

District 3
1000 Rio Brazos Rd
Aztec, NM 87410
DEPUTY OIL & GAS INSPECTOR

JAN 29 1999

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
2040 S. PACHECO
Santa Fe, New Mexico 87505

OK BEE #2
Submit 1 copy to
Appropriate District
and 1 copy to

Santa Fe Office

RECEIVED
JAN 25 1999

PIT REMEDIATION AND CLOSURE REPORT

OIL CON. DIV.
DIST. 3

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 #7 Pit #1
Location: Unit or Qtr/Qtr Sec N 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 35' Width 30' Depth 3'
Pit Location: Ending Pit Dimensions: Length 50' Width 35' Depth 15'
(Attach diagram)
Reference: Wellhead XX Other _____
Footage from reference: 100'
Direction from reference: 224 Degrees _____ East _____ North
_____ X 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) 0

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) 0

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) 0

RANKING SCORE (TOTAL POINTS) 0

Date Remediation Started:

7/9/97

Date Completed:

7/14/97

Remediation Method:

(Check all appropriate sections)

Excavation

XXX

Approx. cubic yards

777

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 15' , took PID readings. Spread soil onlocation for remediation. Took soil samples.

Groundwater Encountered:

No

XX

Yes

Depth

Final Pit:

Sample location

5 point composite sample taken from pit sidewalls and pit

Closure Sampling:

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

Sample depth

15'8 to 10" into pit sidewalls 10" into pit bottom

Sample Date

7/14/97

Sample Time

9:30 AM

Sample results

Benzene

(ppm)

ND

Total BTEX

(ppm)

ND

Field Headspace

(ppm)

18.98

TPH

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.

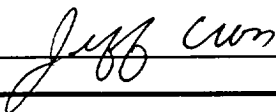
DATE

January 8, 1999

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


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

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

PIT REMEDIATION AND CLOSURE REPORT

Operator: <u>Apache Corporation \ MW Petroleum</u>		Telephone: <u>505-325-0318</u>	
Address: <u>2855 Southside River Road, Suite A, Farmington, NM 87401</u>			
Facility or Well Name:		<u>Jic Apache Tribal A118 #7 Pit #2</u>	
Location: Unit or Qtr/Qtr Sec	<u>N</u>	<u>Sec 25</u>	<u>T 26 N R 3W</u> County <u>Rio Arriba</u>
Pit Type: Separator:	<u>XX</u>	Dehydrator	Other
Land Type:	<u>Jicarilla Tribal</u>		
Beginning Pit Dimensions: Length <u>20'</u> Width <u>20'</u> Depth <u>3'</u>			
Pit Location: Ending Pit Dimensions:	Length <u>28'</u>	Width <u>25'</u>	Depth <u>12'</u>
(Attach diagram)	Reference: Wellhead	<u>XX</u>	Other
	Footage from reference:	<u>70'</u>	
	Direction from reference:	<u>310</u> Degrees	East North <u>X</u>
		<u>XX</u> West	South
Depth To Groundwater:		Less than 50 feet	(20 points)
(vertical distance from		50 feet to 99 feet	(10 points)
contaminants to seasonal		Greater than 100 feet	(0 points) <u>0</u>
high water elevation of			
groundwater)			
Wellhead Protection Area:		Yes	(20 points)
(Less than 200 feet from a private		No	(0 points) <u>0</u>
domestic water source, or; less than			
1000 feet from all other water sources)			
Distance To Surface Water:		Less than 200 feet	(20 points)
(Horizontal distance to perennial		200 feet to 1000 feet	(10 points)
lakes, ponds, rivers, streams, creeks,		Greater than 1000 feet	(0 points) <u>0</u>
irrigation canals and ditches)			
RANKING SCORE (TOTAL POINTS)			<u>0</u>

Date Remediation Started:		<u>8/7/97</u>	Date Completed:		<u>8/8/97</u>
Remediation Method: (Check all appropriate sections)		Excavation <u>XXX</u>	Approx. cubic yards		<u>233</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 12' , 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>5 point composite sample taken from pit sidewalls and pit</u>			
Closure Sampling: (in multiple samples, attach sample results and diagram of sample locations and depths)	Sample depth	<u>12'</u>	<u>8 to 10" into pit sidewalls 10" into pit bottom</u>		
	Sample Date	<u>8/8/97</u>	Sample Time	<u>10:00 AM</u>	
	Sample results				
	Benzene	(ppm)	<u>ND</u>		
	Total BTEX	(ppm)	<u>ND</u>		
	Field Headspace	(ppm)	<u>22.94</u>		
	TPH		<u>1100/side</u> <u>2900/BTM</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>January 8, 1999</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>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 # 7</u>		PIT # <u>1</u>																										
Location:	Unit or Qtr/Qtr Sec <u>N</u>	SEC <u>25</u>	T <u>26N</u> R <u>3W</u> County <u>RIO ARRIBA</u>																									
Pit Type:	Separator: <u> </u>	Dehydrator <u> </u>	Other <u>BLOWPIT</u>																									
Land Type: <u>JIC. TRIBAL</u>																												
<table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Pit Location:</td> <td style="width: 25%;">Pit Dimensions:</td> <td style="width: 20%;">Length <u>50'</u></td> <td style="width: 20%;">Width <u>35'</u></td> <td style="width: 20%;">Depth <u>15'</u></td> </tr> <tr> <td>(Attach diagram)</td> <td>Reference:</td> <td>Wellhead <u>XXX</u></td> <td>Other <u> </u></td> <td></td> </tr> <tr> <td></td> <td>Footage from reference:</td> <td colspan="3"><u>100'</u></td> </tr> <tr> <td></td> <td>Direction from reference:</td> <td><u>224</u> Degrees</td> <td><u> </u> East</td> <td>North <u> </u></td> </tr> <tr> <td></td> <td></td> <td><u>X</u> West</td> <td>of South</td> <td><u>XX</u></td> </tr> </table>				Pit Location:	Pit Dimensions:	Length <u>50'</u>	Width <u>35'</u>	Depth <u>15'</u>	(Attach diagram)	Reference:	Wellhead <u>XXX</u>	Other <u> </u>			Footage from reference:	<u>100'</u>				Direction from reference:	<u>224</u> Degrees	<u> </u> East	North <u> </u>			<u>X</u> West	of South	<u>XX</u>
Pit Location:	Pit Dimensions:	Length <u>50'</u>	Width <u>35'</u>	Depth <u>15'</u>																								
(Attach diagram)	Reference:	Wellhead <u>XXX</u>	Other <u> </u>																									
	Footage from reference:	<u>100'</u>																										
	Direction from reference:	<u>224</u> Degrees	<u> </u> East	North <u> </u>																								
		<u>X</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	(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: 7/9/97 Date Completed: 7-14-97

Remediation Method: Excavation XXX Approx. cubic yards 777
(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 15', took PID readings. spread soil on location for remediation. Took soil samples.

Groundwater Encountered: No XXX Yes _____ Depth _____

Final Pit: Sample location 5 point composite taken from pit sidewalls and pit bottom center.

Closure Sampling: (in multiple samples, attach sample results and diagram of sample locations and depths) Sample depth 15' 8" to 10" into pit side walls, 10" into pit bottom.

Sample Date 7/14/97 Sample Time 9:30AM
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>18.98</u>		Ethylbenzene	(ppb)	<u>NA</u>
	TPH	(ppm)	<u>ND</u>		Total Xylenes	(ppb)	<u>NA</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 11-25-98 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 C M DATE: 12-28-98

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 # 7</u>		PIT # <u>2</u>	
Location:	Unit or Qtr/Qtr Sec <u>N</u>	<u>SEC 25</u>	<u>T 26N</u> <u>R 3W</u> County <u>RIO ARRIBA</u>
Pit Type:	Separator: <u>XX</u>	Dehydrator <u> </u>	Other <u> </u>
Land Type:	<u>JIC. TRIBAL</u>		
Pit Location: (Attach diagram)	Pit Dimensions:	Length <u>28'</u>	Width <u>25'</u> Depth <u>12'</u>
	Reference:	Wellhead <u>XXX</u>	Other <u> </u>
	Footage from reference:	<u>70'</u>	
	Direction from reference:	<u>310</u> Degrees <u> </u> East	North <u>X</u>
		<u>XX</u> West	of South <u> </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: 8/7/97 Date Completed: 8-8-97

Remediation Method: Excavation XXX Approx. cubic yards 233
 (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 12', took PID readings. spread soil on location for remediation. Took soil samples.

Groundwater Encountered: No XXX Yes _____ Depth _____

Final Pit: Sample location 5 point composite taken from pit sidewalls and pit bottom center.

Closure Sampling: (in multiple samples, attach sample results and diagram of sample locations and depths) Sample depth 12' 8" to 10" into pit side walls, 10" into pit bottom.

Sample Date 8/8/97 Sample Time 10:00 AM

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>22.94</u>		Ethylbenzene	(ppb)	<u>NA</u>
	TPH	(ppm)	<u>1100\SIDE</u> <u>2900\BTM</u>		Total Xylenes	(ppb)	<u>NA</u>

Groundwater Sample: Yes _____ No XXX (If yes attach sample results)

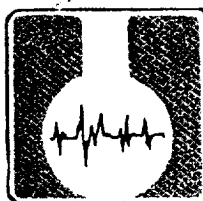
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DATE 11-25-98 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: K. C. Mammell DATE: 12-28-98



**ASSAIGAI
ANALYTICAL
LABORATORIES, INC.**

AUG 4 1997

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:
July 22, 1997 11:19

**CERTIFICATE OF ANALYSIS
RESULTS BY SAMPLE**

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

WORKORDER # : 9707176
WORK ID : JICARILLA PIT CLOSURES
CLIENT CODE : APA01
DATE RECEIVED : 07/18/97

ATTN: JEFF CROSS

Page: 1

Lab ID: 9707176-01A P.1 #1
Sample ID: AP 118 #7 SIDES

Collected: 07/14/97 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	07/21/97	SBTXME179
Toluene	ND	mg/kg	0.0050	100	07/21/97	SBTXME179
Ethylbenzene	ND	mg/kg	0.0050	100	07/21/97	SBTXME179
P-&m-Xylene	ND	mg/kg	0.010	100	07/21/97	SBTXME179
O-Xylene	ND	mg/kg	0.0050	100	07/21/97	SBTXME179

Lab ID: 9707176-01B P.1 #1
Sample ID: AP 118 #7 SIDES

Collected: 07/14/97 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	07/21/97	SDRO43

Lab ID: 9707176-02A P.1 #1
Sample ID: AP 118 #7 BOTTOM

Collected: 07/14/97 09:45:00
Matrix: SOIL

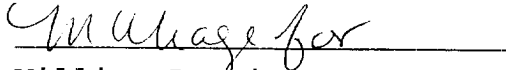
TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	100	07/21/97	SBTXME179
Toluene	ND	mg/kg	0.0050	100	07/21/97	SBTXME179
Ethylbenzene	ND	mg/kg	0.0050	100	07/21/97	SBTXME179
P-&m-Xylene	ND	mg/kg	0.010	100	07/21/97	SBTXME179
O-Xylene	ND	mg/kg	0.0050	100	07/21/97	SBTXME179



Lab ID: 9707176-02B Pit #1
Sample ID: AP 118 #7 BOTTOM

Collected: 07/14/97 09:45:00
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	07/21/97	SDRO43


William P. Biava
President

WORKORDER COMMENTS

DATE : 07/22/97
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.

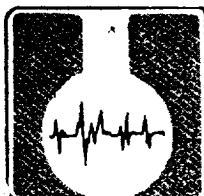
B = Analyte was also detected in laboratory method QC blank.

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.

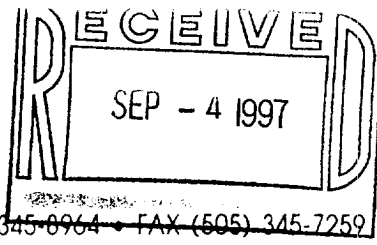
REPORT COMMENTS



**ASSAIGAI
ANALYTICAL
LABORATORIES, INC.**

7300 Jefferson, N.E. • Albuquerque, New Mexico 87109 • (505) 345-0964 • FAX (505) 345-7259

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



Report Generated:
August 22, 1997 14:41

**CERTIFICATE OF ANALYSIS
RESULTS BY SAMPLE**

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

WORKORDER # : 9708167
WORK ID : JICARILLA PIT CLOSURES
CLIENT CODE : APA01
DATE RECEIVED : 08/15/97

ATTN: JEFF CROSS

Page: 1

Lab ID: 9708167-01A

Sample ID: ~~AP18 #7 PIT #2 SIDES~~

Collected: ~~08/08/97~~ 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	08/20/97	SBTXME185
Toluene	ND	mg/kg	0.0050	100	08/20/97	SBTXME185
Ethylbenzene	ND	mg/kg	0.0050	100	08/20/97	SBTXME185
P-&m-Xylene	ND	mg/kg	0.010	100	08/20/97	SBTXME185
O-Xylene	ND	mg/kg	0.0050	100	08/20/97	SBTXME185

Lab ID: 9708167-01B

Sample ID: ~~AP18 #7 PIT #2 SIDES~~

Collected: ~~08/08/97~~ 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	ND	mg/Kg	25	25	08/20/97	SDRO047

Lab ID: 9708167-02A

Sample ID: ~~AP18 #7 PIT #2 BOTTOM~~

Collected: ~~08/08/97~~ 10:30:00

Matrix: SOIL

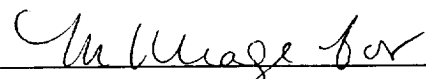
TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	100	08/20/97	SBTXME185
Toluene	ND	mg/kg	0.0050	100	08/20/97	SBTXME185
Ethylbenzene	ND	mg/kg	0.0050	100	08/20/97	SBTXME185
P-&m-Xylene	ND	mg/kg	0.010	100	08/20/97	SBTXME185
O-Xylene	ND	mg/kg	0.0050	100	08/20/97	SBTXME185



Lab ID: 9708167-02B
Sample ID: ~~AT18 #7~~ ~~PT18 #2~~ BOTTOM

Collected: ~~08/08/97~~ 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	200	mg/Kg	25	25	08/20/97	SDRO047


William P. Biava
President

WORKORDER COMMENTS

DATE : 08/22/97
WORKORDER:

DEFINITIONS/DATA QUALIFIERS

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

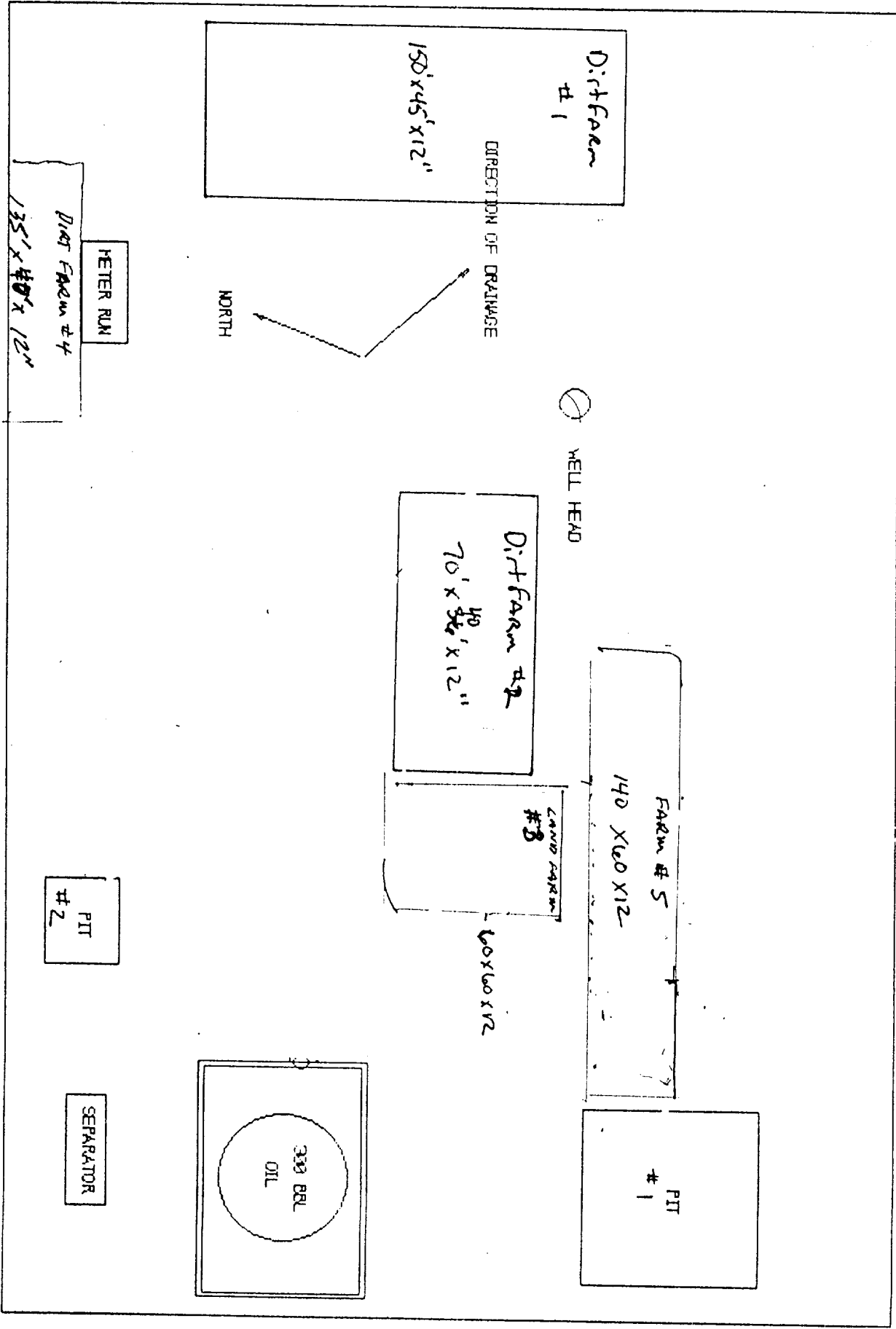
ND = Analyte "not detected" in analysis at the sample specific detection limit.
D_F = Sample "dilution factor"
NT = Analyte "not tested" per client request.
B = Analyte was also detected in laboratory method QC blank.
E = Analyte concentration (result) is an estimated value or exceeds analysis calibration 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

M W PETROLEUM, JOCARILLA APACHE 118 NUMBER 7
 SE/4 SW/4 Q1, SECTION 25, TOWNSHIP 28N, RANGE 3W
 RIO ARriba COUNTY, NEW MEXICO
 Revised 6/18/97 MD

Lease # JAT A118



M W PETROLEUM/FARMINGTON DISTRICT
PIT EXCAVATION AND CLOSURE REPORT

LOCATION JAT A118 # 7
PIT COUNT 2

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

START:		PIT #1 7/9/97			FINISH:		PIT #1 7/14/97	
DIMENSIONS		PIT # 2 8/7/9			PIT #2 8/8/97			
	W	L	D		W	L	D	CU YDS
Pit 1	30'	35'	3'	Pit 1	35'	50'	15'	777
Pit 2	20'	20'	3'	Pit 2	25'	28'	12'	233
Pit 3				Pit 3				
		Pit 1 @ 12'	Pit 2 @ 8'	Pit 3 @		Pit 1 @ 15'	Pit 2 @ 12'	Pit 3 @
P I D	Center	580	560		P I D	Center	88	30.5
	NW Corner	221	700			NW Corner	1.1	28
	NE Corner	248	520			NE Corner	0.5	20.1
	SW Corner	320	605			SW Corner	3.9	25.6
	SE Corner	388	425			SE Corner	1.4	10.5

NOTES:

7/9/97 START EXCAVATION ON PIT # 1,HEAVY STAINING AND ODOR TO 6'

7/10/97 CONTINUE EXCAVATION, LIGHT STAINING AND ODOR, PID READINGS HIGH @ 7'

7/11/97 EXCAVATE TO 12' LITTLE STAINING AND ODOR, PID READINGS STILL HIGH.

7/14/97 EXCAVATE PIT TO 15' , NO STAINING OR ODOR , PID READINGS G TOOK SOIL SAMPLES.

8/7/97 START EXCAVATION ON PIT # 2 , EXCAVATE TO 8' , LIGHT STAINING AND ODOR ,PID READINGS HIGH.

8/8/97 TOOK SOIL SAMPLES ON PIT 2

SAMP DATE		7/14/97	8/8/97						
		Pit 1 @ 15'	Pit 2 @ 12'	Pit 3 @	ANALYSIS RESULTS			PER LAB	Assaigai
P I D	Center	88	30.5		PIT	TPH	BETEX	WITNESS	DATE
	NW Corner	1.1	28		NO				
	NE Corner	0.5	20.1		1	ND	ND	J.C.	7/21/97
	SW Corner	3.9	25.6		2	1100\2900	ND	J.C.	8/20/97
	SE Corner	1.4	10.5		3				

RE-SAMPLE OR CELL(S) SAMPLE									
DATE:		Pit 1 @	Pit 2 @	Pit 3 @	ANALYSIS RESULTS			PER LAB	
P I D	Center				PIT	TPH	BETEX	WITNESS	DATE
	NW Corner				NO				
	NE Corner				1				
	SW Corner				2				
	SE Corner				3				

RE-SAMPLE OR CELL(S) SAMPLE									
DATE:		Pit 1 @	Pit 2 @	Pit 3 @	ANALYSIS RESULTS			PER LAB	
P I D	Center				PIT	TPH	BETEX	WITNESS	DATE
	NW Corner				NO				
	NE Corner				1				
	SW Corner				2				
	SE Corner				3				



SAMPLE DATE

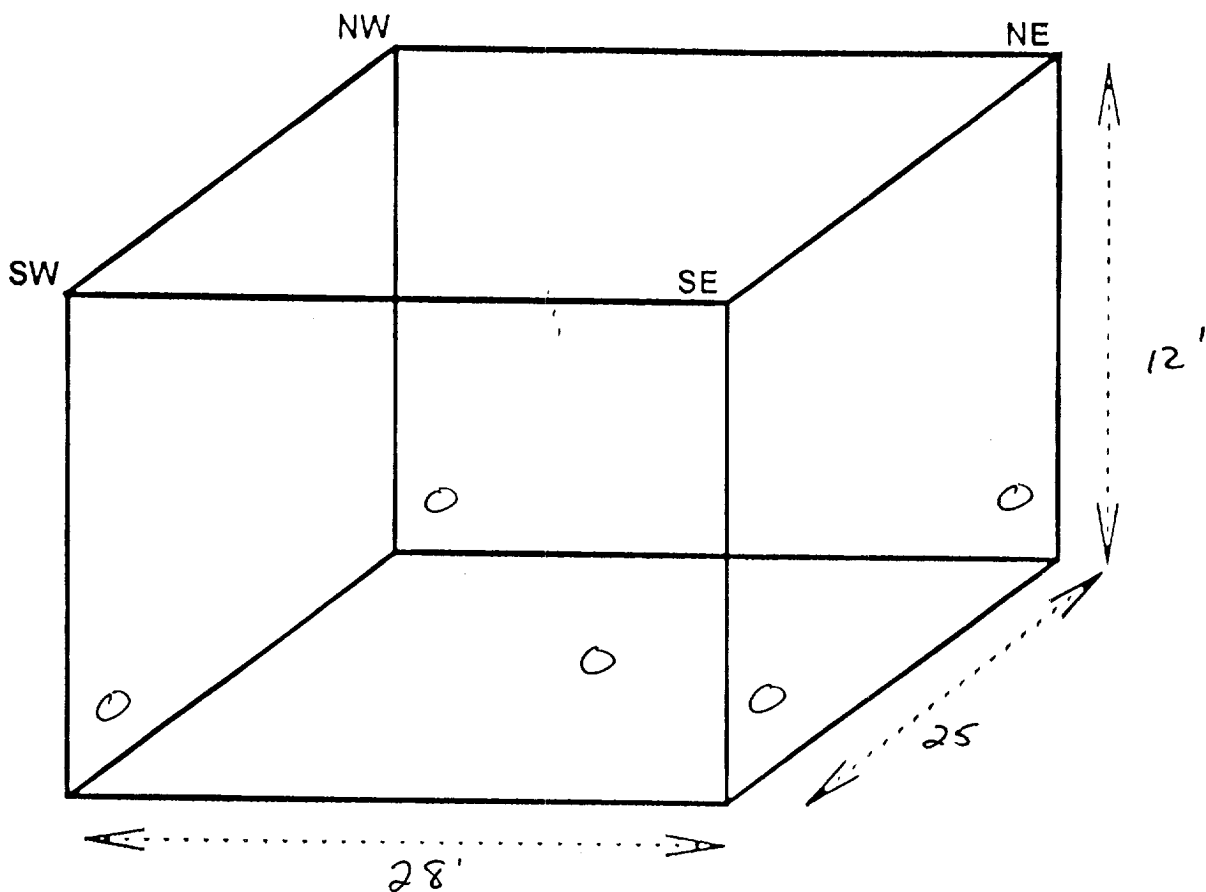
JA1 A118 #7 p.t #1
7-14-97

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#7 Pit #2

SAMPLE DATE 8-8-97

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

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

Submit 1 copy to
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and Oil & Gas Administration

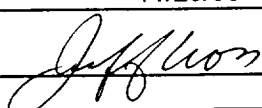
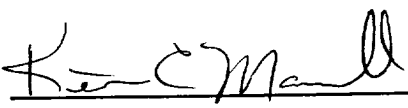
ON-SITE SOIL REMEDIATION REPORT

Operator: <u>MW 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 A 118 # 7 CELL # 1</u>	
Location: Unit or Qtr/Qtr Sec <u>N SEC 25 T 26 N R 3 W</u> County <u>RIO ARRIBA</u>	
Land Type <u>JIC. TRIBAL</u>	
Date Remediation Started: <u>7/9/97</u> Date Completed: <u>11/11/98</u>	
Remediation Method: Landfarmed <u>XXX</u> Approx. cubic yards <u>250</u>	
Composted <u> </u>	
Other <u>SOIL TO BE PUT BACK IN PIT</u>	
Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling Sampling Date: <u>11/11/98</u> Time: <u>11:00AM</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>11/25/98</u> PRINTED NAME <u>JEFF CROSS</u>	
SIGNATURE <u><i>Jeff Cross</i></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>use as Backfill</u>	
SIGNED: <u><i>Keith M...</i></u> DATE: <u>12-28-98</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>MW 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 A 118 # 7 CELL # 2</u>	
Location: Unit or Qtr/Qtr Sec <u>N SEC 25 T 26 N R 3 W</u> County <u>RIO ARRIBA</u>	
Land Type <u>JIC. TRIBAL</u>	
Date Remediation Started: <u>7/9/97</u> Date Completed: <u>11/11/98</u>	
Remediation Method: Landfarmed <u>XXX</u> Approx. cubic yards <u>104</u>	
Composted _____	
Other <u>SOIL TO BE PUT BACK IN PIT</u>	
Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling Sampling Date: <u>11/11/98</u> Time: <u>11:10AM</u> Sample Results: Field Headspace (ppm) <u>0</u> TPH (ppm) <u>ND</u> Method <u>M8015</u> Other BTEX \ SW846 , 8020A (ND)
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>11/25/98</u> PRINTED NAME <u>JEFF CROSS</u>	
SIGNATURE <u></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) <u>use as Backfill</u>	
SIGNED: <u></u> DATE: <u>12-28-98</u>	

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

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and Oil & Gas Administration

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>MW 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 A 118 # 7 CELL # 3</u>	
Location: Unit or Qtr/Qtr Sec <u>N SEC 25 T 26 N R 3 W</u> County <u>RIO ARRIBA</u>	
Land Type <u>JIC. TRIBAL</u>	
Date Remediation Started: <u>7/9/97</u> Date Completed: <u>11/11/98</u>	
Remediation Method: Landfarmed <u>XXX</u> Approx. cubic yards <u>133</u>	
Composted <u> </u>	
Other <u>SOIL TO BE PUT BACK IN PIT</u>	
Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling Sampling Date: <u>11/11/98</u> Time: <u>11:20AM</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>11/25/98</u> PRINTED NAME <u>JEFF CROSS</u>	
SIGNATURE <u><i>Jeff Cross</i></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>use as Backfill</u>	
SIGNED: <u><i>Karen C. Mando</i></u> DATE: <u>12-25-98</u>	

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

Submit 1 copy to
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and Oil & Gas Administration

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>MW 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 A 118 # 7 CELL # 4</u>	
Location: Unit or Qtr/Qtr Sec <u>N SEC 25 T 26 N R 3 W</u> County <u>RIO ARRIBA</u>	
Land Type <u>JIC. TRIBAL</u>	
Date Remediation Started: <u>7/9/97</u> Date Completed: <u>11/11/98</u>	
Remediation Method: Landfarmed <u>XXX</u> Approx. cubic yards <u>200</u>	
Composted _____	
Other <u>SOIL TO BE PUT BACK IN PIT</u>	
Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling Sampling Date: <u>11/11/98</u> Time: <u>11:30AM</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>11/25/98</u> PRINTED NAME <u>JEFF CROSS</u>	
SIGNATURE <u><i>Jeff Cross</i></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) <u>was as Backfill</u>	
SIGNED: <u><i>Ken C. Mendez</i></u> DATE: <u>12-28-98</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>MW 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 A 118 # 7 CELL # 5</u>	
Location: Unit or Qtr/Qtr Sec <u>N</u> SEC 25 T 26 N R 3 W County <u>RIO ARRIBA</u>	
Land Type <u>JIC. TRIBAL</u>	
Date Remediation Started: <u>7/9/97</u> Date Completed: <u>11/11/98</u>	
Remediation Method: Landfarmed <u>XXX</u> Approx. cubic yards <u>311</u>	
Composted _____	
Other <u>SOIL TO BE PUT BACK IN PIT</u>	
Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling Sampling Date: <u>11/11/98</u> Time: <u>11:40AM</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>11/25/98</u> PRINTED NAME <u>JEFF CROSS</u>	
SIGNATURE <u><i>Jeff Cross</i></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) <u>use as Backfill</u>	
SIGNED: <u><i>Kevin C. McNeill</i></u> DATE: <u>12-28-98</u>	

M W PETROLEUM/FARMINGTON DISTRICT SOIL REMEDIATIONS STATUS REPORT

REMEDIATION SITE JAT A118 # 7

* AMOUNT OF SOIL UNDERGOING REMEDIATION 1010 Yds.

CELL No. <u>1</u>	SampDATE 6/10/98	TPH 8800	BTEX ND
	11/11/98	ND	ND
DIMENSIONS(LxWxH) <u>150' X 45' X 12"</u>			
CELL LOCATION (dir. from well head) <u>EAST</u>			
* DATE BEGAN: <u>7/9/97</u>			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) <u>11-11-98</u>			
CELL No. <u>2</u>	SampDATE 6/10/98	TPH 4600	BTEX ND
	11/11/98	ND	ND
DIMENSIONS(LxWxH) <u>70' X 40' X 12"</u>			
CELL LOCATION (dir. from well head) <u>WEST</u>			
* DATE BEGAN: <u>7/9/97</u>			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) <u>11-11-98</u>			
CELL No. <u>3</u>	SampDATE 11/11/98	TPH ND	BTEX ND
DIMENSIONS(LxWxH) <u>60' x 60' x 12"</u>			
CELL LOCATION (dir. from well head) <u>WEST</u>			
* DATE BEGAN: <u>7-9-97</u>			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) <u>11-11-98</u>			
REMEDICATION RECORD: (Date, Treatment, Tilling)			
8/11/97 TREAT ALL CELLS WITH 46-0-0 FERTILIZER, WATER, PLOW AND TILL SOIL.			
4/23/98 PLOW AND TILL SOIL.			
5/17/98 PLOW AND TILL SOIL. 9/4/98 WATER, PLOW AND TILL SOIL.			
6/3/98 WATER, PLOW AND TILL SOIL. 9/24/98 PLOW AND TILL SOIL.			
6/9/98 PLOW AND TILL SOIL. 10/14/98 PLOW AND TILL SOIL.			
7/13/98 WATER, PLOW AND TILL SOIL.			
7/28/98 PLOW AND TILL SOIL.			
8/12/98 PLOW AND TILL SOIL.			

From excavation reports.

M W PETROLEUM/FARMINGTON DISTRICT SOIL REMEDIATIONS STATUS REPORT

REMEDIATION SITE JAT A118 # 7

* AMOUNT OF SOIL UNDERGOING REMEDIATION 1010 Yds.


CELL No. <u>4</u>	SampDATE 11/11/98	TPH <u>ND</u>	BTEX <u>ND</u>
DIMENSIONS(LxWxH) <u>135' X 40' X 12"</u>			
CELL LOCATION (dir. from well head) <u>NORTH</u>			
* DATE BEGAN: <u>7/9/97</u>			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) <u>11-11-98</u>			
CELL No. <u>5</u>	SampDATE 11/11/98	TPH <u>ND</u>	BTEX <u>ND</u>
DIMENSIONS(LxWxH) <u>140' X 60' X 12"</u>			
CELL LOCATION (dir. from well head) <u>SOUTH</u>			
* DATE BEGAN: <u>7/9/97</u>			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) <u>11-11-98</u>			
CELL No. _____	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) _____			
REMEDIATION RECORD: (Date, Treatment, Tilling)			

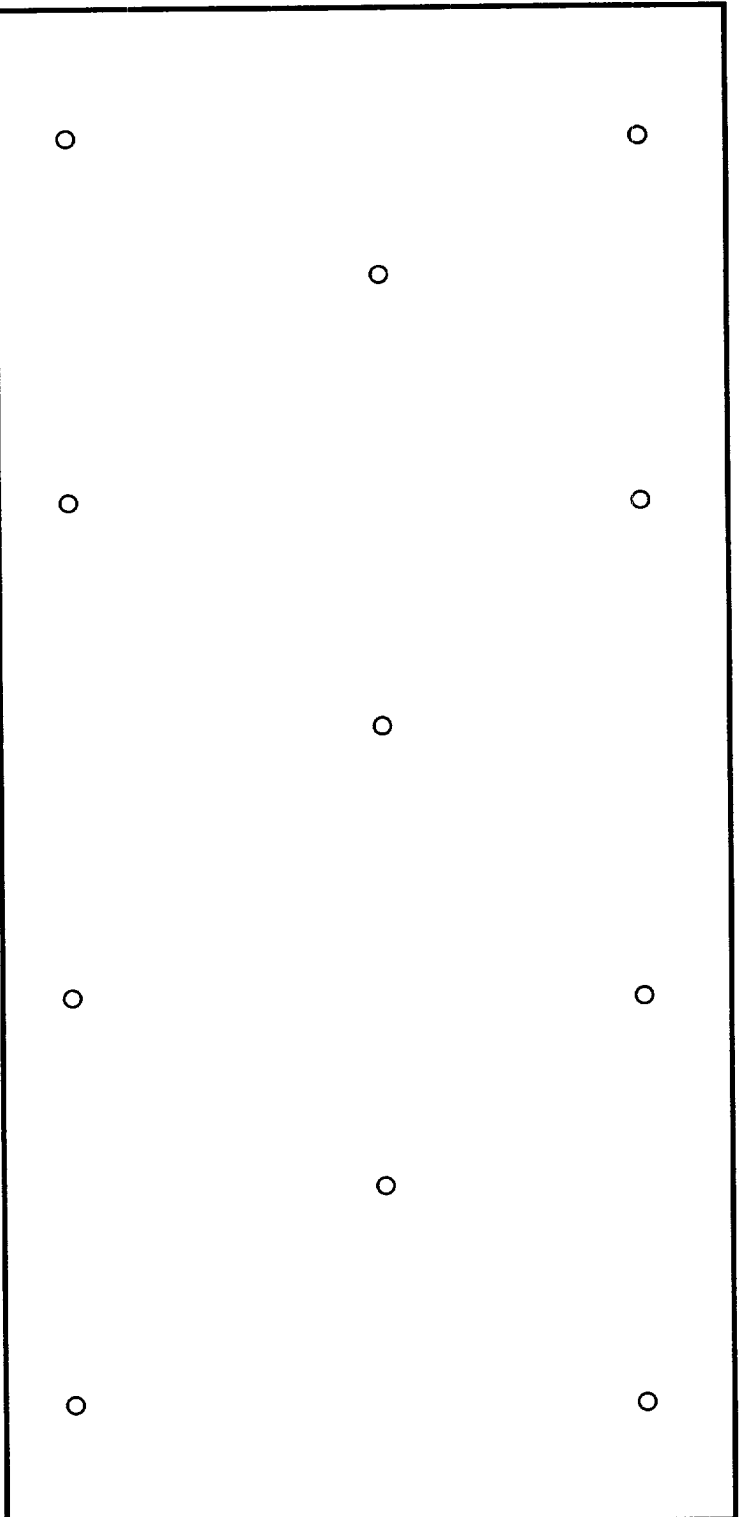
From excavation reports.

WELL NAME: JAT A118 # 7 CELL # 1

SAMPLE DATE: 11/11/98

DIMENSIONS: 150' X 45' X 12"

 = SAMPLE AREA



NOTES: ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

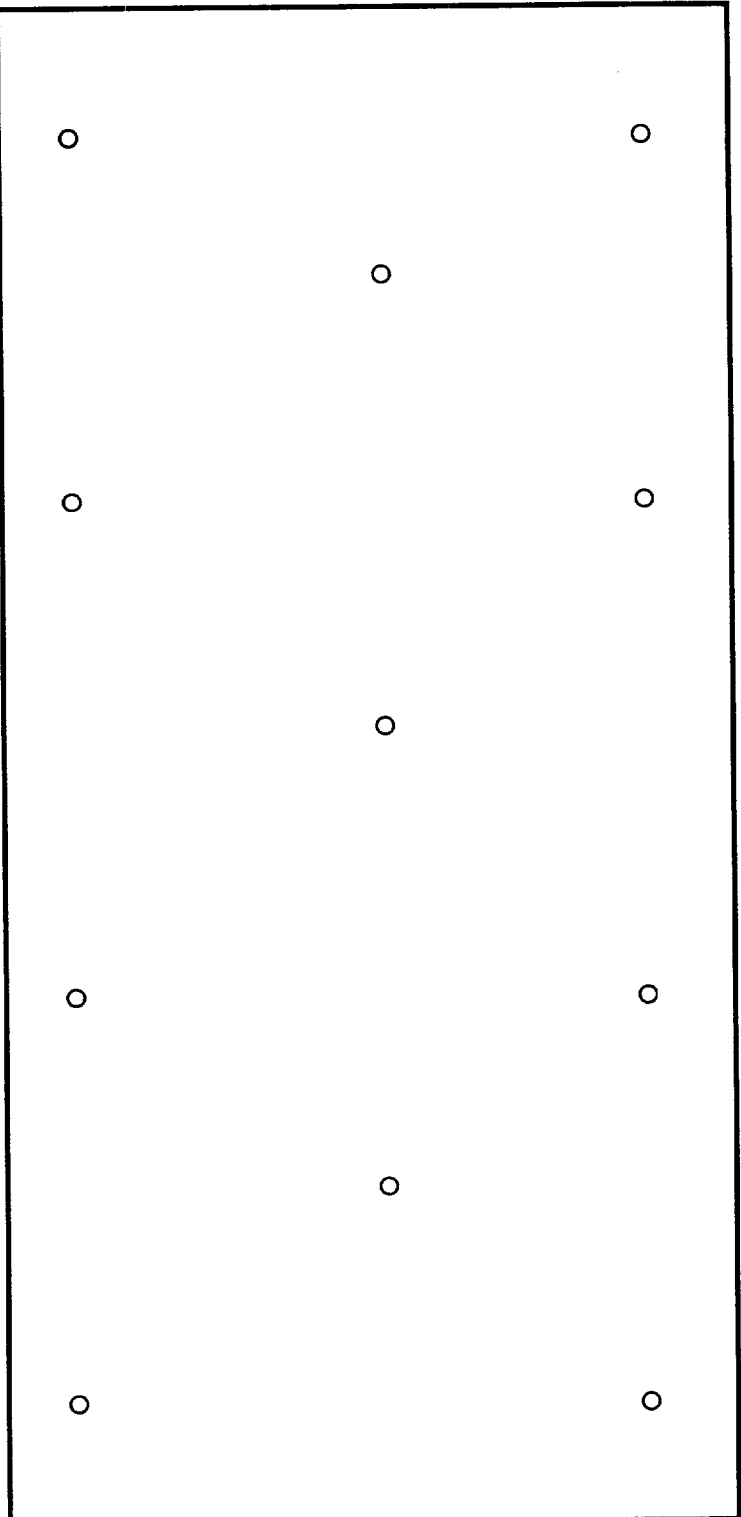
11 POINT COMPOSITE SAMPLE

WELL NAME: JAT A118 # 7 CELL # 2

SAMPLE DATE: 11/11/98

DIMENSIONS: 70' X 40' X 12"

 = SAMPLE AREA



NOTES: ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

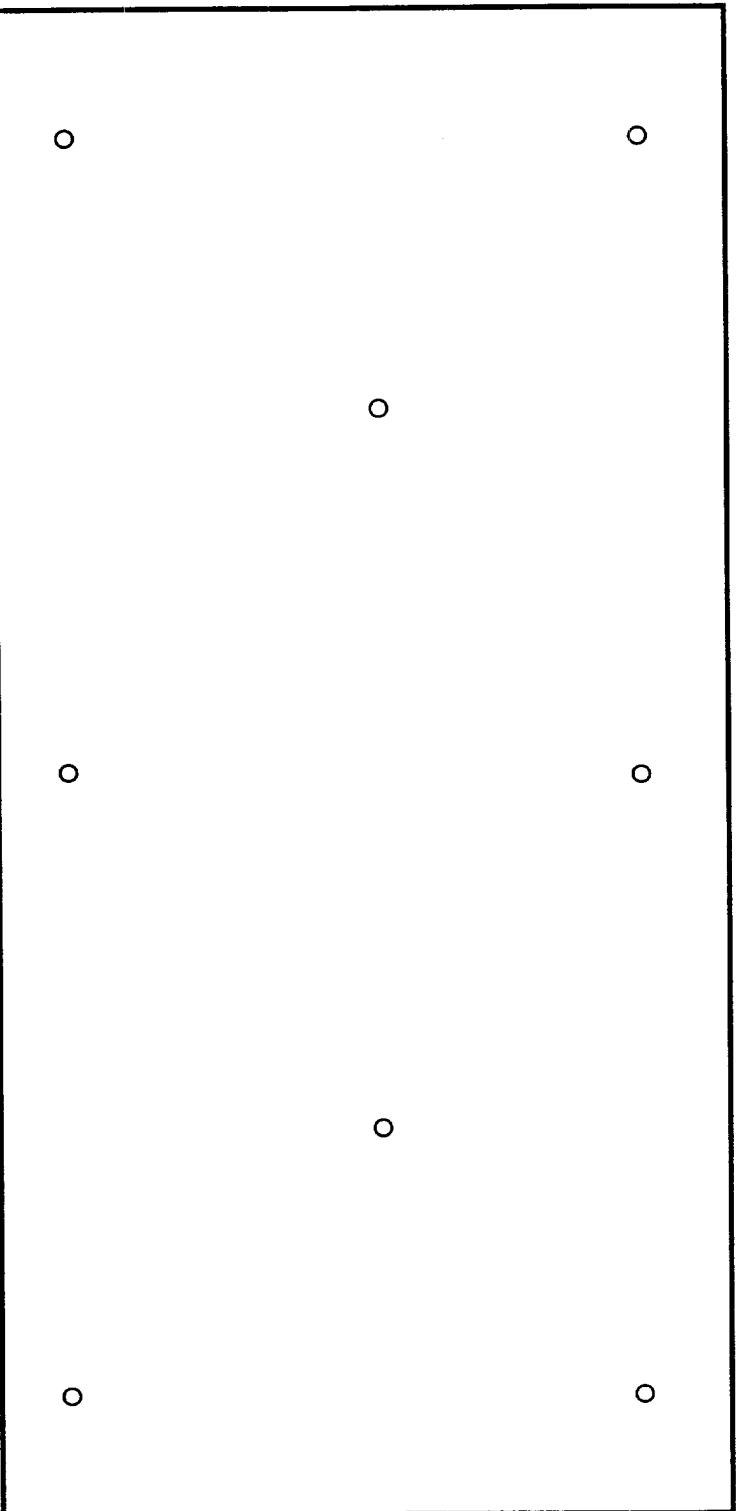
11 POINT COMPOSITE SAMPLE

WELL NAME: JAT A118 # 7 CELL # 3

SAMPLE DATE: 11/11/98

DIMENSIONS: 60' X 60' X 12"

 = SAMPLE AREA



NOTES: ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

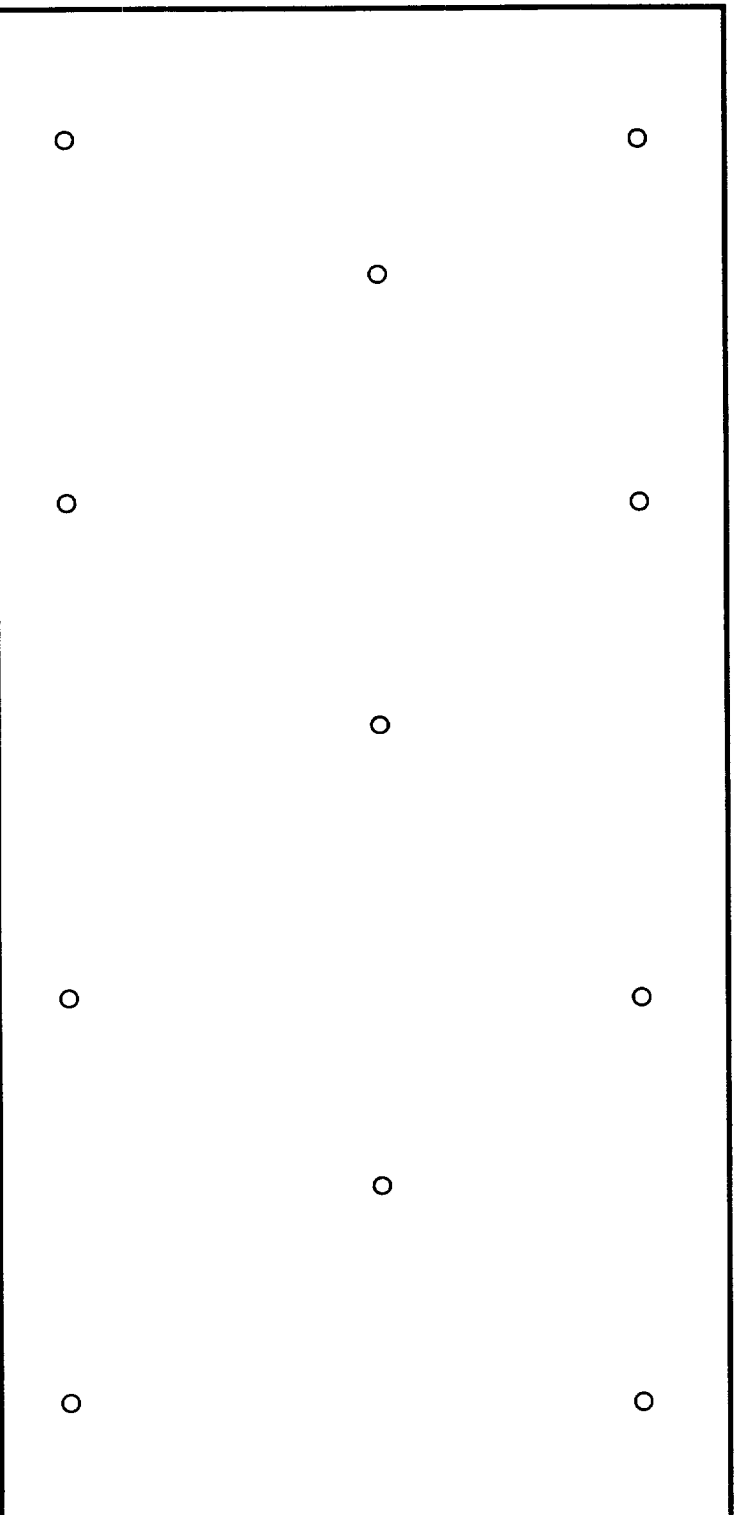
8 POINT COMPOSITE SAMPLE

WELL NAME: JAT A118 # 7 CELL # 4

SAMPLE DATE: 11/11/98

DIMENSIONS: 135' X 40' X 12"

 = SAMPLE AREA



NOTES: ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

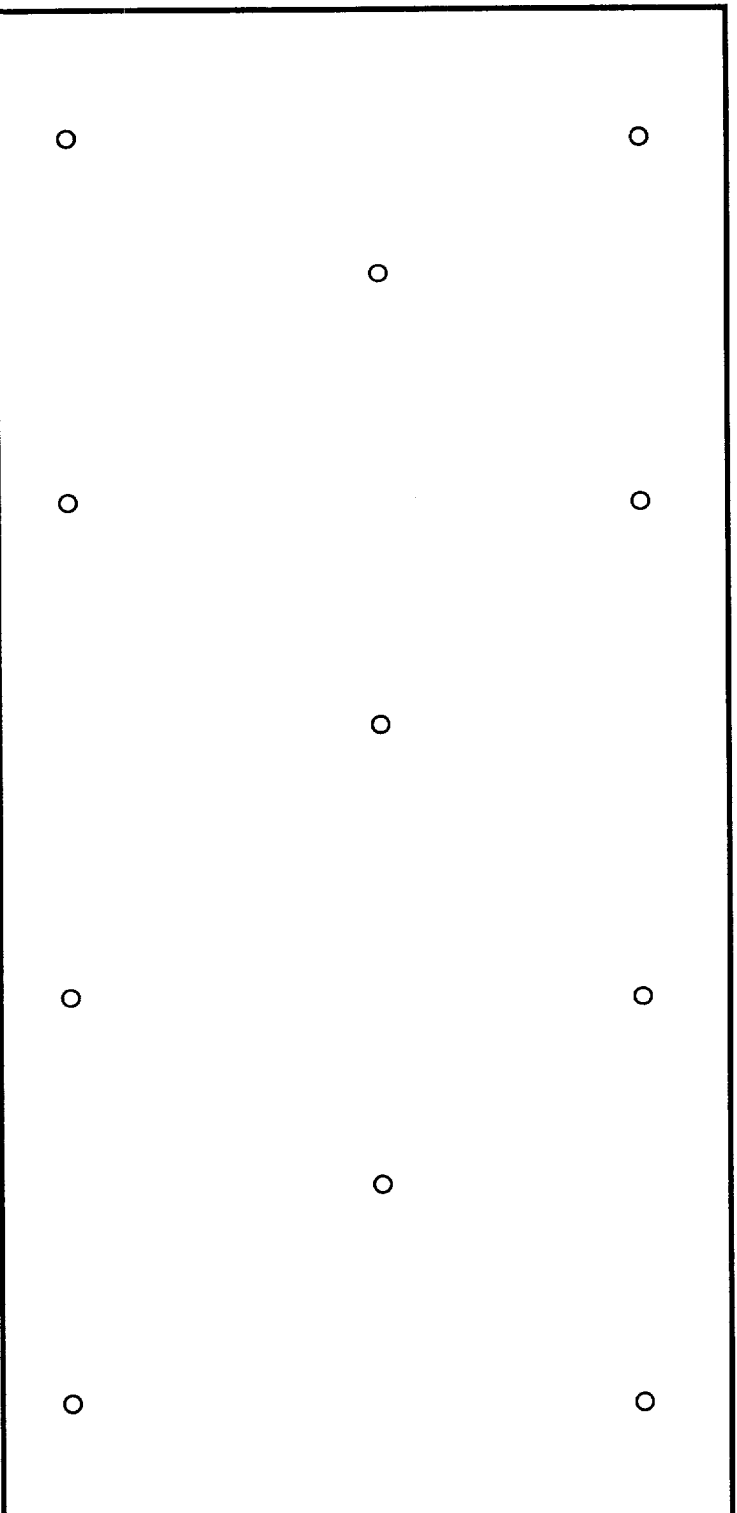
11 POINT COMPOSITE SAMPLE

WELL NAME: JAT A118 # 7 CELL # 5

SAMPLE DATE: 11/11/98

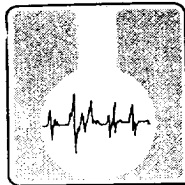
DIMENSIONS: 140' X 60' X 12"

 = SAMPLE AREA



NOTES: ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

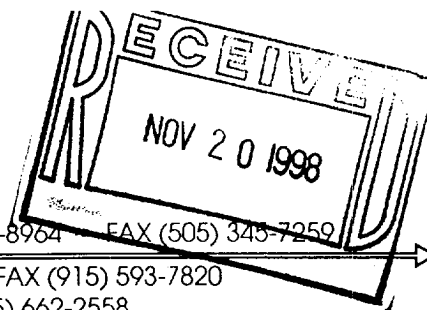
11 POINT COMPOSITE SAMPLE



ASSAIGAI ANALYTICAL LABORATORIES, INC.

7300 Jefferson, NE • 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
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: **9811110 JICARILLA PIT CLOSURES**

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

Client Sample ID **A118 #7 CELL #1** Sample Matrix **SOIL** Sample Collected **11/11/98 11:00:00**

Fraction	QC Group	CAS #	Result	Units	Dilution Factor	Detection Limit	Sequence	Run Date
Test: SW846 8010B/8020A Purgeable VOCs by GC/PID-ELCD								
9811110-01A	X98513	71-43-2	Benzene	ND	mg / Kg	250	0.005	XG.1998.996-20 11/13/98
	X98513	100-41-4	Ethylbenzene	ND	mg / Kg	250	0.005	XG.1998.996-20
	X98513	95-47-6	o-Xylene	ND	mg / Kg	250	0.005	XG.1998.996-20
	X98513		P/M-Xylenes	ND	mg / Kg	250	0.01	XG.1998.996-20
	X98513	108-88-3	Toluene	ND	mg / Kg	250	0.005	XG.1998.996-20
Test: SW846 8015A Diesel Range Organics by GC/FID								
9811110-01B	X98516		Diesel Range Organics	ND	mg / Kg	20	25	XG.1998.1009-6 11/16/98

Client Sample ID **A118 #7 CELL #2** Sample Matrix **SOIL** Sample Collected **11/11/98 11:10:00**

Fraction	QC Group	CAS #	Result	Units	Dilution Factor	Detection Limit	Sequence	Run Date
Test: SW846 8015A/8020A GRO / Purgeable Aromatics								
9811110-02A	X98517	71-43-2	Benzene	ND	mg / Kg	250	0.005	XG.1998.1000-7 11/13/98
	X98517	100-41-4	Ethylbenzene	ND	mg / Kg	250	0.005	XG.1998.1000-7
	X98517	95-47-6	o-Xylene	ND	mg / Kg	250	0.005	XG.1998.1000-7
	X98517		p/m Xylenes	ND	mg / Kg	250	0.01	XG.1998.1000-7
	X98517	108-88-3	Toluene	ND	mg / Kg	250	0.005	XG.1998.1000-7
Test: SW846 8015A Diesel Range Organics by GC/FID								
9811110-02B	X98516		Diesel Range Organics	ND	mg / Kg	20	25	XG.1998.1009-7 11/16/98



Assaigai Analytical Laboratories, Inc.
Certificate of Analysis

Client: **APACHE CORPORATION**
Project: **9811110 JICARILLA PIT CLOSURES**

Client Sample ID A118 #7 CELL #3	Sample Matrix SOIL	Sample Collected 11/11/98 11:20:00
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<u>Fraction</u>	<u>QC Group</u>	<u>CAS #</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>Detection Limit</u>	<u>Sequence</u>	<u>Run Date</u>
Test: SW846 8015A/8020A GRO / Purgeable Aromatics								
9811110-03A	X98517	71-43-2	Benzene	ND	mg / Kg	250	0.005	XG.1998.1000-8 11/13/98
	X98517	100-41-4	Ethylbenzene	ND	mg / Kg	250	0.005	XG.1998.1000-8
	X98517	95-47-6	o-Xylene	ND	mg / Kg	250	0.005	XG.1998.1000-8
	X98517		p/m Xylenes	ND	mg / Kg	250	0.01	XG.1998.1000-8
	X98517	108-88-3	Toluene	ND	mg / Kg	250	0.005	XG.1998.1000-8
Test: SW846 8015A Diesel Range Organics by GC/FID								
9811110-03B	X98516		Diesel Range Organics	ND	mg / Kg	20	25	XG.1998.1009-8 11/16/98

Client Sample ID A118 #7 CELL #4	Sample Matrix SOIL	Sample Collected 11/11/98 11:30:00
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<u>Fraction</u>	<u>QC Group</u>	<u>CAS #</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>Detection Limit</u>	<u>Sequence</u>	<u>Run Date</u>
Test: SW846 8015A/8020A GRO / Purgeable Aromatics								
9811110-04A	X98517	71-43-2	Benzene	ND	mg / Kg	250	0.005	XG.1998.1000-9 11/13/98
	X98517	100-41-4	Ethylbenzene	ND	mg / Kg	250	0.005	XG.1998.1000-9
	X98517	95-47-6	o-Xylene	ND	mg / Kg	250	0.005	XG.1998.1000-9
	X98517		p/m Xylenes	ND	mg / Kg	250	0.01	XG.1998.1000-9
	X98517	108-88-3	Toluene	ND	mg / Kg	250	0.005	XG.1998.1000-9
Test: SW846 8015A Diesel Range Organics by GC/FID								
9811110-04B	X98516		Diesel Range Organics	ND	mg / Kg	20	25	XG.1998.1009-9 11/16/98

Client Sample ID A118 #7 CELL #5	Sample Matrix SOIL	Sample Collected 11/11/98 11:40:00
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<u>Fraction</u>	<u>QC Group</u>	<u>CAS #</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>Detection Limit</u>	<u>Sequence</u>	<u>Run Date</u>
Test: SW846 8015A/8020A GRO / Purgeable Aromatics								
9811110-05A	X98517	71-43-2	Benzene	ND	mg / Kg	250	0.005	XG.1998.1000-10 11/13/98
	X98517	100-41-4	Ethylbenzene	ND	mg / Kg	250	0.005	XG.1998.1000-10
	X98517	95-47-6	o-Xylene	ND	mg / Kg	250	0.005	XG.1998.1000-10
	X98517		p/m Xylenes	ND	mg / Kg	250	0.01	XG.1998.1000-10
	X98517	108-88-3	Toluene	ND	mg / Kg	250	0.005	XG.1998.1000-10
Test: SW846 8015A Diesel Range Organics by GC/FID								
9811110-05B	X98516		Diesel Range Organics	ND	mg / Kg	20	25	XG.1998.1012-2 11/17/98

CHAIN OF CUSTODY RECORD

ALBUQUERQUE, N.M. 87101
(505) 345-8964

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

ANALYTICAL
LABORATORIES, INC.

Lab Job no. 1110 Date _____

Page _____ of _____

Client Apache Corporation

Project Manager / Contact Jeff Cross

Address 2855 Southside River RD, Ste. A Telephone No. (505) 774-6643

City / State / Zip Farmington, NM 87401-7947 Fax No. (505) 774-6624

Project Name / Number _____

Samplers: (Signature) Danny Butcher

Contract / Purchase Order / Quote _____

ALL FRACTION NUMBER	Field Sample Number / Location	Date	Time	Sample Type	Type / Size of Container	Preservation Info.		No. of Containers	Analysis Required	Remarks
						Temp.	Chemical			
1A	A118 #7 Cell #1	11/11/98	11:00	SOIL	4 oz glass		ICE	✓		
1B	1		"		4 oz glass			✓		
2A	2		11:10					✓		
2B	2		"					✓		
3A	3		11:20					✓		
3B	3		"					✓		
4A	4		11:30					✓		
4B	4		"					✓		
5A	5		11:40					✓		
5B	5		"					✓		

Relinquished by:		Received by:		Relinquished by:		Received by:	
Signature	Date	Signature	Date	Signature	Date	Signature	Date
<u>Danny Butcher</u>	<u>11/11/98</u>	<u>Don. B. Briggs</u>	<u>11/12/98</u>	<u>Don. B. Briggs</u>	<u>11/12/98</u>	<u>Rebecca L. L...</u>	<u>11/12/98</u>
Printed <u>DANNY BUTCHER</u>	Time <u>1105</u>	Printed <u>Don. B. Briggs</u>	Time	Printed <u>Rebecca L. L...</u>	Time	Company	Reason
Company <u>APACHE CORP</u>		Company <u>DAL JSC</u>		Company		Reason	
Reason		Reason		Reason		Reason	

After analysis, samples are to be:

☐ Disposed of (additional)

☐ Stored (30 days max)

☐ Stored over 30 days (advise)

☐ Returned to customer

LABORATORY