

District III  
1000 Rio Arriba Rd  
Albuquerque, NM 87102  
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

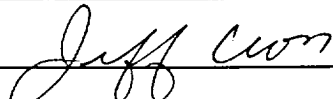
OIL CONSERVATION DIVISION  
2040 S. PACHECO  
Santa Fe, New Mexico 87505

FEB 08 1999

**PIT REMEDIATION AND CLOSURE REPORT**

RECEIVED  
DEC - 9 1998  
OIL & GAS DIV.

Operator: <b>Apache Corporation \ MW Petroleum</b>		Telephone: <b>505-325-0318</b>																													
Address: <b>2855 Southside River Road, Suite A, Farmington, NM 87401</b>																															
Facility or Well Name:		<b>Jic Apache Tribal A118 #15 Pit #1</b>																													
Location: Unit or Qtr/Qtr Sec		<b>P Sec 25 T 26 N R 3W</b> County <b>Rio Arriba</b>																													
Pit Type: Separator: <b>XX</b>		Dehydrator _____ Other _____																													
Land Type: <b>Jicarilla Tribal</b>																															
<table border="0"><tr><td>Beginning Pit Dimensions:</td><td>Length <b>12'</b></td><td>Width <b>12'</b></td><td>Depth <b>5'</b></td></tr><tr><td>Pit Location: Ending Pit Dimensions:</td><td>Length <b>20'</b></td><td>Width <b>20'</b></td><td>Depth <b>10'</b></td></tr><tr><td colspan="4">(Attach diagram)</td></tr><tr><td>Reference:</td><td>Wellhead <b>XX</b></td><td colspan="2">Other _____</td></tr><tr><td colspan="2">Footage from reference:</td><td colspan="2"><b>100'</b></td></tr><tr><td colspan="2">Direction from reference:</td><td colspan="2"><b>212</b> Degrees _____ East _____ North _____</td></tr><tr><td colspan="2"></td><td colspan="2"><b>X</b> West _____ South <b>XX</b></td></tr></table>				Beginning Pit Dimensions:	Length <b>12'</b>	Width <b>12'</b>	Depth <b>5'</b>	Pit Location: Ending Pit Dimensions:	Length <b>20'</b>	Width <b>20'</b>	Depth <b>10'</b>	(Attach diagram)				Reference:	Wellhead <b>XX</b>	Other _____		Footage from reference:		<b>100'</b>		Direction from reference:		<b>212</b> Degrees _____ East _____ North _____				<b>X</b> West _____ South <b>XX</b>	
Beginning Pit Dimensions:	Length <b>12'</b>	Width <b>12'</b>	Depth <b>5'</b>																												
Pit Location: Ending Pit Dimensions:	Length <b>20'</b>	Width <b>20'</b>	Depth <b>10'</b>																												
(Attach diagram)																															
Reference:	Wellhead <b>XX</b>	Other _____																													
Footage from reference:		<b>100'</b>																													
Direction from reference:		<b>212</b> Degrees _____ East _____ North _____																													
		<b>X</b> West _____ South <b>XX</b>																													
<b>Depth To Groundwater:</b> (vertical distance from contaminants to seasonal high water elevation of groundwater)		<table border="0"><tr><td>Less than 50 feet</td><td>(20 points)</td><td>_____</td></tr><tr><td>50 feet to 99 feet</td><td>(10 points)</td><td>_____</td></tr><tr><td>Greater than 100 feet</td><td>( 0 points)</td><td><b>0</b></td></tr></table>		Less than 50 feet	(20 points)	_____	50 feet to 99 feet	(10 points)	_____	Greater than 100 feet	( 0 points)	<b>0</b>																			
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50 feet to 99 feet	(10 points)	_____																													
Greater than 100 feet	( 0 points)	<b>0</b>																													
<b>Wellhead Protection Area:</b> (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)		<table border="0"><tr><td>Yes</td><td>(20 points)</td><td>_____</td></tr><tr><td>No</td><td>( 0 points)</td><td><b>0</b></td></tr></table>		Yes	(20 points)	_____	No	( 0 points)	<b>0</b>																						
Yes	(20 points)	_____																													
No	( 0 points)	<b>0</b>																													
<b>Distance To Surface Water:</b> (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)		<table border="0"><tr><td>Less than 200 feet</td><td>(20 points)</td><td>_____</td></tr><tr><td>200 feet to 1000 feet</td><td>(10 points)</td><td>_____</td></tr><tr><td>Greater than 1000 feet</td><td>( 0 points)</td><td><b>0</b></td></tr></table>		Less than 200 feet	(20 points)	_____	200 feet to 1000 feet	(10 points)	_____	Greater than 1000 feet	( 0 points)	<b>0</b>																			
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200 feet to 1000 feet	(10 points)	_____																													
Greater than 1000 feet	( 0 points)	<b>0</b>																													
		RANKING SCORE (TOTAL POINTS) <b>0</b>																													

<b>Date Remediation Started:</b>		<u>9/16/97</u>	<b>Date Completed:</b>		<u>9/18/97</u>
<b>Remediation Method:</b> (Check all appropriate sections)		Excavation <u>XXX</u>	Approx. cubic yards		<u>140</u>
		Landfarmed <u>XX</u>	Insitu Bioremediation		
		Other _____			
<b>Remediation Location:</b> (i.e. landfarmed onsite, name and location of offsite facility)		Onsite <u>XX</u>	Offsite _____		
<b>General Description of Remedial Action:</b> <u>Excavate pit to 10' , took PID readings. Spread soil on</u>					
<u>location for remediation. Took soil samples.</u>					
_____					
_____					
_____					
<b>Groundwater Encountered:</b>		No <u>XX</u>	Yes _____	Depth _____	
<b>Final Pit:</b> Sample location <u>4 point composite sample taken from pit sidewalls. Grab sample</u>					
<b>Closure Sampling:</b> (in multiple samples, attach sample results and diagram of sample locations and depths) taken from pit bottom center.					
		Sample depth <u>10'</u>	<u>8 to 10" into pit sidewalls 10" into pit bottom</u>		
		Sample Date <u>9/18/97</u>	Sample Time		<u>2:30 PM</u>
		Sample results			
		Benzene	(ppm)	<u>ND</u>	
		Total BTEX	(ppm)	<u>ND</u>	
		Field Headspace	(ppm)	<u>39.34</u>	
		TPH	<u>side/ND</u>		
			<u>Btm/ND</u>		
<b>Groundwater Sample:</b>		Yes _____	No <u>XX</u>	(If yes attach sample results)	
<b>I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.</b>					
<b>DATE</b>		<u>December 1, 1998</u>	<b>PRINTED NAME</b>		<u>Jeff Cross</u>
<b>SIGNATURE</b>		<u></u>	<b>AND TITLE</b>		<u>Project Manager</u>

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

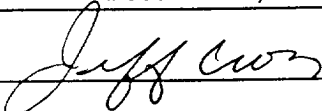
## PIT REMEDIATION AND CLOSURE REPORT

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 #15 Pit #2</u>					
Location: Unit or Qtr/Qtr Sec	<u>P</u>	<u>Sec 25</u>	<u>T 26 N</u>	<u>R 3W</u>	County	<u>Rio Arriba</u>	
Pit Type: Separator:	<u>                    </u>	Dehydrator	<u>                    </u>	Other	<u>Tank Drain</u>		
Land Type:	<u>Jicarilla Tribal</u>						
Beginning Pit Dimensions:		Length	<u>12'</u>	Width	<u>12'</u>	Depth	<u>5'</u>
Pit Location: Ending Pit Dimensions:	Length	<u>20'</u>	Width	<u>20'</u>	Depth	<u>15'</u>	
(Attach diagram)		Reference:	Wellhead	<u>XX</u>	Other	<u>                    </u>	
Footage from reference:		<u>75'</u>					
Direction from reference:		<u>266</u>	Degrees	<u>                    </u>	East	North	<u>                    </u>
		<u>X</u>	West	<u>                    </u>	South	<u>XX</u>	
<b>Depth To Groundwater:</b>		Less than 50 feet		(20 points)		<u>                    </u>	
(vertical distance from		50 feet to 99 feet		(10 points)		<u>                    </u>	
contaminants to seasonal		Greater than 100 feet		(0 points)		<u>0</u>	
high water elevation of							
groundwater)							
<b>Wellhead Protection Area:</b>		Yes		(20 points)		<u>                    </u>	
(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)							
<b>Distance To Surface Water:</b>		Less than 200 feet		(20 points)		<u>                    </u>	
(Horizontal distance to perennial		200 feet to 1000 feet		(10 points)		<u>                    </u>	
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>

<b>Date Remediation Started:</b>	<u>9/18/98</u>	<b>Date Completed:</b>	<u>9/18/97</u>
<b>Remediation Method:</b> (Check all appropriate sections)	Excavation <u>XXX</u>	Approx. cubic yards	<u>210</u>
	Landfarmed <u>XX</u>	Insitu Bioremediation	
	Other		
<b>Remediation Location:</b> (i.e. landfarmed onsite, name and location of offsite facility)	Onsite <u>XX</u>	Offsite	
<b>General Description of Remedial Action:</b> <u>Excavate pit to 15' , took PID readings. Spread soil on</u>			
<u>location for remediation. Took soil samples.</u>			
<b>Groundwater Encountered:</b>	No <u>XX</u>	Yes	Depth

<b>Final Pit:</b>	Sample location	<u>4 point composite sample taken from pit sidewalls. Grab sample</u>	
<b>Closure Sampling:</b> (in multiple samples, attach sample results and diagram of sample locations and depths)		<u>taken from pit bottom center.</u>	
	Sample depth	<u>15'</u>	<u>8 to 10" into pit sidewalls 10" into pit bottom</u>
	Sample Date	<u>9/18/97</u>	Sample Time <u>5:00 PM</u>
	Sample results		
	Benzene	(ppm)	<u>ND</u>
	Total BTEX	(ppm)	<u>7.5</u>
	Field Headspace	(ppm)	<u>38.8</u>
	TPH		<u>side/ND</u>
			<u>Btm/1800</u>
<b>Groundwater Sample:</b>	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		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 # 15 PIT # 1</u>			
Location:	Unit or Qtr/Qtr Sec <u>P</u>	<u>SEC25</u>	T <u>26N</u> R <u>3 W</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>20'</u>	Width <u>20'</u> Depth <u>10'</u>
	Reference:	Wellhead <u>XXX</u>	Other <u>      </u>
	Footage from reference:	<u>100'</u>	
	Direction from reference:	<u>212</u> Degrees	East <u>      </u> North <u>      </u>
		<u>X</u> West	South <u>XX</u>
<b>Depth To Groundwater:</b> (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>
<b>Distance to an Ephemeral Stream:</b> (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>
<b>Distance to Nearest Lake, Playa, or Watering Pond:</b> (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>
<b>Wellhead Protection Area:</b> (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>
<b>Distance To Surface Water:</b> (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>
		<b>RANKING SCORE (TOTAL POINTS)</b> <u>0</u>	

Date Remediation Started:		9/16/97		Date Completed:		9/18/97	
Remediation Method: (Check all appropriate sections)		Excavation <u>XXX</u>		Approx. cubic yards		<u>140</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>4 point composite taken from pit sidewalls, Grab sample from pit</u>					
Closure Sampling: (in multiple samples, attach sample results and diagram of sample locations and depths)		bottom center. <u>8" to 10" into pit side walls, 10" into pit bottom.</u>					
Sample depth		<u>10'</u>					
Sample Date		<u>9/18/97</u>		Sample Time		<u>2:30PM</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>39.34</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 <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>9-14-98</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>Ken Cross</u>		DATE:		<u>11-13-98</u>	

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

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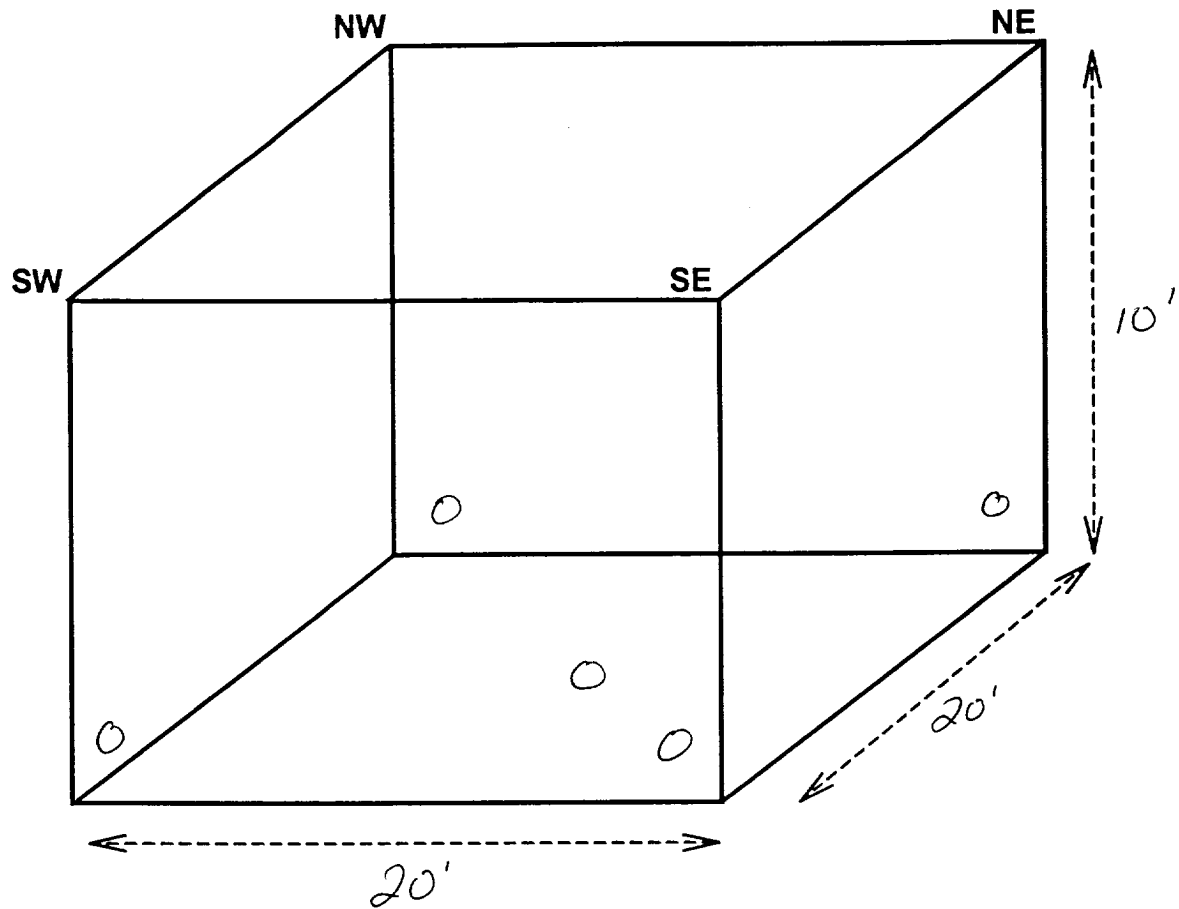
**PIT REMEDIATION AND CLOSURE REPORT**

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 # 15 PIT # 2</u>			
Location:	Unit or Qtr/Qtr	Sec	<u>P SEC25 T 26N R 3 W</u> County <u>RIO ARRIBA</u>
Pit Type:	Separator: <u>          </u>	Dehydrator <u>          </u>	Other <u>TANKDRAIN</u>
Land Type:	<u>JIC. TRIBAL</u>		
Pit Location: (Attach diagram)	Pit Dimensions:	Length <u>20'</u>	Width <u>20'</u> Depth <u>15'</u>
	Reference:	Wellhead <u>XXX</u>	Other <u>                                </u>
	Footage from reference:	<u>75'</u>	
	Direction from reference:	<u>266</u> Degrees <u>          </u> East	North <u>          </u>
		<u>XX</u> West	of South <u>X</u>
<b>Depth To Groundwater:</b> (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>
<b>Distance to an Ephemeral Stream:</b> (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>
<b>Distance to Nearest Lake, Playa, or Watering Pond:</b> (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>
<b>Wellhead Protection Area:</b> (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>
<b>Distance To Surface Water:</b> (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>

<b>Date Remediation Started:</b>		<u>9/18/97</u>		<b>Date Completed:</b>		<u>9/18/97</u>	
<b>Remediation Method:</b> (Check all appropriate sections)		Excavation <u>XXX</u>		Approx. cubic yards		<u>210</u>	
		Landfarmed <u>XX</u>		Insitu Bioremediation			
		Other _____					
<b>Remediation Location:</b> (i.e. landfarmed onsite, name and location of offsite facility)		Onsite <u>XX</u>		Offsite _____			
<b>General Description of Remedial Action:</b> <u>Excavate pit to 15', took PID readings. spread soil on location for remediation. Took soil samples.</u>							
<b>Groundwater Encountered:</b>		No <u>XXX</u>		Yes _____		Depth _____	
<b>Final Pit:</b>		Sample location <u>4 point composite taken from pit sidewalls, Grab sample from pit bottom center.</u>					
<b>Closure Sampling:</b> (in multiple samples, attach sample results and diagram of sample locations and depths)		Sample depth <u>15'</u> 8" to 10" into pit side walls, 10" into pit bottom.					
Sample Date		<u>9/18/97</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>7.5</u>		Toluene	(ppb)	<u>NA</u>
	Field Headspace	(ppm)	<u>38.8</u>		Ethylbenzene	(ppb)	<u>NA</u>
	TPH	(ppm)	<u>SIDE/ND</u>		Total Xylenes	(ppb)	<u>NA</u>
			<u>BTM\1800</u>				
<b>Groundwater Sample:</b>		Yes _____		No <u>XXX</u>		(If yes attach sample results)	
<b>I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.</b>							
<b>DATE</b>		<u>9-14-98</u>		<b>PRINTED NAME</b>		<u>JEFF CROSS</u>	
<b>SIGNATURE</b>		<u>Jeff Cross</u>		<b>AND TITLE</b>		<u>PROJECT MANAGER</u>	
<b>AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.</b>							
<b>APPROVED:</b>		YES <u>X</u>		NO _____		(REASON) _____	
<b>SIGNED:</b>		<u>Ken C. M...</u>		<b>DATE:</b>		<u>11-13-98</u>	





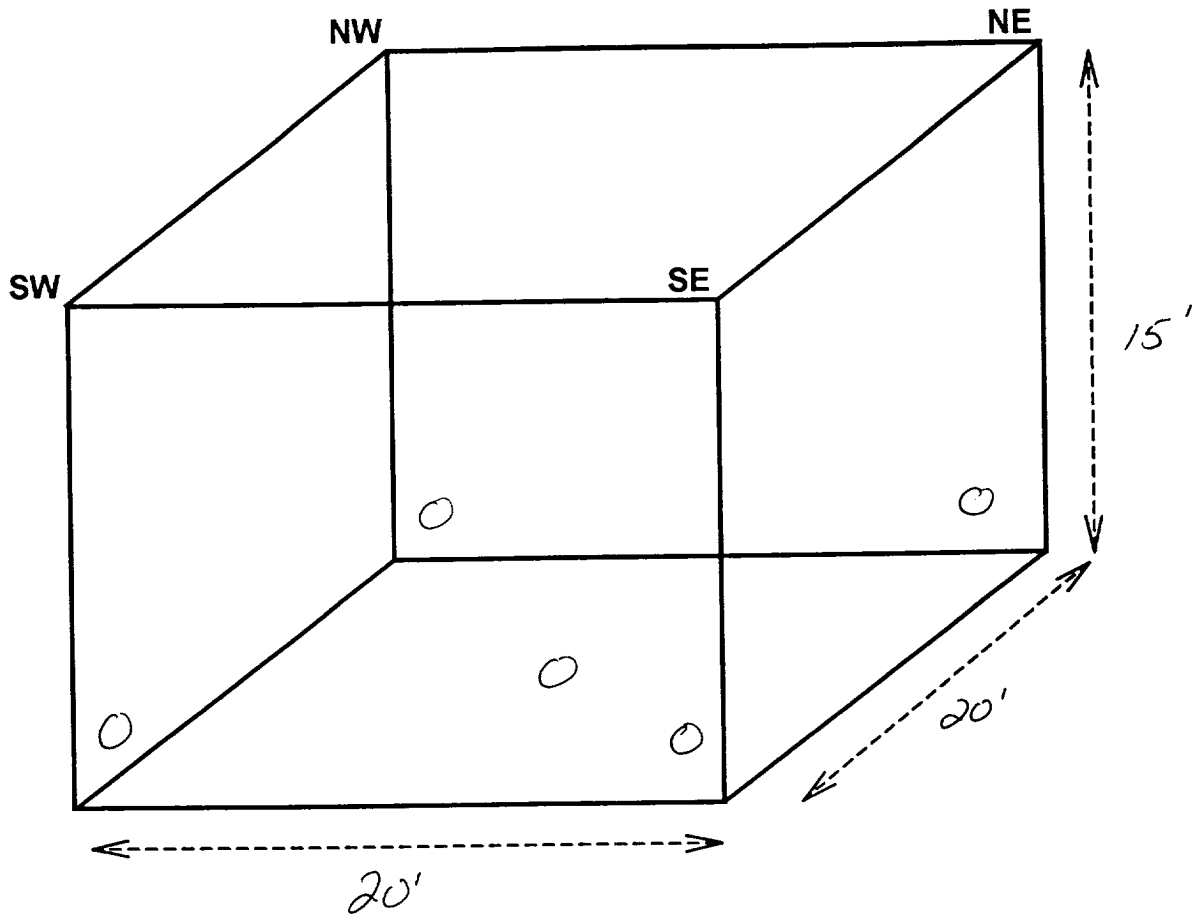


○ = SAMPLE AREA

WELL NAME JAT A118 # 15 PIT # 1

SAMPLE DATE 9/18/97

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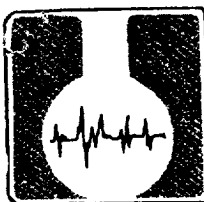


○ = SAMPLE AREA

WELL NAME JAT A118 # 15 PIT # 2

SAMPLE DATE 9/18/97

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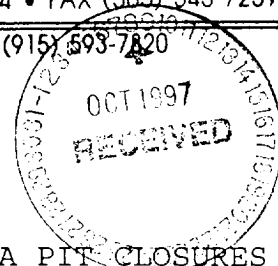


**ASSAIGAI  
ANALYTICAL  
LABORATORIES, INC.**

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 3, 1997 10:56

**CERTIFICATE OF ANALYSIS  
RESULTS BY SAMPLE**



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

WORKORDER # : 9709177  
AWORK ID : JICARILLA PIT CLOSURES  
CLIENT CODE : APA01  
DATE RECEIVED : 09/19/97

ATTN: JEFF CROSS

Page: 1

Lab ID: 9709177-01A  
Sample ID: JAT A118-15 PIT 1 BOTTOM

Collected: 09/18/97 14:30:00  
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: 9709177-01B  
Sample ID: JAT A118-15 PIT 1 BOTTOM

Collected: 09/18/97 14:30:00  
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	09/24/97	SDRO054

Lab ID: 9709177-02A  
Sample ID: JAT A118-15 PIT 1 SIDES

Collected: 09/18/97 14:40:00  
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: 9709177-02B  
 Sample ID: JAT A118-15 PIT 1 SIDES

Collected: 09/18/97 14:40:00  
 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	09/24/97	SDRO054

Lab ID: 9709177-03A  
 Sample ID: JAT A118-15 PIT 2 SIDES

Collected: 09/18/97 17:00:00  
 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: 9709177-03B  
 Sample ID: JAT A118-15 PIT 2 SIDES

Collected: 09/18/97 17:00:00  
 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	09/24/97	SDRO054

Lab ID: 9709177-04A  
 Sample ID: JAT A118-15 PIT 2 BOTTOM

Collected: 09/18/97 17:15:00  
 Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A						
Benzene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
Toluene	ND	mg/kg	0.0050	100	09/24/97	SVUST007
Ethylbenzene	2.1	mg/kg	0.0050	100	09/24/97	SVUST007
P-&m-Xylene	5.4	mg/kg	0.010	100	09/24/97	SVUST007
O-Xylene	ND	mg/kg	0.0050	100	09/24/97	SVUST007

Lab ID: 9709177-04B  
 Sample ID: JAT A118-15 PIT 2 BOTTOM

Collected: 09/18/97 17:15:00  
 Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
Diesel Range OG Soil/M8015 Diesel Range OG in Soil	1800	mg/Kg	25	25	09/24/97	SDRO054

William P. Biava

William P. Biava  
President

## **WORKORDER COMMENTS**

DATE : 10/03/97  
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.

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### **REPORT COMMENTS**

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# Chain of Custody Record

LABORATORY, NEW MEXICO 87111  
(505) 345-8964  
3332 WEDGEWOOD  
EL PASO, TEXAS 79925  
(915) 593-6000  
1910 N. BIG SPRING  
MIDLAND, TEXAS 79705  
(915) 570-1116

Client Apache Corporation Project Manager / Contact Jeff Cross  
Address 304 N. Behrend Telephone No. (505) 774-6643  
City / State / Zip Farmington, NM 87401 Fax No. (505) 774-6624  
Project Name / Number JICARILLA PIT CLOSURES Samplers: (Signature) [Signature]  
Contract / Purchase Order / Quote \_\_\_\_\_

SAL FRACTION NUMBER	Field Sample Number	Location	Date	Time	Sample Type	Type / Size of Container	Preservation		Remarks
							Temp.	Chemical	
	SAT A118-15 P.T.R.	9/14/97	2:30	Soil	4 oz glass		Ice		
	" " " "	9/14/97	1	1					
	SAT A118-15 P.T.R.	9/15/97	2:40	Soil	4 oz glass		Ice		
	" " " "	9/15/97	1	1					
	SAT A118-15 P.T.R.	9/18/97	5:00	Soil	4 oz glass		Ice		
	" " " "	9/18/97	1	1					
	SAT A118-15 P.T.R.	9/18/97	5:15	Soil	4 oz glass		Ice		
	" " " "	9/18/97	1	1					

Relinquished by:  
Signature [Signature]  
Printed SCOTT PRATT  
Company AAL  
Reason \_\_\_\_\_

Received by:  
Signature [Signature]  
Printed SCOTT PRATT  
Company AAL  
Reason \_\_\_\_\_

Relinquished by:  
Signature [Signature]  
Printed SCOTT PRATT  
Company AAL  
Reason \_\_\_\_\_

Received by:  
Signature [Signature]  
Printed SCOTT PRATT  
Company AAL  
Reason \_\_\_\_\_

Date 9/19/97  
Time 11:45

Date 9/19/97  
Time 14:30

Date 9/19/97  
Time 14:30

Date 9/19/97  
Time 14:30

Signature [Signature]  
Printed SCOTT PRATT  
Company AAL  
Reason \_\_\_\_\_

Signature [Signature]  
Printed SCOTT PRATT  
Company AAL  
Reason \_\_\_\_\_

Signature [Signature]  
Printed SCOTT PRATT  
Company AAL  
Reason \_\_\_\_\_

Signature [Signature]  
Printed SCOTT PRATT  
Company AAL  
Reason \_\_\_\_\_

Method of Shipment: \_\_\_\_\_

Shipment No. \_\_\_\_\_

Special Instructions: \_\_\_\_\_

After analysis, samples are to be:  
☐ Disposed of (additional fee)  
☐ Stored (30 days max)  
☐ Stored over 30 days (additional fee)  
☐ Returned to customer

LABORATORY



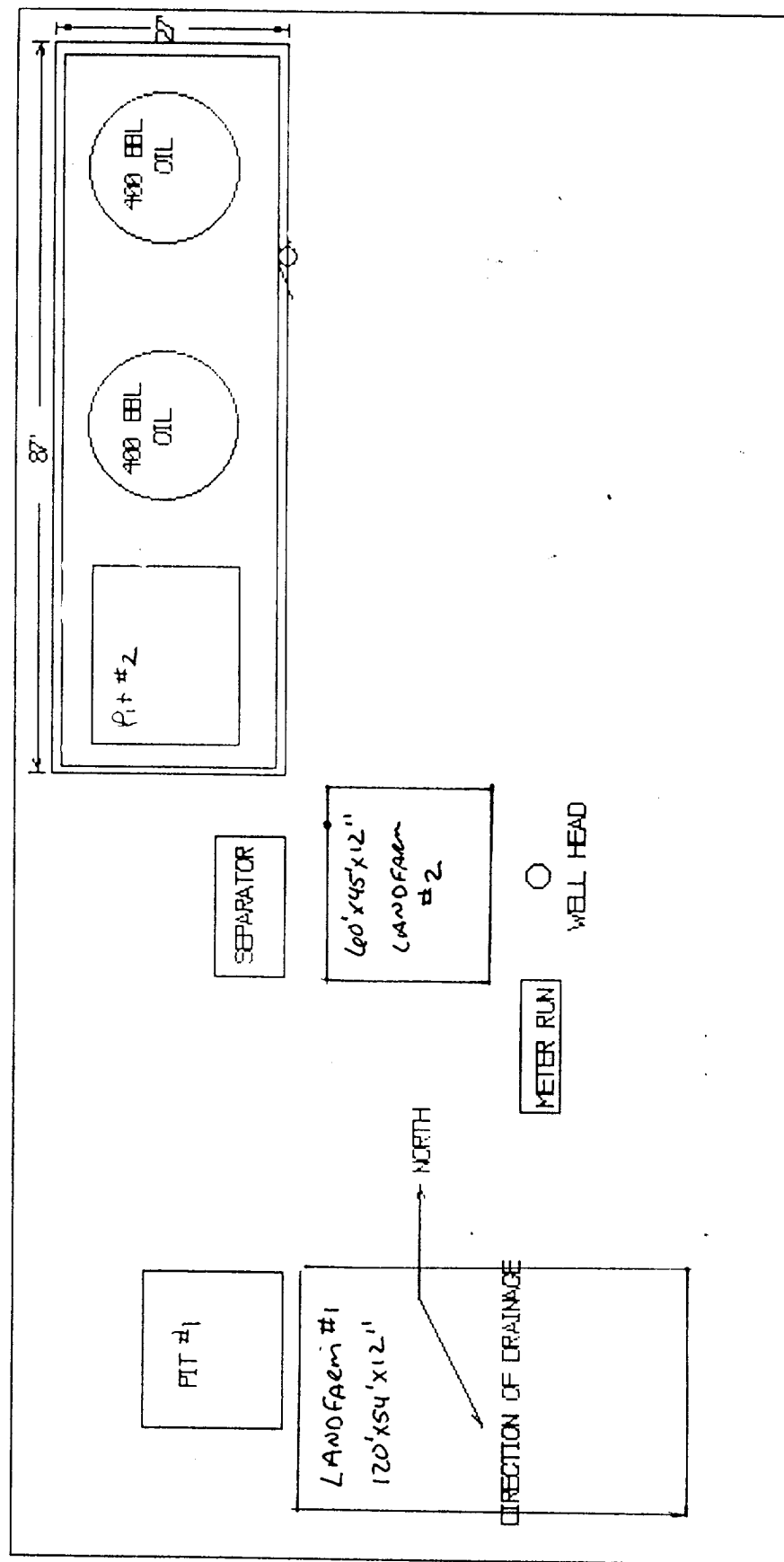
M W PETROLEUM

JICARILLA APACHE A-118-15

SE/4 SE/4 (P) L8889 #JAT A118

SECTION 25, TOWNSHIP 26N RANGE 3W

RIO ARriba COUNTY, NM Revise 8/2/97 MS



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

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 # 15 CELL # 1</u>			
Location: Unit or Qtr/Qtr Sec <u>P</u>		SEC 25 T 26N R 3W County <u>RIO ARRIBA</u>	
Land Type <u>JIC. TRIBAL</u>			
Date Remediation Started: <u>9/18/97</u>		Date Completed: <u>8/18/98</u>	
Remediation Method: Landfarmed <u>XXX</u>		Approx. cubic yards <u>240</u>	
Composted _____			
Other _____		<u>REMEDIED SOIL TO BE PUT BACK IN PIT.</u>	
Depth to Groundwater: (pts) <u>0</u>		<div style="text-align: center;"><b>Final Closure Sampling</b></div> <div>Sampling Date: <u>8/18/98</u> Time: <u>9:45AM</u></div> <div>Sample Results:</div> <div>Field Headspace (ppm) <u>0</u></div> <div>TPH (ppm) <u>ND</u> Method <u>M8015</u></div> <div>Other <u>BTEX \ SW846 , 8020A (ND)</u></div>	
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>			
<b>RANKING SCORE (TOTAL POINTS)</b> <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>Ken M...</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 # 15 CELL # 2</u>			
Location: Unit or Qtr/Qtr Sec		County	
<u>P SEC 25 T 26N R 3W</u>		<u>RIO ARRIBA</u>	
Land Type <u>JIC. TRIBAL</u>			
Date Remediation Started: <u>9/18/97</u>		Date Completed: <u>8/18/98</u>	
Remediation Method: Landfarmed <u>XXX</u>		Approx. cubic yards <u>110</u>	
Composted			
Other		<u>REMEDIATED SOIL TO BE PUT BACK IN PIT.</u>	
Depth to Groundwater: (pts) <u>0</u>		<b>Final Closure Sampling</b> Sampling Date: <u>8/18/98</u> Time: <u>10:00AM</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>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>use as Backfill</u>			
SIGNED: <u>Kurt M...</u>		DATE: <u>11-13-98</u>	

# M W PETROLEUM/FARMINGTON DISTRICT SOIL REMEDIATIONS STATUS REPORT

REMEDIATION SITE JAT A118 # 15

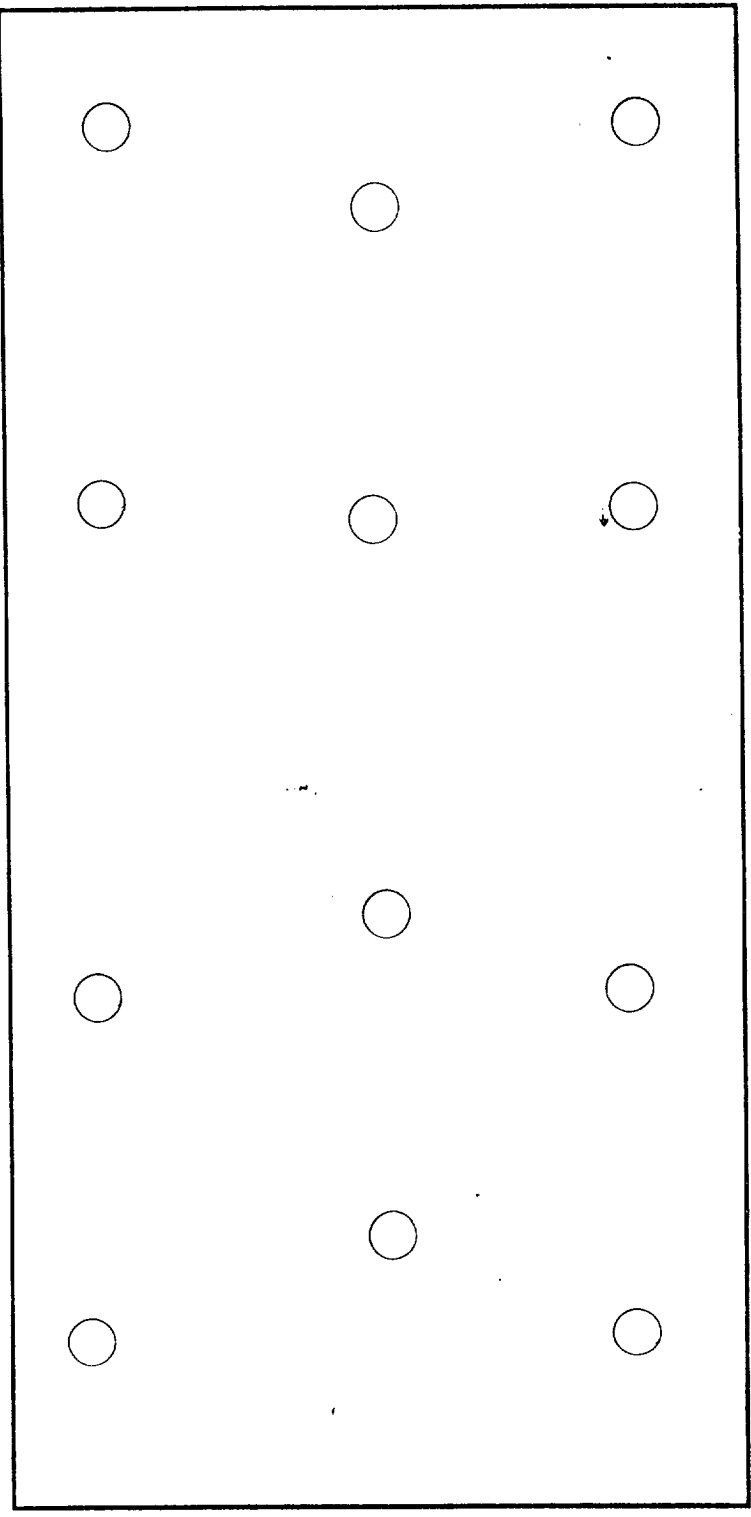
\* AMOUNT OF SOIL UNDERGOING REMEDIATION 350 Yds.

CELL No. <u>1</u>	SampDATE <b>8/18/98</b>	TPH <b>ND</b>	BTEX <b>ND</b>
DIMENSIONS(LxWxH) <u>120' X 54' X 12'</u>			
CELL LOCATION (dir. from well head) <u>NORTH</u>			
* DATE BEGAN: <u>9/18/97</u>			
DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) <u>8/18/98</u>			
CELL No. <u>2</u>	SampDATE <b>8/18/98</b>	TPH <b>ND</b>	BTEX <b>ND</b>
DIMENSIONS(LxWxH) <u>60' X 45' X 12"</u>			
CELL LOCATION (dir. from well head) <u>EAST</u>			
* DATE BEGAN: <u>9/18/97</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 CELLS WITH 46-0-0 FERTILIZER,WATER,PLOW AND TILL SOIL.			
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 TILLED 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 #15 Cell #1  
SAMPLE DATE: 8-18-98  
DIMENSIONS: 120' x 54' x 12"

○ = SAMPLE AREA



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

12 point composite sample

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

WELL NAME:

A118 #15 cell #2

SAMPLE DATE:

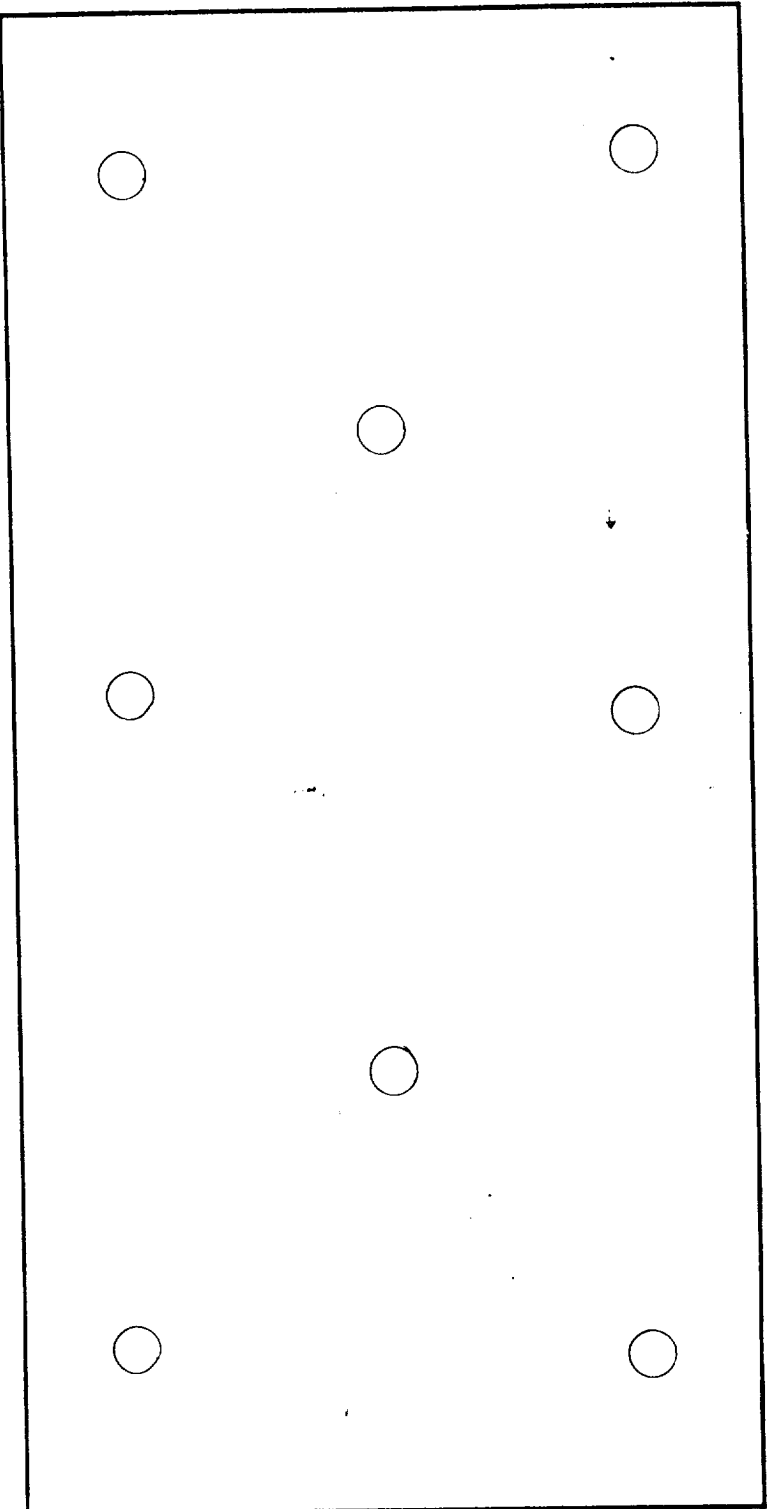
8-18-98

DIMENSIONS:

60' x 45' x 12''



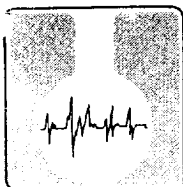
= SAMPLE AREA



NOTES:

ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

8 point composite sample



**ASSAIGAI  
ANALYTICAL  
LABORATORIES, INC.**

**AUG 24 1998**

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: **9808195 JICARILLA PIT CLOSURES**

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

Client Sample ID: **A118 #15 CELL #1** Sample Matrix: **SOIL** Sample Collected: **08/18/98 09:45:00**

<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>*</u>	<u>Sequence</u>	<u>Run Date</u>
Test: SW846 8010B/8020A Purgeable VOCs by GC/PID-ELCD									
9308195-01A	X98393	71-43-2	Benzene	ND	mg / Kg	50	0.005	XG.1998.703-8	08/21/98
	X98393	100-41-4	Ethylbenzene	ND	mg / Kg	50	0.005	XG.1998.703-8	
	X98393	95-47-6	o-Xylene	ND	mg / Kg	50	0.005	XG.1998.703-8	
	X98393		P/M-Xylenes	ND	mg / Kg	50	0.01	XG.1998.703-8	
	X98393	108-88-3	Toluene	ND	mg / Kg	50	0.005	XG.1998.703-8	
Test: SW846 8015A Diesel Range Organics by GC/FID									
9908195-01B	X98391		Diesel Range Organics	ND	mg / Kg	25	25	XG.1998.700-9	08/22/98

Client Sample ID: **A118 #15 CELL #2** Sample Matrix: **SOIL** Sample Collected: **08/18/98 10:00:00**

<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>*</u>	<u>Sequence</u>	<u>Run Date</u>
Test: SW846 8010B/8020A Purgeable VOCs by GC/PID-ELCD									
9808195-02A	X98393	71-43-2	Benzene	ND	mg / Kg	50	0.005	XG.1998.703-9	08/21/98
	X98393	100-41-4	Ethylbenzene	ND	mg / Kg	50	0.005	XG.1998.703-9	
	X98393	95-47-6	o-Xylene	ND	mg / Kg	50	0.005	XG.1998.703-9	
	X98393		P/M-Xylenes	ND	mg / Kg	50	0.01	XG.1998.703-9	
	X98393	108-88-3	Toluene	ND	mg / Kg	50	0.005	XG.1998.703-9	
Test: SW846 8015A Diesel Range Organics by GC/FID									
9808195-02B	X98391		Diesel Range Organics	ND	mg / Kg	25	25	XG.1998.700-10	08/22/98



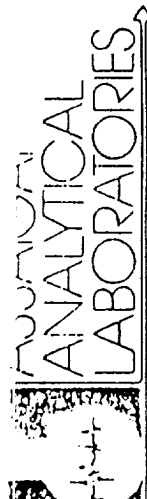
Assaigai Analytical Laboratories, Inc.  
**Certificate of Analysis**

Client: **APACHE CORPORATION**  
Project: **9808195 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. \*\*\*





# Custody Record

ALBUQUERQUE NEW MEXICO 87109  
(505) 345-8964

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

MELOQUIADES ALANIS  
6411 LOCAL UNO  
CIUDAD JUAREZ, CHIHUAHUA MEXICO 32320

Project Manager/Contact Jeff Cross  
Telephone No. (505) 774-6643  
Fax No. (505) 774-6624  
Sampers: (Signature) Jeff Cross

State / Zip Earthington, NM 87401-7947

Project Name / Number JICARILLA PIT CLOSURES

Contract / Purchase Order / Quote 1

LABORATORY NUMBER	Field Sample Number / Location	Date	Time	Sample Type	Type / Size of Container	Preservation	
						Temp.	Chemical
A	A118 #15 Cell #1	8-18-98	9:45	soil	4oz glass		ICE
B	1		9:45	soil	4oz glass		ICE
2A	A118 #15 Cell #2		10:00				
2B	1		10:00				

Analysis Required		Remarks
No. of Containers	Analysis Required	
1	X	
1	X	
1	X	
1	X	

ORT (mod 8015)  
BTEX

Received by: Jeff Cross  
Signature: Jeff Cross  
Printed: Jeff Cross  
Company: Apache Corp.  
Reason: Delivery

Retinquished by: Jim P. Bivins  
Signature: Jim P. Bivins  
Printed: Jim P. Bivins  
Company: AAL  
Reason: Analysis

Date: 10/19/98  
Time: 1015

Date: 8/20/98  
Time: 1745

After analysis, samples are to be:

☐ Disposed of (additional fee)  
☐ Stored (30 days max)  
☐ Stored over 30 days (additional fee)  
☐ Returned to customer

LABORATORY