Jeff Cross</u>
SIGNATURE <u></u>	AND TITLE <u>Project Manager</u>

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

Operator: <u>M W PETROLEUM</u>		Telephone <u>505-325-0318</u>	
Address: <u>2855 SOUTHSIDE RIVER ROAD / SUITE A / FARMINGTON N.M. 87401-7947</u>			
Facility or Well Name: <u>JAT A118 # 24 PIT # 1</u>			
Location:	Unit or Qtr/Qtr	Sec	County
	<u>P</u>	<u>SEC 25</u>	<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>20'</u>	Width <u>20'</u> Depth <u>8'</u>
	Reference:	Wellhead <u>XXX</u>	Other <u> </u>
	Footage from reference:	<u>75'</u>	
	Direction from reference:	<u>145</u> Degrees	<u>X</u> East North West 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) (10 points) (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) (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) (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) (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) (10 points) (0 points)
			<u>0</u>
RANKING SCORE (TOTAL POINTS)			<u>0</u>

Date Remediation Started: 9/11/97 Date Completed: 9/15/97

Remediation Method: Excavation XXX Approx. cubic yards 118
(Check all appropriate sections) Landfarmed XX Insitu Bioremediation _____
Other _____

Remediation Location: Onsite XX Offsite _____
(i.e. landfarmed onsite, name and location of offsite facility)

General Description of Remedial Action: Excavate pit to 8', took PID readings. spread soil on location for remediation. Took soil samples.

Groundwater Encountered: No XXX Yes _____ Depth _____

Final Pit: Sample location 4 point composite taken from pit sidewalls, Grab sample from pit bottom center.
Closure Sampling: 8" to 10" into pit side walls, 10" into pit bottom.
(in multiple samples, attach sample results and diagram of sample locations and depths) Sample depth 8'

Sample Date 9/15/97 Sample Time 9:00AM
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>17.46</u>		Ethylbenzene	(ppb)	<u>NA</u>
	TPH	(ppm)	<u>SIDE/ND</u>		Total Xylenes	(ppb)	<u>NA</u>
			<u>BTM/ND</u>				

Groundwater Sample: Yes _____ No XXX (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 9-14-98 PRINTED NAME JEFF CROSS
SIGNATURE Jeff Cross AND TITLE PROJECT MANAGER

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO _____ (REASON) _____

SIGNED: Ken Cross DATE: 11-13-98

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>M W PETROLEUM</u>		Telephone <u>505-325-0318</u>	
Address: <u>2855 SOUTHSIDE RIVER ROAD / SUITE A / FARMINGTON N.M. 87401-7947</u>			
Facility or Well Name: <u>JAT A118 # 24 PIT # 2</u>			
Location:	Unit or Qtr/Qtr	Sec	County
	<u>P</u>	<u>SEC 25</u>	<u>RIO ARRIBA</u>
Pit Type:	Separator: <u> </u>	Dehydrator <u> </u>	Other <u>SEPERATOR\TANK DRAIN</u>
Land Type: <u>JIC. TRIBAL</u>			

Pit Location: (Attach diagram)	Pit Dimensions:	Length <u>20'</u>	Width <u>20'</u>	Depth <u>10'</u>
	Reference:	Wellhead <u>XXX</u>	Other <u> </u>	
	Footage from reference:	<u>70'</u>		
	Direction from reference:	<u>220</u> Degrees	<u> </u> East	<u> </u> North
		<u>XX</u> West	<u> </u> 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>
Distance to an Ephemeral Stream: (Downgradient dry wash greater than ten feet in width)	Less than 100 feet	(10 points)	<u> </u>
	Greater than 100 feet	(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	(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 100 feet	(20 points)	<u> </u>
	100 feet to 1000 feet	(10 points)	<u> </u>
	Greater than 1000 feet	(0 points)	<u>0</u>
	RANKING SCORE (TOTAL POINTS)		<u>0</u>

Date Remediation Started: 9/15/97 **Date Completed:** 9/15/97

Remediation Method: (Check all appropriate sections)
 Excavation XXX Approx. cubic yards 148
 Landfarmed XX Insitu Bioremediation _____
 Other _____

Remediation Location: (i.e. landfarmed onsite, name and location of offsite facility)
 Onsite XX Offsite _____

General Description of Remedial Action: Excavate pit to 10', took PID readings. spread soil on location for remediation. Took soil samples.

Groundwater Encountered: No XXX Yes _____ Depth _____

Final Pit: Sample location 4 point composite taken from pit sidewalls, Grab sample from pit bottom center.

Closure Sampling: (in multiple samples, attach sample results and diagram of sample locations and depths) Sample depth 10'

Sample Date 9/15/97 Sample Time 3:00PM

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>23.34</u>		Ethylbenzene	(ppb)	<u>NA</u>
	TPH	(ppm)	<u>SIDE/ND</u>		Total Xylenes	(ppb)	<u>NA</u>
			<u>BTM\800</u>				

Groundwater Sample: Yes _____ No XXX (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 9-14-98 **PRINTED NAME** JEFF CROSS

SIGNATURE Jeff Cross **AND TITLE** PROJECT MANAGER

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO _____ (REASON) _____

SIGNED: Karen C Mamm **DATE:** 11-13-98

M W PETROLEUM/FARMINGTON DISTRICT PIT EXCAVATION AND CLOSURE REPORT

LOCATION JAT A118 # 24

PIT COUNT 2

Jicarilla Apache Tribal EPO/OCD/BLM
Review and Approval
OCD-BLM
EPO Representative _____
Date of Review _____

START:		PIT # 1 9/11/97			FINISH: PIT # 1 9/15/97			
DIMENSIONS		PIT# 2 9/15/97			PIT # 2 9/15/97			
	W	L	D		W	L	D	CU YDS
Pit 1	15'	15'	3'	Pit 1	20'	20'	8'	118
Pit 2	18'	18'	3'	Pit 2	20'	20'	10'	148
Pit 3				Pit 3				
		Pit 1 @ 8	Pit 2 @ 10'	Pit 3 @		Pit 1 @ 8	Pit 2 @ 10'	Pit 3 @
P	Center	20.3	4.7		P	Center	20.3	4.7
I	NW Corner	9.7	32.8		I	NW Corner	9.7	32.8
D	NE Corner	35.2	40.7		D	NE Corner	35.2	40.7
	SW Corner	17.8	25.8			SW Corner	17.8	25.8
	SE Corner	4.3	12.7			SE Corner	4.3	12.7

NOTES:

9/11/97 START EXCAVATION ON PIT # 1, NO STAINING OR ODOR
9/15/97 FINISH EXCAVATION ON PIT # 1, PID READINGS GOOD.
9/15/97 START EXCAVATION ON PIT # 2, NO STAINING OR ODOR.
9/15/97 FINISH EXCAVATION ON PIT # 2, PID READINGS GOOD.

SAMP DATE

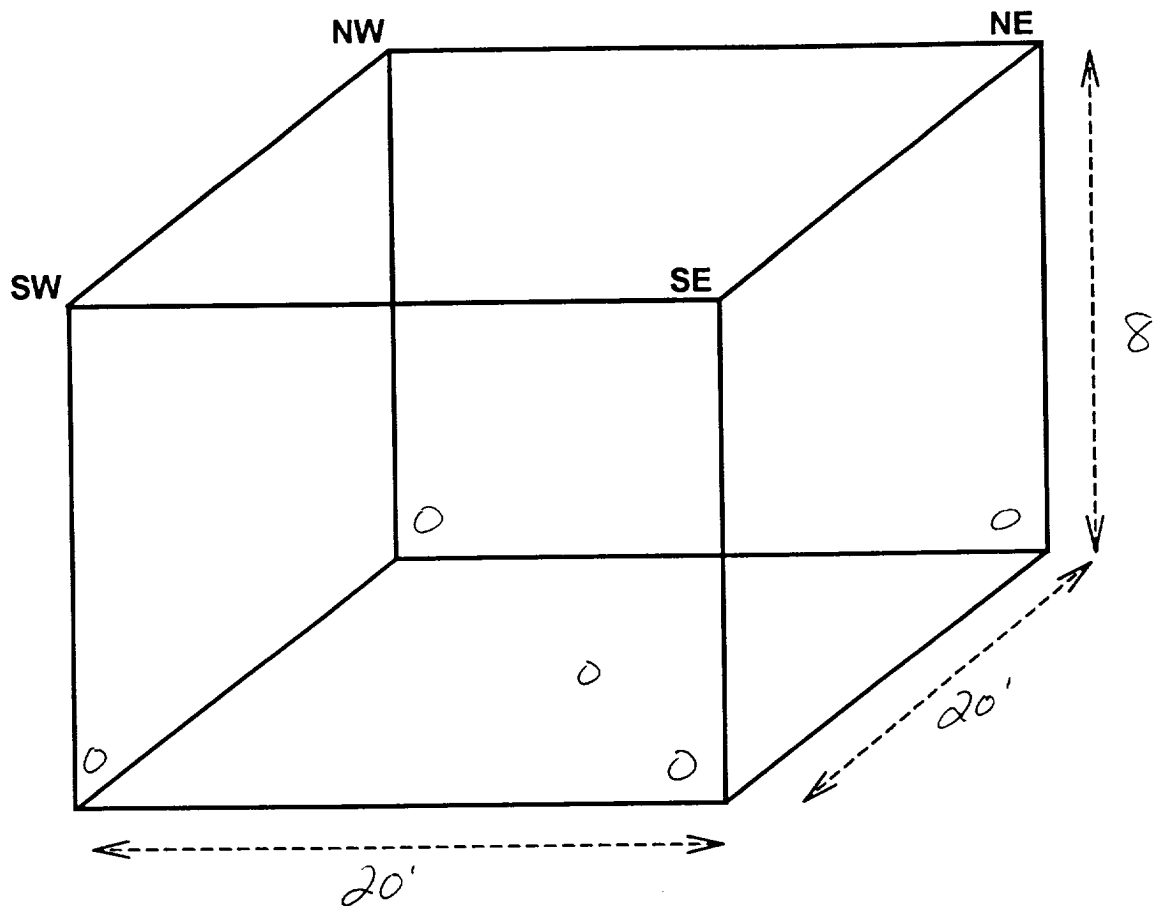
		Pit 1 @ 8	Pit 2 @ 10'	Pit 3 @	ANALYSIS RESULTS			PER LAB	Assaigai
P	Center	20.3	4.7		PIT	TPH	BETEX	WITNESS	DATE
I	NW Corner	9.7	32.8		NO	SIDE\BTM	SIDE\BTM		
D	NE Corner	35.2	40.7		1	ND\ND	ND\ND	J.C.	9/24/97
	SW Corner	17.8	25.8		2	ND\800	ND\ND	J.C.	9/24/97
	SE Corner	4.3	12.7		3				

RE-SAMPLE

DATE:		Pit 1 @	Pit 2 @	Pit 3 @	ANALYSIS RESULTS			PER LAB	
P	Center				PIT	TPH	BETEX	WITNESS	DATE
I	NW Corner				NO	SIDE\BTM	SIDE\BTM		
D	NE Corner				1				
	SW Corner				2				
	SE Corner				3				

RE-SAMPLE

DATE:		Pit 1 @	Pit 2 @	Pit 3 @	ANALYSIS RESULTS			PER LAB	
P	Center				PIT	TPH	BETEX	WITNESS	DATE
I	NW Corner				NO	SIDE\BTM	SIDE\BTM		
D	NE Corner				1				
	SW Corner				2				
	SE Corner				3				

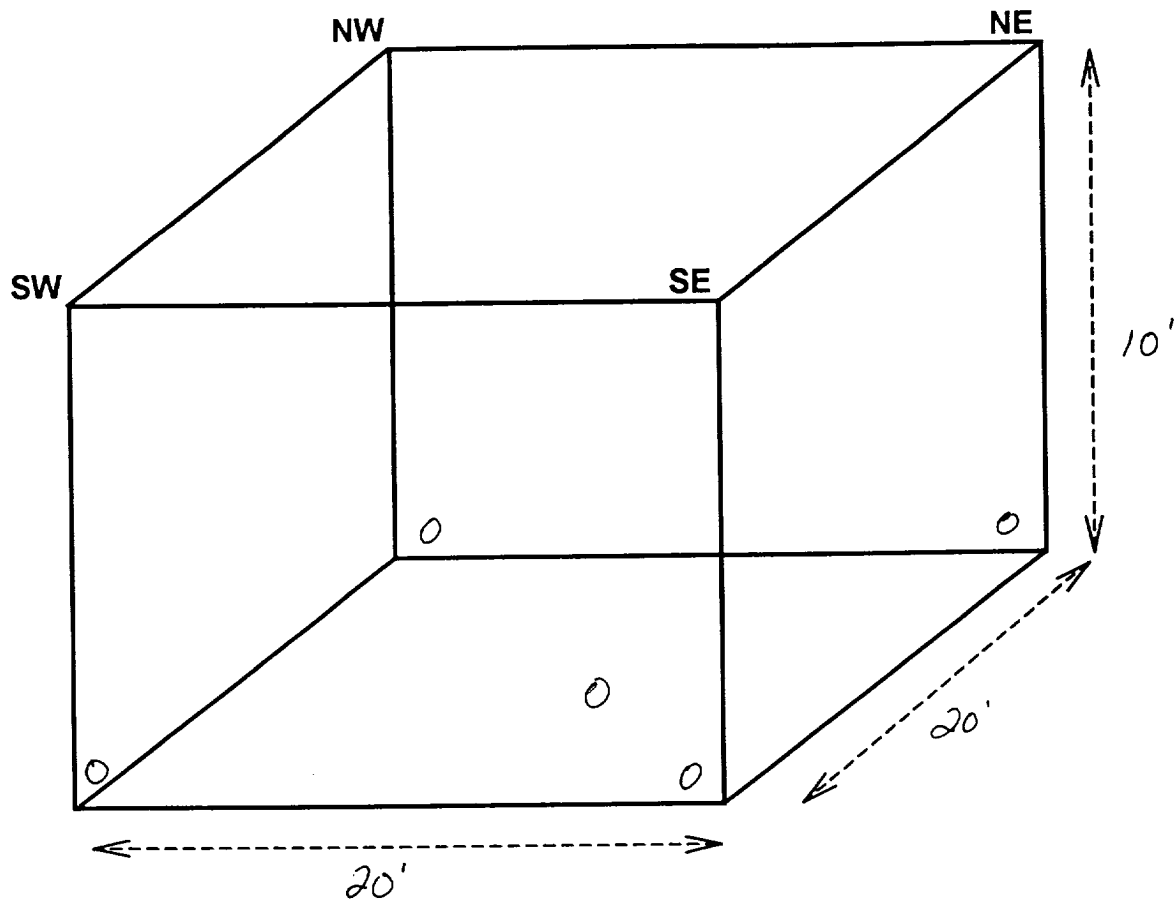


○ = SAMPLE AREA

WELL NAME JAT A118 # 24 PIT # 1

SAMPLE DATE 9/15/97

NOTES 4 POINT COMPOSITE SAMPLE TAKEN 8" TO 10" INTO PIT
SIDEWALL
1 POINT GRAB SAMPLE TAKEN 10" TO 12" INTO BOTTOM CENTER

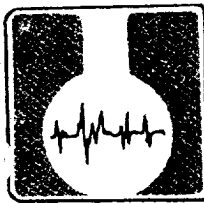


○ = SAMPLE AREA

WELL NAME JAT A118 # 24 PIT # 2

SAMPLE DATE 9/15/97

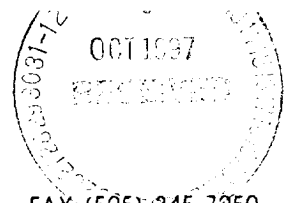
NOTES 4 POINT COMPOSITE SAMPLE TAKEN 8" TO 10" INTO PIT
SIDEWALL
1 POINT GRAB SAMPLE TAKEN 10" TO 12" INTO BOTTOM CENTER



**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



Report Generated:
October 2, 1997 14:01

**CERTIFICATE OF ANALYSIS
RESULTS BY SAMPLE**

SENT APACHE CORPORATION
TO: 2855 SOUTHSIDE RIVER RD STE
FARMINGTON, NM 87401-7947

WORKORDER # : 9709176
AWORK ID : JICARILLA PIT CLOSURES
CLIENT CODE : APA01
DATE RECEIVED : 09/19/97

ATTN: JEFF CROSS

Page: 1

Lab ID: 9709176-01A
Sample ID: A118 #24 PIT #1 SIDES

Collected: 09/15/97 09:00:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
Toluene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
Ethylbenzene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
P-&m-Xylene	ND	mg/kg	0.010	100	09/24/97	SVUST007
O-Xylene	ND	mg/kg	0.0050	100	09/24/97	SVUST007

Lab ID: 9709176-01B
Sample ID: A118 #24 PIT #1 SIDES

Collected: 09/15/97 09:00:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
Diesel Range OG Soil/M8015						
Diesel Range OG in Soil	ND	mg/Kg	25	25	09/23/97	SDRO054

Lab ID: 9709176-02A
Sample ID: A118 #24 PIT #1 BOTTOM

Collected: 09/15/97 09:30:00
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
Toluene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
Ethylbenzene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
P-&m-Xylene	ND	mg/kg	0.010	100	09/24/97	SVUST007
O-Xylene	ND	mg/kg	0.0050	100	09/24/97	SVUST007



Lab ID: 9709176-02B
 Sample ID: A118 #24 PIT #1 BOTTOM

Collected: 09/15/97 09:30:00
 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	25	25	09/23/97	SDRO054

Lab ID: 9709176-03A
 Sample ID: A118 #24 PIT #2 SIDES

Collected: 09/19/97 15:00:00
 Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
Toluene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
Ethylbenzene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
P-&m-Xylene	ND	mg/kg	0.010	100	09/24/97	SVUST007
O-Xylene	ND	mg/kg	0.0050	100	09/24/97	SVUST007

Lab ID: 9709176-03B
 Sample ID: A118 #24 PIT #2 SIDES

Collected: 09/19/97 15:00:00
 Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
Diesel Range OG Soil/M8015 Diesel Range OG in Soil	ND	mg/Kg	25	25	09/23/97	SDRO054

Lab ID: 9709176-04A
 Sample ID: A118 #24 PIT #2 BOTTOM

Collected: 09/19/97 15:30:00
 Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
Toluene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
Ethylbenzene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
P-&m-Xylene	ND	mg/kg	0.010	100	09/24/97	SVUST007
O-Xylene	ND	mg/kg	0.0050	100	09/24/97	SVUST007

Lab ID: 9709176-04B
 Sample ID: A118 #24 PIT #2 BOTTOM

Collected: 09/19/97 15:30:00
 Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
Diesel Range OG Soil/M8015 Diesel Range OG in Soil	800	mg/Kg	25	25	09/23/97	SDRO054

Enclosure for

William P. Biava
President

WORKORDER COMMENTS

DATE : 10/02/97
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

Chain of Custody Record
Lab job no. 9176 Date 9-19-97

11

Lab job no.:

Page of

Project Manager / Contact ~~Jeff Cross~~

Telephone No. (505) 774-6643

Fax No. (505) 774-6624

Yorba Buena:

Contract / Purchase Order / Quote _____

(505) 345-8964

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

MELQUIADES ALANIS

6411 LOCAL UNO
CIUDAD JUAREZ, CHIHUAHUA MEXICO 32320

ALL FRACTION NUMBER	Field Sample Number / Location	Date	Time	Sample Type	Type / Size of Container	Preservation Temp.	Chemical
1A	A118 #24 PIT #1 Side	9-15-97	9:00	Soil	4022 Gal / 4022		ICE
1B	" "						
2A	A118 #24 PIT #1 Bottom		9:30				
2B	" "						
3A	A118 #24 PIT #2 Side		3:00				
3B	" "						
4A	A118 #24 PIT #2 Bottom		3:30				
4B	" "						

Address 304 N. Behrend

City/State/Zip Farlington, NM 87401

Project Name / Number JICARILLA PIT CLOSURES

Contract / Purchase Order / Quote _____

Telephone No. (505) 774-6643

Fax No. (505) 774-6624

Samplers: (Signature) [Signature]

No. of Containers BTEX

Analysis Required ORO (mod 845)

Remarks _____

Retinquished by:	Received by:	Retinquished by:	Received by:
Signature <u>Jason G</u>	Signature <u>Scott Pratt</u>	Signature <u>Scott Pratt</u>	Signature <u>Scott Pratt</u>
Printed <u>JASON G</u>	Printed <u>SCOTT PRATT</u>	Printed <u>SCOTT PRATT</u>	Printed <u>SCOTT PRATT</u>
Company _____	Company <u>AAL</u>	Company <u>AAL</u>	Company _____
Reason _____	Reason _____	Reason _____	Reason _____
Date _____	Date <u>9/19/97</u>	Date _____	Date <u>19 Sept. 97</u>
Time _____	Time _____	Time _____	Time <u>14:30</u>
<u>11:45</u>			

Method of Shipment: _____	After analysis, samples are to be: <input type="checkbox"/> Disposed of (additional fee) <input type="checkbox"/> Stored (30 days max) <input type="checkbox"/> Stored over 30 days (additional fee) <input type="checkbox"/> Returned to customer
Shipment No. _____	
Special instructions: _____	
Comments: _____	

LABORATORY

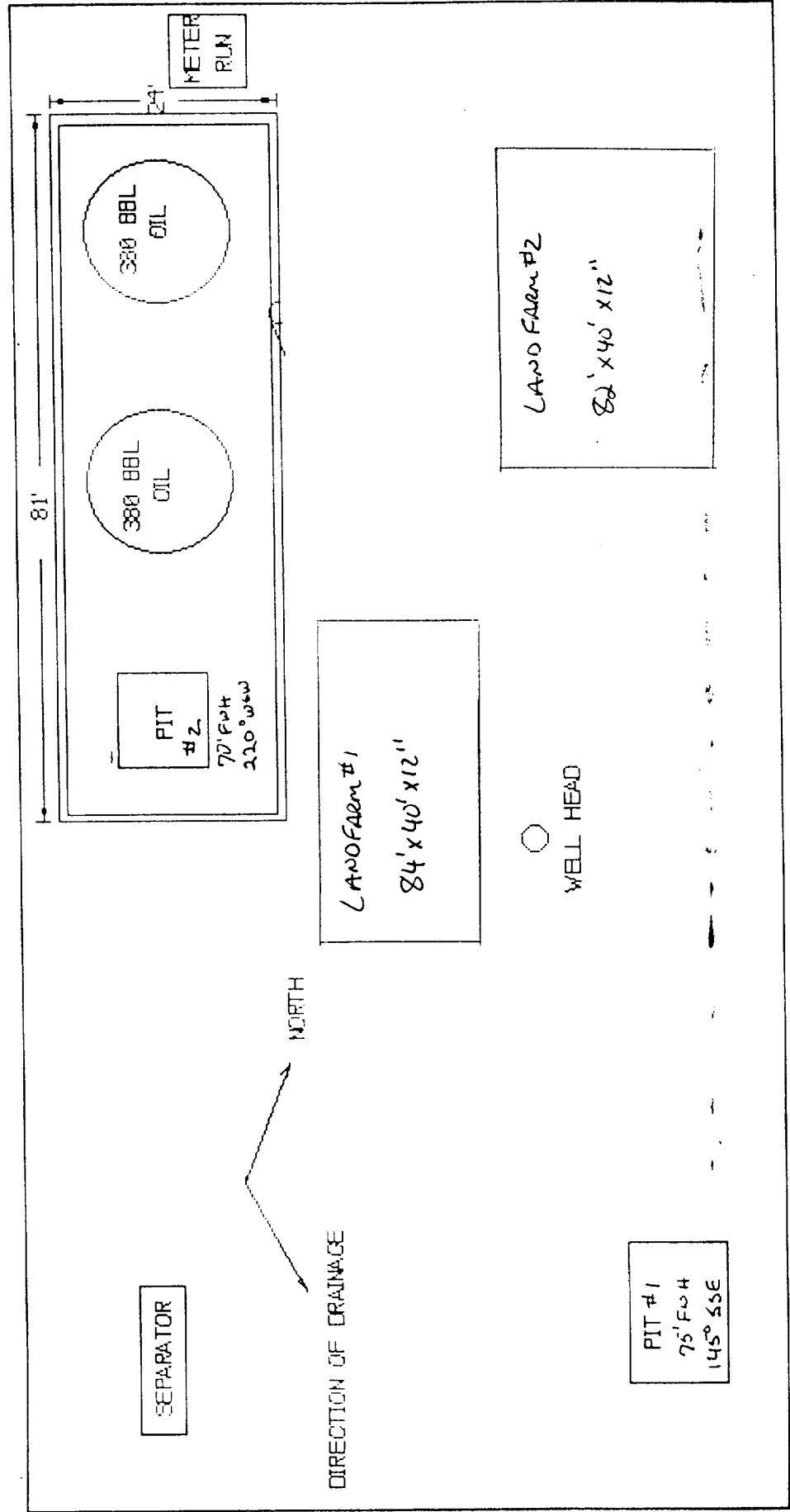
M W PETROLEUM

JICARILLA APACHE TRIBAL 118-24

SE/4 SE/4 (P) L 8888 #JAT A118

SECTION 25, TOWNSHIP 26N RANGE 3W

RIO ARriba COUNTY, NM 6/2/97 MG



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>M W PETROLUEM</u> Telephone <u>505-325-0318</u>	
Address: <u>2855 SOUTHSIDE RIVER ROAD /SUITE A/FARMINGTON, N.M. 87401-7947</u>	
Facility or Well Name: <u>JAT A118# 24 CELL # 1</u>	
Location: Unit or Qtr/Qtr Sec <u>P</u> SEC <u>25</u> T <u>26N</u> R <u>3W</u> County <u>RIO ARRIBA</u>	
Land Type <u>JIC. TRIBAL</u>	
Date Remediation Started: <u>9/11/97</u> Date Completed: <u>8/18/98</u>	
Remediation Method: Landfarmed <u>XXX</u> Approx. cubic yards <u>134</u>	
Composted <u> </u>	
Other <u>REMEDIATED SOIL TO BE PUT BACK IN PIT.</u>	
Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling Sampling Date: <u>8/18/98</u> Time: <u>10:15AM</u> Sample Results: Field Headspace (ppm) <u>0</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>9/14/98</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>Karen C. Marshall</u> DATE: <u>11-13-98</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>M W PETROLUEM</u>		Telephone <u>505-325-0318</u>	
Address: <u>2855 SOUTHSIDE RIVER ROAD /SUITE A/FARMINGTON, N.M. 87401-7947</u>			
Facility or Well Name: <u>JAT A118# 24 CELL # 2</u>			
Location: Unit or Qtr/Qtr Sec		<u>P</u>	<u>SEC 25 T 26N R 3W</u> County <u>RIO ARRIBA</u>
Land Type		<u>JIC. TRIBAL</u>	
Date Remediation Started: <u>9/15/97</u>		Date Completed: <u>8/18/98</u>	
Remediation Method: Landfarmed		<u>XXX</u>	Approx. cubic yards <u>132</u>
Composted			
Other		<u>REMEDIED SOIL TO BE PUT BACK IN PIT.</u>	
Depth to Groundwater: (pts) <u>0</u>		Final Closure Sampling Sampling Date: <u>8/18/98</u> Time: <u>10:30AM</u> Sample Results: Field Headspace (ppm) <u>0</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>9/14/98</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>Kurt C. Marshall</u>		DATE: <u>11-13-98</u>	

M W PETROLEUM/FARMINGTON DISTRICT SOIL REMEDIATIONS STATUS REPORT

REMEDIATION SITE JAT A118 # 24

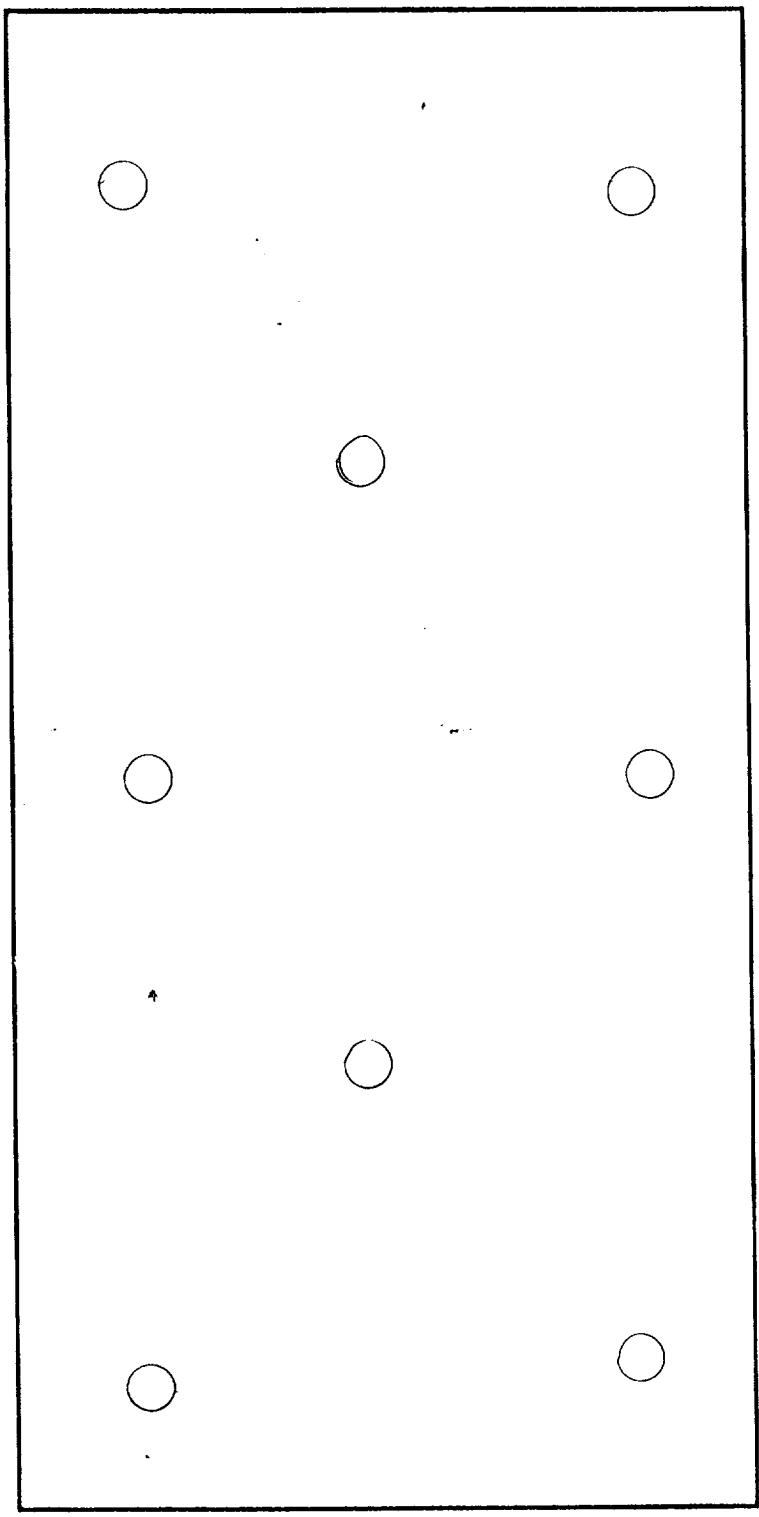
* AMOUNT OF SOIL UNDERGOING REMEDIATION 266 Yds.

CELL No. <u>1</u>	SampDATE 8/18/98	TPH ND	BTEX ND
DIMENSIONS(LxWxH) <u>84' X 40' X 12"</u>			
CELL LOCATION (dir. from well head) <u>WEST</u>			
* DATE BEGAN: <u>9/11/97</u>			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) <u>8/18/98</u>			
CELL No. <u>2</u>	SampDATE 8/18/98	TPH ND	BTEX ND
DIMENSIONS(LxWxH) <u>82' X 40' X 12"</u>			
CELL LOCATION (dir. from well head) <u>NORTH</u>			
* DATE BEGAN: <u>9/15/97</u>			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) <u>8/18/98</u>			
CELL No. <u>3</u>	SampDATE	TPH	BTEX
DIMENSIONS(LxWxH)			
CELL LOCATION (dir. from well head)			
* DATE BEGAN:			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm)			
REMEDICATION RECORD: (Date, Treatment, Tilling)			
9/23/97 TREAT SOIL CELLS WIYH 46-0-0 FERTILIZER,WATER,PLOW AND TILL.			
4/22/98 PLOWED SOIL CELLS.			
4/24/98 TILL SOIL CELLS.			
5/19/98 PLOWED SOIL CELLS. 8/4/98 WATER,PLOW AND TILL SOIL CELLS.			
5/20/98 TILL SOIL CELLS. 8/17/98 PLOW AND TILL SOIL CELLS.			
6/12/98 WATER,PLOW AND TILL SOIL CELLS.			
7/18/98 PLOW SOIL CELLS.			
7/23/98 TILL SOIL CELLS.			

From excavation reports.

WELL NAME: A118 #24 cell #2
SAMPLE DATE: 8-18-98
DIMENSIONS: 8' x 40' x 12"

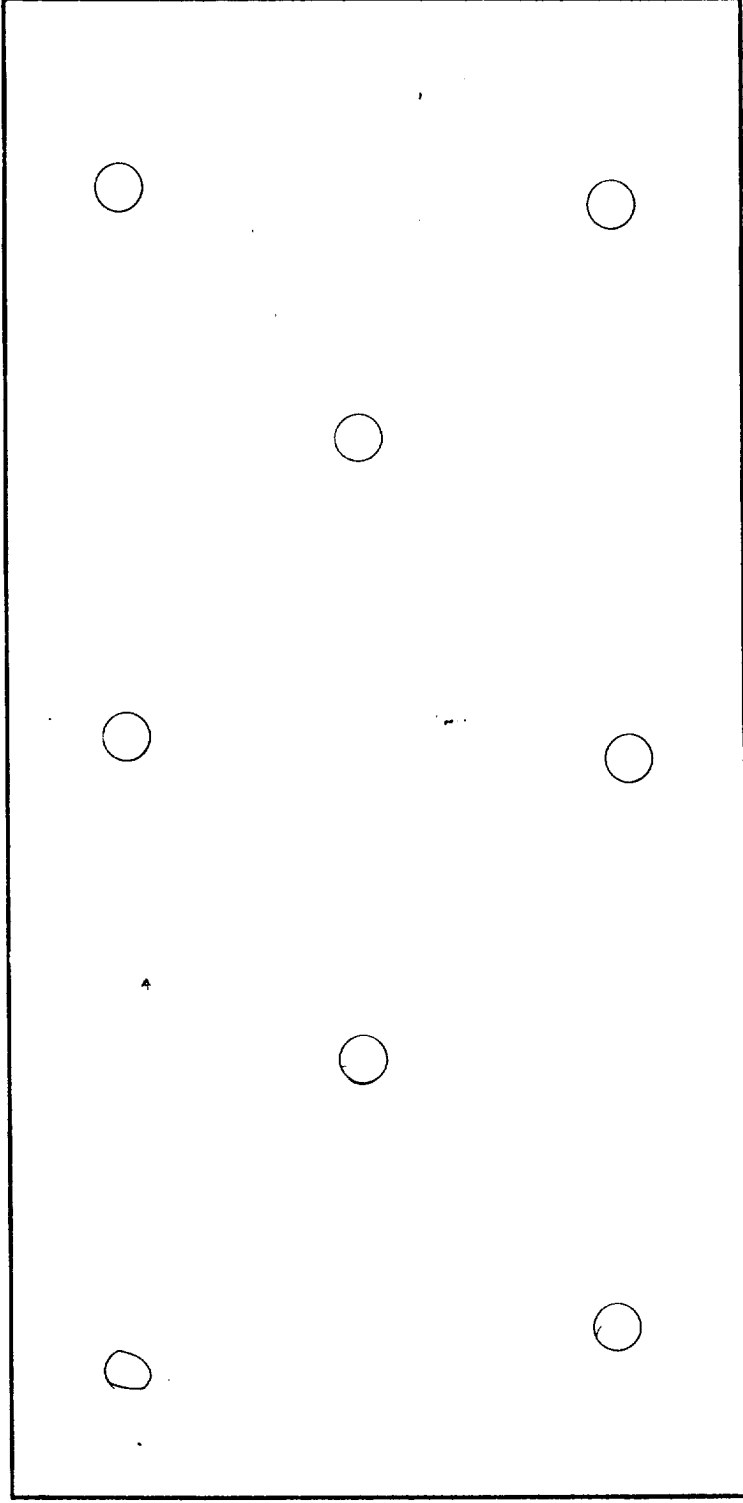
○ = SAMPLE AREA



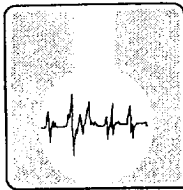
NOTES: ALL SAMPLES TAKEN 10" TO 12" INTO CELL.
8 point composite sample

WELL NAME: A118 #24 cell #1
SAMPLE DATE: 8-18-98
DIMENSIONS: 84' x 40' x 12"

○ = SAMPLE AREA



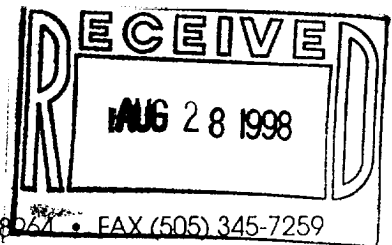
NOTES: ALL SAMPLES TAKEN 10" TO 12" INTO CELL.
8 point composite sample



ASSAIGAI ANALYTICAL LABORATORIES, INC.

7300 Jefferson, NE • Albuquerque, New Mexico 87109 • (505) 345-8064 • FAX (505) 345-7259

3332 Wedgewood, E-5 • El Paso, Texas 79925 • (915) 593-6000 • FAX (915) 593-7820
127 Eastgate Drive, 212-C • Los Alamos, New Mexico 87544 • (505) 662-2558



APACHE CORPORATION
attn: **JEFF CROSS**
2855 SOUTHSIDE RIVER RD STE A
FARMINGTON, NM 87401-7947

* explanation of codes

B	analyte detected in Method Blank
E	result is estimated
H	analyzed out of hold time
N	tentatively identified compound
S	subcontracted
1-9	see footnote

Assaigai Analytical Laboratories, Inc.

Certificate of Analysis

Client: **APACHE CORPORATION**
Project: **9808193 JICARILLA PIT CLOSURES**

William P. Biava
William P. Biava: President of Assaigai Analytical Laboratories, Inc.

Client Sample ID **A118 #24 CELL #1** Sample Matrix **SOIL** Sample Collected **08/18/98 10:15:00**

Fraction	QC Group	CAS #	Result	Units	Dilution Factor	Detection Limit	*	Sequence	Run Date
Test: SW846 8015A/8020A GRO / Purgeable Aromatics									
9808193-01A	X98392	71-43-2	Benzene	ND	mg / Kg	50	0.005	XG.1998.704-20	08/21/98
	X98392	100-41-4	Ethylbenzene	ND	mg / Kg	50	0.005	XG.1998.704-20	
	X98392	95-47-6	o-Xylene	ND	mg / Kg	50	0.005	XG.1998.704-20	
	X98392		p/m Xylenes	ND	mg / Kg	50	0.01	XG.1998.704-20	
	X98392	108-88-3	Toluene	ND	mg / Kg	50	0.005	XG.1998.704-20	
Test: SW846 8015A Diesel Range Organics by GC/FID									
9808193-01B	X98391		Diesel Range Organics	ND	mg / Kg	25	25	XG.1998.700-5	08/22/98

Client Sample ID **A118 #24 CELL #2** Sample Matrix **SOIL** Sample Collected **08/18/98 10:30:00**

Fraction	QC Group	CAS #	Result	Units	Dilution Factor	Detection Limit	*	Sequence	Run Date
Test: SW846 8015A/8020A GRO / Purgeable Aromatics									
9808193-02A	X98392	71-43-2	Benzene	ND	mg / Kg	50	0.005	XG.1998.704-17	08/21/98
	X98392	100-41-4	Ethylbenzene	ND	mg / Kg	50	0.005	XG.1998.704-17	
	X98392	95-47-6	o-Xylene	ND	mg / Kg	50	0.005	XG.1998.704-17	
	X98392		p/m Xylenes	ND	mg / Kg	50	0.01	XG.1998.704-17	
	X98392	108-88-3	Toluene	ND	mg / Kg	50	0.005	XG.1998.704-17	
Test: SW846 8015A Diesel Range Organics by GC/FID									
9808193-02B	X98391		Diesel Range Organics	ND	mg / Kg	25	25	XG.1998.700-6	08/22/98



Assaigai Analytical Laboratories, Inc.
Certificate of Analysis

Client: **APACHE CORPORATION**
Project: **9808193 JICARILLA PIT CLOSURES**

*** Sample specific analytical Detection Limit is determined by multiplying the sample Dilution Factor by the listed method Detection Limit. ***
*** Results relate only to the items tested. ***

LABORATORY