

Denny E Faust
 District III
DEPUTY OIL & GAS INSPECTOR
 1000 Rio Brazos Rd
 Aztec, NM 87410
 JAN 29 1999

Energy, Minerals and Natural Resources Department

State of New Mexico

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

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

RECEIVED
 JAN 25 1999

Approved

PIT REMEDIATION AND CLOSURE REPORT

OIL CON. DIV.
 DIST 3
 505-325-0318

Operator: Apache Corporation Telephone: 505-325-0318

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

Facility or Well Name: Apache # 124 #1

Location: Unit or Qtr/Qtr Sec NWSW Sec 23 T 25 N R 4W County Rio Arriba

Pit Type: Separator: _____ Dehydrator _____ Other Blow Pit

Land Type: Jicarilla Tribal

Beginning Pit Dimensions: Length 55' Width 45' Depth 4'

Pit Location: Ending Pit Dimensions: Length 70' Width 52' Depth 12'

(Attach diagram)

Reference: Wellhead XXX Other _____

Footage from reference: 120'

Direction from reference: 270 Degrees _____ East _____ North _____
 _____ West _____ South _____

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 source:;)	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:

6/25/97

Date Completed:

6/26/97

Remediation Method:

(Check all appropriate sections)

Excavation

XXX

Approx. cubic yards

1078

Landfar med

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 12', 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 taken from pit sidewalls, 8 to 10" into

Closure Sampling:

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

Sample depth

1 point sample taken 10 to 12" into pit bottom center.

12'

Sample Date

6/26/97

Sample Time

3:45 PM

Sample results

Benzene

(ppm)

ND

Total BTEX

(ppm)

ND

Field Headspace

(ppm)

48.2

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

Jeff Cross

AND TITLE

Project Manager

Date Remediation Started: 6/25/97 Date Completed: 6/26/97

Remediation Method: Excavation XXX Approx. cubic yards 1078
 (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 X Yes _____ Depth _____

Final Pit: Sample location 4 point composite taken from pit sidewalls, 8 to 10" into sidewalls.

Closure Sampling: (in multiple samples, attach sample results and diagram of sample locations and depths) Sample depth 12'
 Sample Date 6/26/97 Sample Time 3:45pm

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>48.2</u>		Ethylbenzene	(ppb)	<u>NA</u>
	TPH	(ppm)	<u>ND</u>		Total Xylenes	(ppb)	<u>NA</u>

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

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

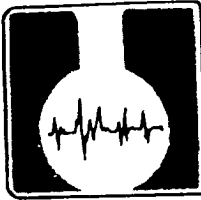
DATE 11-25-98 PRINTED NAME JEFF CROSS

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. Marshall DATE: 12-28-98



**ASSAIGAI
ANALYTICAL
LABORATORIES, INC.**

JUL 21 1997

7300 Jefferson, N.E. • Albuquerque, New Mexico 87109 • (505) 345-8964 • FAX (505) 345-7259
3332 Wedgewood, E.S. • El Paso, Texas 79925 • (915) 593-6000 • FAX (915) 593-7820

Report Generated:
July 7, 1997 15:42

**CERTIFICATE OF ANALYSIS
RESULTS BY SAMPLE**

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

WORKORDER # : 9706288
WORK ID : JICARILLA PIT CLOSURES
CLIENT CODE : APA01
DATE RECEIVED : 06/27/97

ATTN: JEFF CROSS

Page: 1

Lab ID: 9706288-01A
Sample ID: 124 #1 SIDES

Collected: 06/26/97 15:45:00
Matrix: SOIL

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

Lab ID: 9706288-01B
Sample ID: 124 #1 SIDES

Collected: 06/26/97 15:45:00
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	50	25	07/01/97	SDRO39

Lab ID: 9706288-02A
Sample ID: 124 #1 BOTTOM

Collected: 06/26/97 16:00:00
Matrix: SOIL

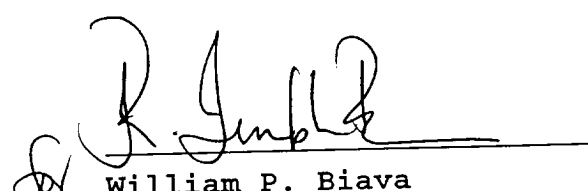
TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
BTEX/SW846 8020A	ND	mg/kg	0.0050	100	06/30/97	SBTXME173
Benzene	ND	mg/kg	0.0050	100	06/30/97	SBTXME173
Toluene	ND	mg/kg	0.0050	100	06/30/97	SBTXME173
Ethylbenzene	ND	mg/kg	0.010	100	06/30/97	SBTXME173
P-&m-Xylene	ND	mg/kg	0.0050	100	06/30/97	SBTXME173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



Sample ID: 9706288-02B
Sample ID: 124 #1 BOTTOM

Collected: 06/26/97 16:00:00
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	50	25	07/01/97	SDRO39


William P. Biava
President

WORKORDER COMMENTS

DATE : 07/07/97
WORKORDER:

DEFINITIONS/DATA QUALIFIERS

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

- ND = Analyte "not detected" in analysis at the sample specific detection limit.
- D_F = Sample "dilution factor"
- NT = Analyte "not tested" per client request.
- B = Analyte was also detected in laboratory method QC blank.
- E = Analyte concentration (result) is an estimated value or exceeds analysis calibration range.
- LIMIT = The minimum amount of the analyte that AAL can detect utilizing the specified analysis.

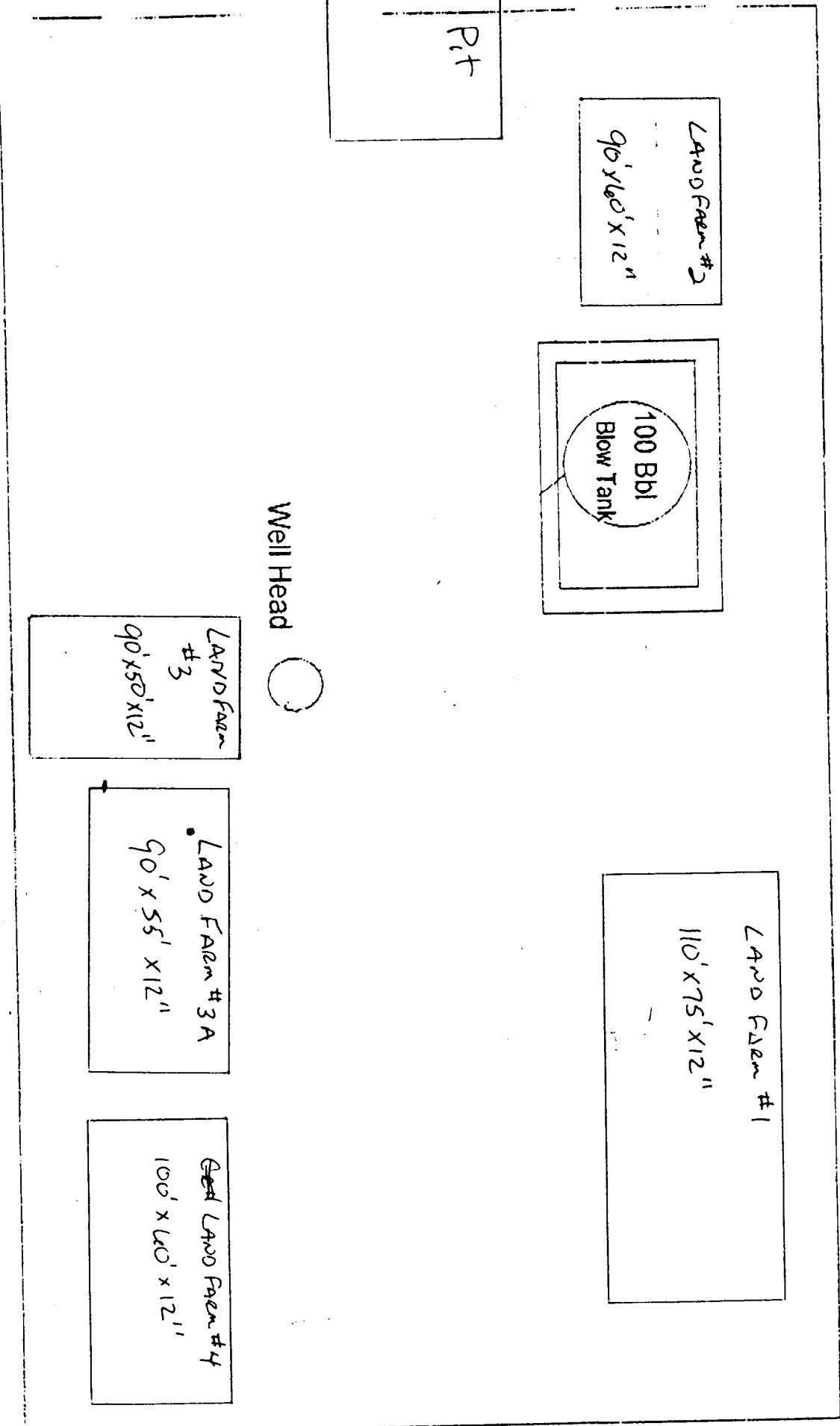
Please Note: Multiply the "Limit" value (AAL's Detection Limit) by Dilution Factor (D_F) to obtain the sample specific Detection Limit.

REPORT COMMENTS

MW PETROLEUM
Jicarilla Apache Tribal 124 # 1
NW SW Lease #JAT 124
Sec 23, T25N R4W
Rio Arriba County, NM
Revised 12-22-97

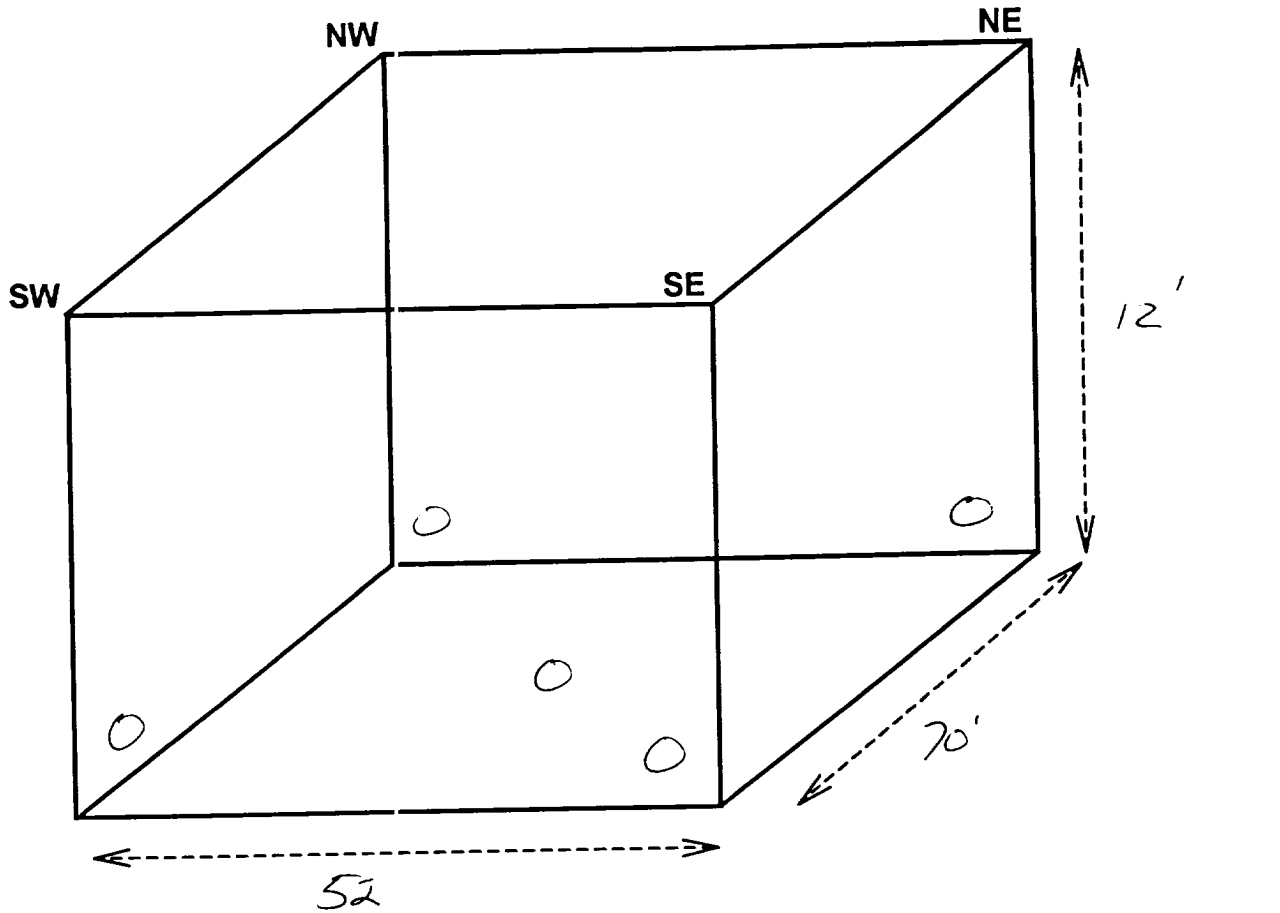
NORTH

General Drainage



Well Head





○ = SAMPLE AREA

WELL NAME JAT 124 # 1

SAMPLE DATE 6/26/97

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
 Natural Resource Dept.
 and Oil & Gas Administration

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>APACHE CORPORATION</u> Telephone <u>505-325-0318</u>	
Address: <u>2855 SOUTHSIDE RIVER ROAD/SUITE A/ FARMINGTON N.M. 87401-7947</u>	
Facility or Well Name: <u>JAT 124 # 1 CELL # 1</u>	
Location: Unit or Qtr/Qtr Sec <u>NWSW SEC 23 T 25 N R 4 W</u> County <u>RIO ARRIBA</u>	
Land Type <u>JIC. TRIBAL</u>	
Date Remediation Started: <u>6/25/97</u> Date Completed: <u>11/11/98</u>	
Remediation Method: Landfarmed <u>XXX</u> Approx. cubic yards <u>306</u>	
Composted _____	
Other <u>SOIL TO BE PUT BACK IN PIT</u>	
Depth to Groundwater: (pts) <u>0</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>	Final Closure Sampling Sampling Date: <u>11/11/98</u> Time: <u>2:00PM</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>
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) _____	
SIGNED: <u><i>Kurt Mc...</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: APACHE CORPORATION Telephone 505-325-0318
 Address: 2855 SOUTHSIDE RIVER ROAD/SUITE A/ FARMINGTON N.M. 87401-7947
 Facility or Well Name: JAN 124 # 1 CELL # 2
 Location: Unit or Qtr/Qtr Sec N/MSW SEC 23 T 25 N R 4 W County RIO ARRIBA
 Land Type JIC. TRIBAL

Date Remediation Started: 6/25/97 Date Completed: 11/11/98
 Remediation Method: Landfarmed XXX Approx. cubic yards 200
 Composted _____
 Other SOIL TO BE PUT BACK IN PIT

Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling Sampling Date: <u>11/11/98</u> Time: <u>2:10PM</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: 11/25/98 PRINTED NAME JEFF CROSS
 SIGNATURE *Jeff Cross* TITLE PROJECT MANAGER

AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO _____ (REASON) was as Backfill

SIGNED: *Kenn E. Marshall* 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

ON-SITE SOIL REMEDIATION REPORT

Operator: APACHE CORPORATION Telephone 505-325-0318
 Address: 2855 SOUTHS DE RIVER ROAD/SUITE A/ FARMINGTON N.M. 87401-7947
 Facility or Well Name: JAT 124 # 1 CELL # 3
 Location: Unit or Qtr/Qtr Sec N1/4SW SEC 23 T 25 N R 4 W County RIO ARRIBA
 Land Type JIC. TRIBAL

Date Remediation Started: 6/25/97 Date Completed: 8/17/98
 Remediation Method: Landfarmed XXX Approx. cubic yards 167
 Composted _____
 Other SOIL TO BE PUT BACK IN PIT

Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling Sampling Date: <u>8/17/98</u> Time: <u>12:50PM</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: 11/25/98 PRINTED NAME JEFF CROSS
 SIGNATURE *Jeff Cross* TITLE PROJECT MANAGER

AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION. ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO _____ (REASON) _____
 SIGNED: *Kent C. Marshall* 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

ON-SITE SOIL REMEDIATION REPORT

Operator: APACHE CORPORATION Telephone 505-325-0318
 Address: 2855 SOUTHSIDE RIVER ROAD/SUITE A/ FARMINGTON N.M. 87401-7947
 Facility or Well Name: JAT 124 # 1 CELL # 3A
 Location: Unit or Qtr/Qtr Sec NWSW SEC 23 T 25 N R 4 W County RIO ARRIBA
 Land Type JIC. TRIBAL

Date Remediation Started: 6/26/97 Date Completed: 11/11/98
 Remediation Method: Landfarmed XXX Approx. cubic yards 183
 Composted _____
 Other SOIL TO BE PUT BACK IN PIT

Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling Sampling Date: <u>11/11/98</u> Time: <u>2:20PM</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: 11/25/98 PRINTED NAME JEFF CROSS
 SIGNATURE Jeff Cross TITLE PROJECT MANAGER

AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION. ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO _____ (REASON) was as Backfill
 SIGNED: Ken McManis 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

ON-SITE SOIL REMEDIATION REPORT

Operator: APACHE CORPORATION Telephone 505-325-0318
 Address: 2855 SOUTH SIDE RIVER ROAD/SUITE A/ FARMINGTON N.M. 87401-7947
 Facility or Well Name: JAT 124 # 1 CELL # 4
 Location: Unit or Qtr/Qtr Sec NWSW SEC 23 T 25 N R 4 W County RIO ARRIBA
 Land Type JIC. TRIBAL

Date Remediation Started: 6/26/97 Date Completed: 8/17/98
 Remediation Method: Landfarmed XXX Approx. cubic yards 222
 Composted _____
 Other SOIL TO BE PUT BACK IN PIT

Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling Sampling Date: <u>8/17/98</u> Time: <u>1:00PM</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: 11/25/98 PRINTED NAME JEFF CROSS
 SIGNATURE *Jeff Cross* TITLE PROJECT MANAGER

AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION. ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO _____ (REASON) _____
 SIGNED: *Kenneth Mendel* DATE: 12-28-98

M W PETROLEUM/FARMINGTON DISTRICT SOIL REMEDIATIONS STATUS REPORT

REMEDIATION SITE JAT 124 # 1

* AMOUNT OF SOIL UNDERGOING REMEDIATION 1078 Yds.

CELL No. <u>1</u>	SampDATE	TPH	BTEX
DIMENSIONS(LxWxH) <u>110' X 75' X 12"</u>	<u>7/31/97</u>	<u>6000</u>	<u>ND</u>
CELL LOCATION (dir. from well head) <u>NORTH</u>	<u>6/14/98</u>	<u>9300</u>	<u>ND</u>
* DATE BEGAN: <u>6/25/97</u>	<u>8/17/98</u>	<u>5000</u>	<u>ND</u>
DATE TERMINATED (TPH <5,000 ppr/BTEX < 50 ppm/Benzene < 10 ppm)	<u>11/11/98</u>	<u>ND</u>	<u>ND</u>

CELL No. <u>2</u>	SampDATE	TPH	BTEX
DIMENSIONS(LxWxH) <u>90' X 60' 12"</u>	<u>4/28/98</u>	<u>3300</u>	<u>ND</u>
CELL LOCATION (dir. from well head) <u>NORTH WEST</u>	<u>6/14/98</u>	<u>3200</u>	<u>ND</u>
* DATE BEGAN: <u>6/25/97</u>	<u>8/17/98</u>	<u>1100</u>	<u>ND</u>
DATE TERMINATED (TPH <5,000 ppr/BTEX < 50 ppm/Benzene < 10 ppm)	<u>11/11/98</u>	<u>ND</u>	<u>ND</u>

CELL No. <u>3</u>	SampDATE	TPH	BTEX
DIMENSIONS(LxWxH) <u>90' X 50' X 12"</u>	<u>4/28/98</u>	<u>2200</u>	<u>ND</u>
CELL LOCATION (dir. from well head) <u>SOUTH</u>	<u>6/14/98</u>	<u>2100</u>	<u>ND</u>
* DATE BEGAN: <u>6/25/97</u>	<u>8/17/98</u>	<u>ND</u>	<u>ND</u>
DATE TERMINATED (TPH <5,000 ppr/BTEX < 50 ppm/Benzene < 10 ppm)	<u>8/17/98</u>		

REMEDIATION RECORD: (Date, Treatment, Tilling)
6/30/97 TREAT CELL'S WITH 46-0-0 FERTILIZER, WATER, PLOW AND TILL SOIL.
7/7/97 TREAT SOIL CELLS WITH PHOSPHORUS, AND LIME.
7/23/97 WATER, PLOW AND TILL SOIL.
8/13/97 PLOW AND TILL SOIL.
8/25/97 PLOW AND TILL SOIL.
4/20/98 TREAT SOIL WITH LIME AND PHOSPHORUS, PLOW AND TILL SOIL.
5/12/98 WATER, PLOW AND TILL SOIL.
5/21/98 PLOW AND TILL SOIL.

From excavation reports.

M W PETROLEUM/FARMINGTON DISTRICT SOIL REMEDIATIONS STATUS REPORT

REMEDIATION SITE JAT 124 # 1

* AMOUNT OF SOIL UNDERGOING REMEDIATION 1078 Yds.

CELL No. <u>3A</u> DIMENSIONS(LxWxH) <u>90' X 55' X 12"</u> CELL LOCATION (dir. from well head) <u>EAST</u> * DATE BEGAN: <u>6/26/97</u> DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) _____	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SampDATE</th> <th>TPH</th> <th>BTEX</th> </tr> </thead> <tbody> <tr> <td>11/11/98</td> <td>ND</td> <td>ND</td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	SampDATE	TPH	BTEX	11/11/98	ND	ND															
SampDATE	TPH	BTEX																				
11/11/98	ND	ND																				
CELL No. <u>4</u> DIMENSIONS(LxWxH) <u>100' X 60' X 12"</u> CELL LOCATION (dir. from well head) <u>EAST</u> * DATE BEGAN: <u>6/26/97</u> DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) _____	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SampDATE</th> <th>TPH</th> <th>BTEX</th> </tr> </thead> <tbody> <tr> <td>4/28/98</td> <td>3200</td> <td>ND</td> </tr> <tr> <td>6/14/98</td> <td>3000</td> <td>ND</td> </tr> <tr> <td>8/17/98</td> <td>ND</td> <td>ND</td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	SampDATE	TPH	BTEX	4/28/98	3200	ND	6/14/98	3000	ND	8/17/98	ND	ND									
SampDATE	TPH	BTEX																				
4/28/98	3200	ND																				
6/14/98	3000	ND																				
8/17/98	ND	ND																				
CELL No. _____ DIMENSIONS(LxWxH) _____ CELL LOCATION (dir. from well head) _____ * DATE BEGAN: _____ DATE TERMINATED (TPH <5,000 ppm/BTEX< 50 ppm/Benzene < 10 ppm) _____	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SampDATE</th> <th>TPH</th> <th>BTEX</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	SampDATE	TPH	BTEX																		
SampDATE	TPH	BTEX																				
REMEDIATION RECORD: (Date, Treatment, Tilling)																						
6/8/98 PLOW AND TILL SOIL.																						
6/25/98 WATER , PLOW AND TILL SOIL. 10/5/98 PLOW AND TILL SOIL.																						
7/6/98 PLOW AND TILL SOIL.																						
7/28/98 PLOW AND TILL SOIL.																						
8/5/98 PLOW AND TILL SOIL.																						
8/14/98 WATER,PLOW AND TILL SOIL.																						
9/1/98 PLOW AND TILL SOIL.																						
9/22/98 PLOW AND TILL SOIL.																						

From excavation reports.

WELL NAME:

JAT 124 #1 Cell #1

SAMPLE DATE:

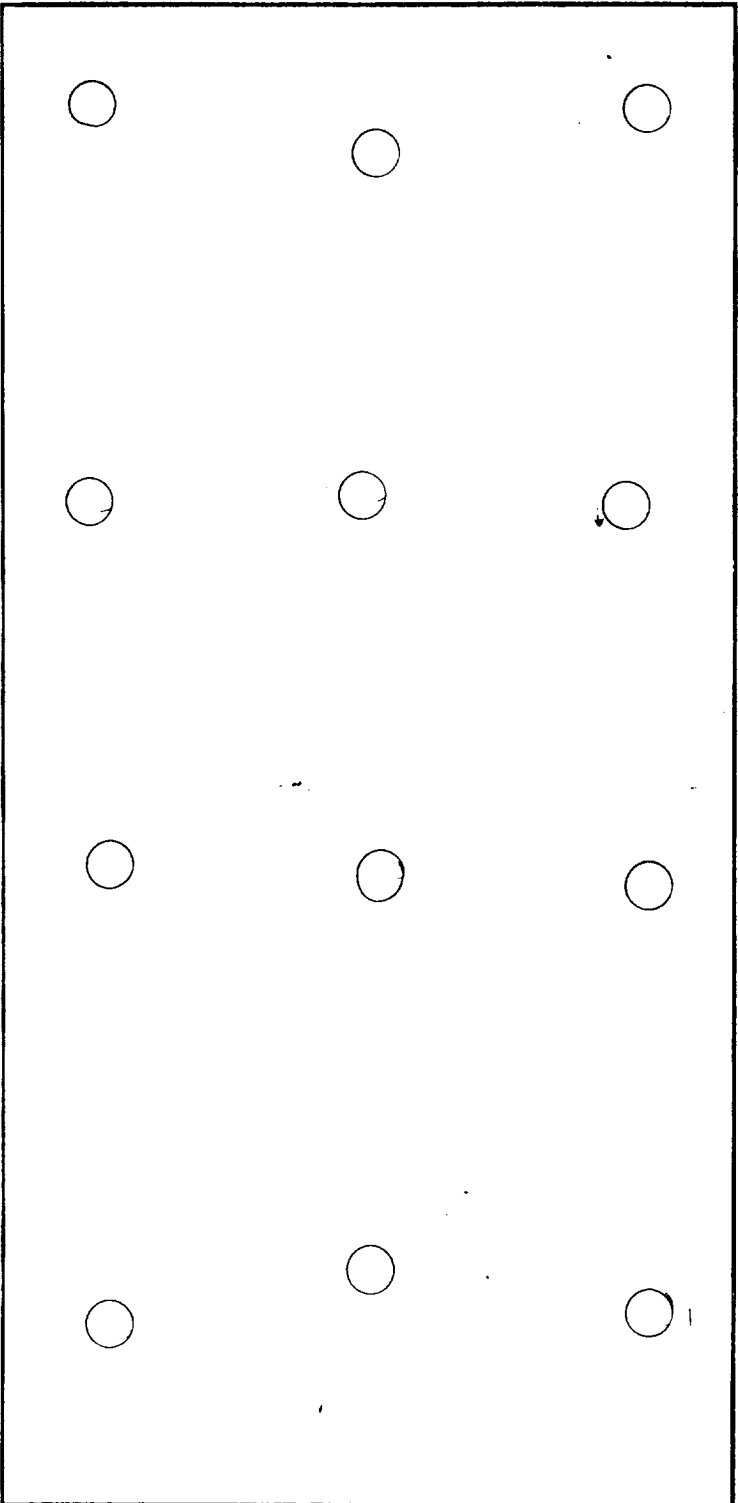
8-17-98

DIMENSIONS:

110' x 75' x 12"



= SAMPLE AREA



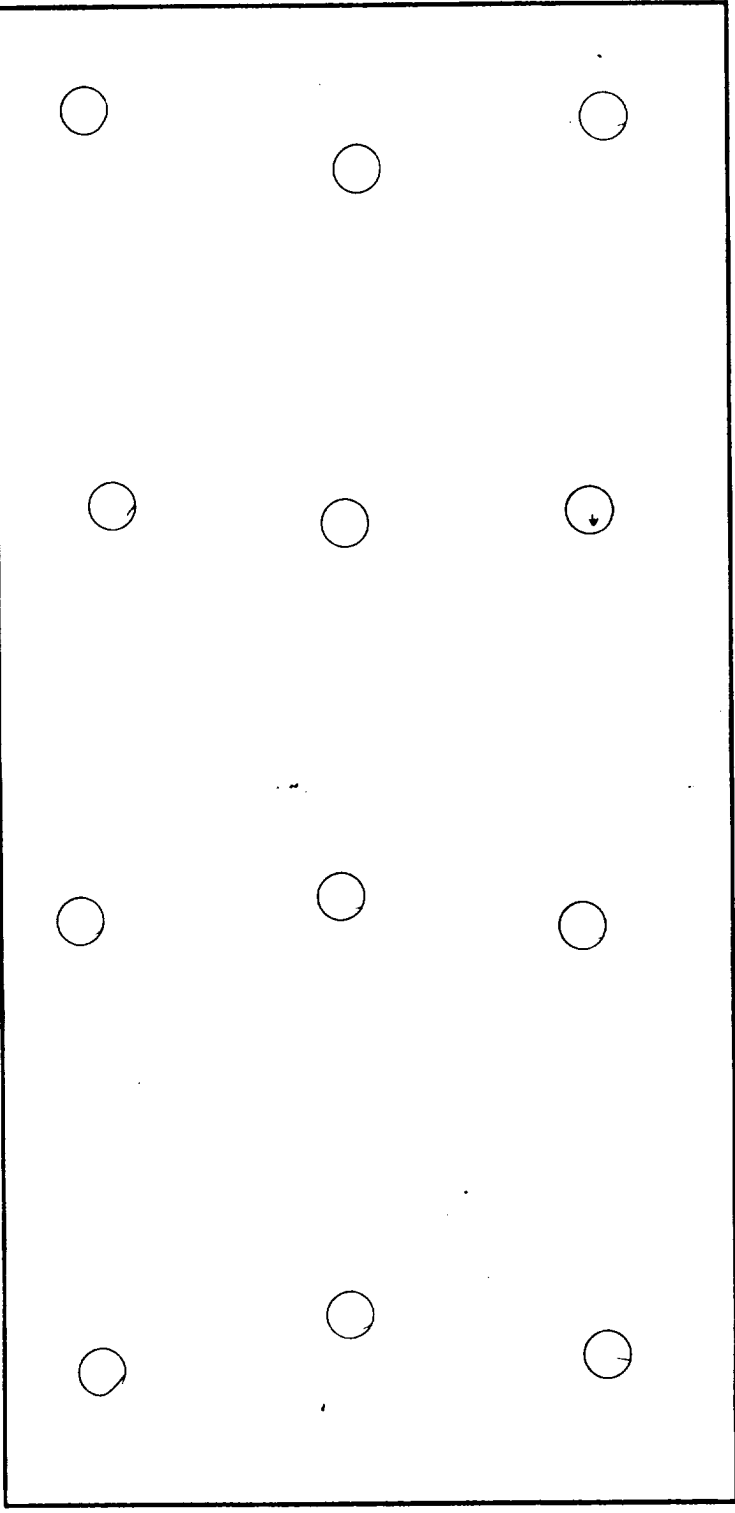
NOTES:

ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

12 Point Composite Sample

WELL NAME: JAT 124 #1 Cell #2
SAMPLE DATE: 8-17-98
DIMENSIONS: 90' x 60' x 12"

○ = SAMPLE AREA

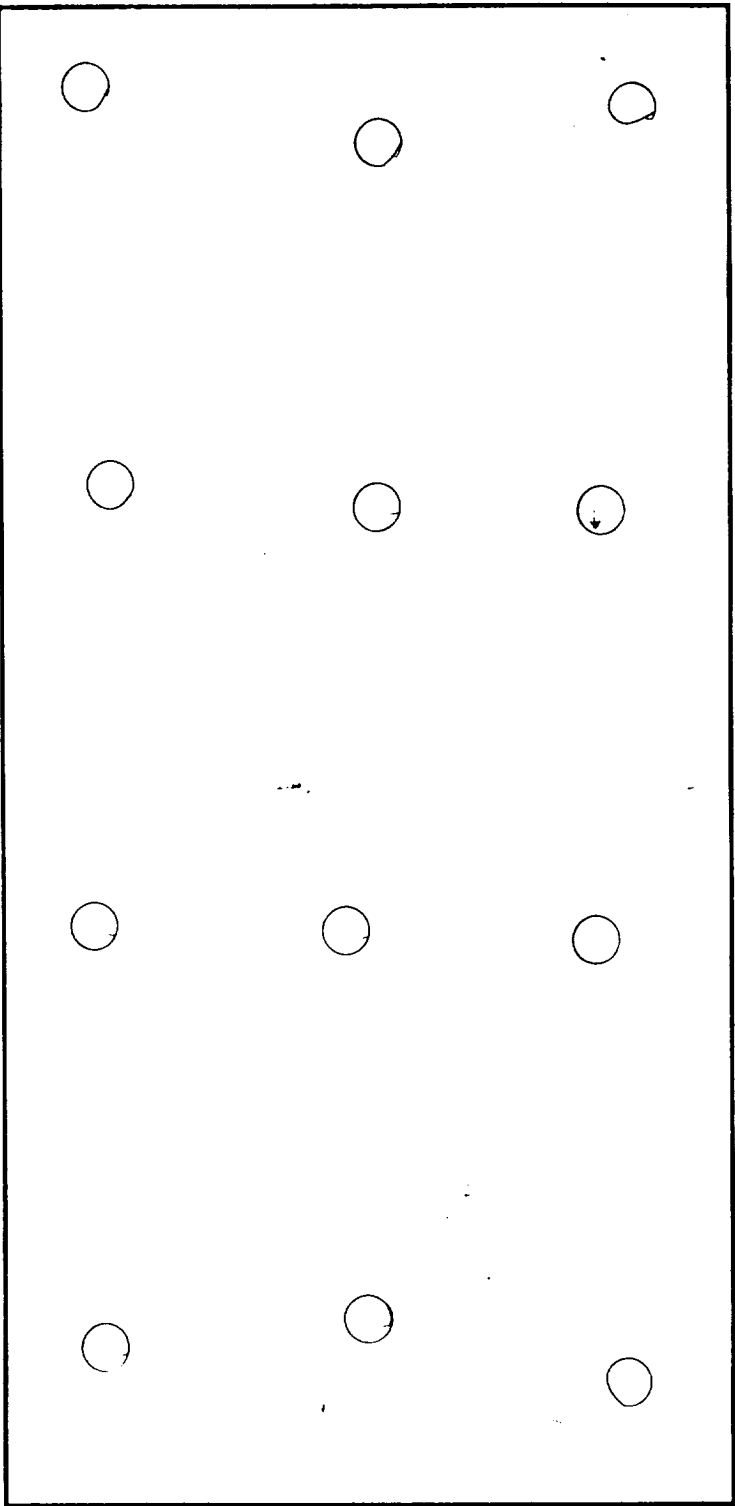


NOTES: ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

12 point composite sample

WELL NAME: SAT 124 #1 cell #3
SAMPLE DATE: 8-17-98
DIMENSIONS: 90' X 50' X 12"

○ = SAMPLE AREA

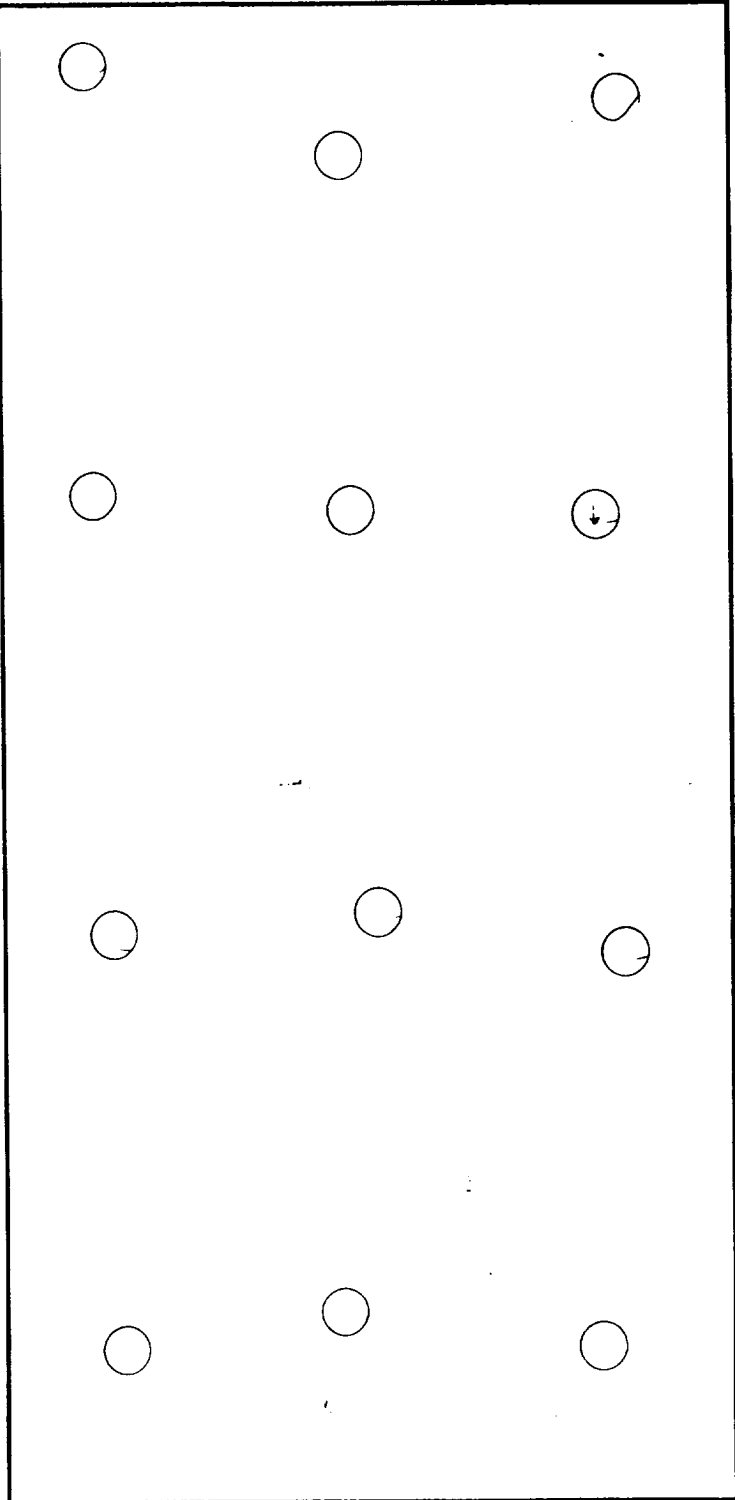


NOTES: ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

12 point composite sample

WELL NAME: JAT 124 #1 cell #4
SAMPLE DATE: 8-17-98
DIMENSIONS: 100' x 60' x 12"

○ = SAMPLE AREA



NOTES:

ALL SAMPLES TAKEN 10" TO 12" INTO CELL.

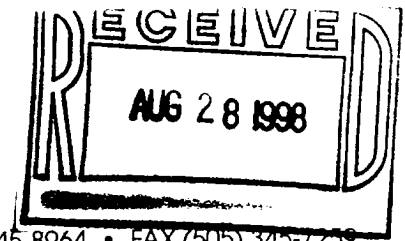
12 Point composite sample



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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

Assagai Analytical Laboratories, Inc.
Certificate of Analysis

Client: **APACHE CORPORATION**
Project: **9808192 JICARILLA PIT CLOSURES**

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

Client Sample ID: **JAT 124 #1 CELL #1** Sample Matrix: **SOIL** Sample Collected: **08/17/98 12:30:00**

Fraction	QC Group	CAS #	Result	Units	Dilution Factor	Detection Limit *	Sequence	Run Date
Test: SW846 80103/8020A Purgeable VOCs by GC/PID-ELCD								
9808192-01A	X98390	71-43-2	ND	mg / Kg	50	0.005	XG.1998.702-15	08/21/98
	X98390	100-41-4	ND	mg / Kg	50	0.005	XG.1998.702-15	
	X98390	95-47-6	ND	mg / Kg	50	0.005	XG.1998.702-15	
	X98390		ND	mg / Kg	50	0.01	XG.1998.702-15	
	X98390	108-88-3	ND	mg / Kg	50	0.005	XG.1998.702-15	
Test: SW846 8015A Diesel Range Organics by GC/FID								
9808192-01B	X98389		5000	mg / Kg	25	25	XG.1998.699-23	08/21/98

Client Sample ID: **JAT 124 #1 CELL #2** Sample Matrix: **SOIL** Sample Collected: **08/17/98 12:40:00**

Fraction	QC Group	CAS #	Result	Units	Dilution Factor	Detection Limit *	Sequence	Run Date
Test: SW846 80103/8020A Purgeable VOCs by GC/PID-ELCD								
9808192-02A	X98390	71-43-2	ND	mg / Kg	50	0.005	XG.1998.702-16	08/21/98
	X98390	100-41-4	ND	mg / Kg	50	0.005	XG.1998.702-16	
	X98390	95-47-6	ND	mg / Kg	50	0.005	XG.1998.702-16	
	X98390		ND	mg / Kg	50	0.01	XG.1998.702-16	
	X98390	108-88-3	ND	mg / Kg	50	0.005	XG.1998.702-16	
Test: SW846 8015A Diesel Range Organics by GC/FID								
9808192-02B	X98389		1100	mg / Kg	25	25	XG.1998.699-24	08/21/98



Assagai Analytical Laboratories, Inc.
Certificate of Analysis

Client: **APACHE CORPORATION**
Project: **9808192 JICARILLA PIT CLOSURES**

Client Sample ID: **JAT 124 #1 CELL #3** Sample Matrix: **SOIL** Sample Collected: **08/17/98 12:50:00**

Fraction	QC Group	CAS #	Result	Units	Dilution Factor	Detection Limit *	Sequence	Run Date
Test: SW846 8010B/8020A Purgeable VOCs by GC/PID-ELCD								
9808192-03A	X98390	71-43-2	Benzene	ND	mg / Kg	50	0.005	XG.1998.702-11 08/21/98
	X98390	100-41-4	Ethylbenzene	ND	mg / Kg	50	0.005	XG.1998.702-11
	X98390	95-47-6	o-Xylene	ND	mg / Kg	50	0.005	XG.1998.702-11
	X98390		P/M-Xylenes	ND	mg / Kg	50	0.01	XG.1998.702-11
	X98390	108-88-3	Toluene	ND	mg / Kg	50	0.005	XG.1998.702-11
Test: SW846 8015A Diesel Range Organics by GC/FID								
9808192-03B	X98389		Diesel Range Organics	ND	mg / Kg	25	25	XG.1998.699-25 08/22/98

Client Sample ID: **JAT 124 #1 CELL #4** Sample Matrix: **SOIL** Sample Collected: **08/17/98 13:00:00**

Fraction	QC Group	CAS #	Result	Units	Dilution Factor	Detection Limit *	Sequence	Run Date
Test: SW846 8010I3/8020A Purgeable VOCs by GC/PID-ELCD								
9808192-04A	X98390	71-43-2	Benzene	ND	mg / Kg	50	0.005	XG.1998.702-12 08/21/98
	X98390	100-41-4	Ethylbenzene	ND	mg / Kg	50	0.005	XG.1998.702-12
	X98390	95-47-6	o-Xylene	ND	mg / Kg	50	0.005	XG.1998.702-12
	X98390		P/M-Xylenes	ND	mg / Kg	50	0.01	XG.1998.702-12
	X98390	108-88-3	Toluene	ND	mg / Kg	50	0.005	XG.1998.702-12
Test: SW846 8015A Diesel Range Organics by GC/FID								
9808192-04B	X98391		Diesel Range Organics	ND	mg / Kg	25	25	XG.1998.700-4 08/22/98

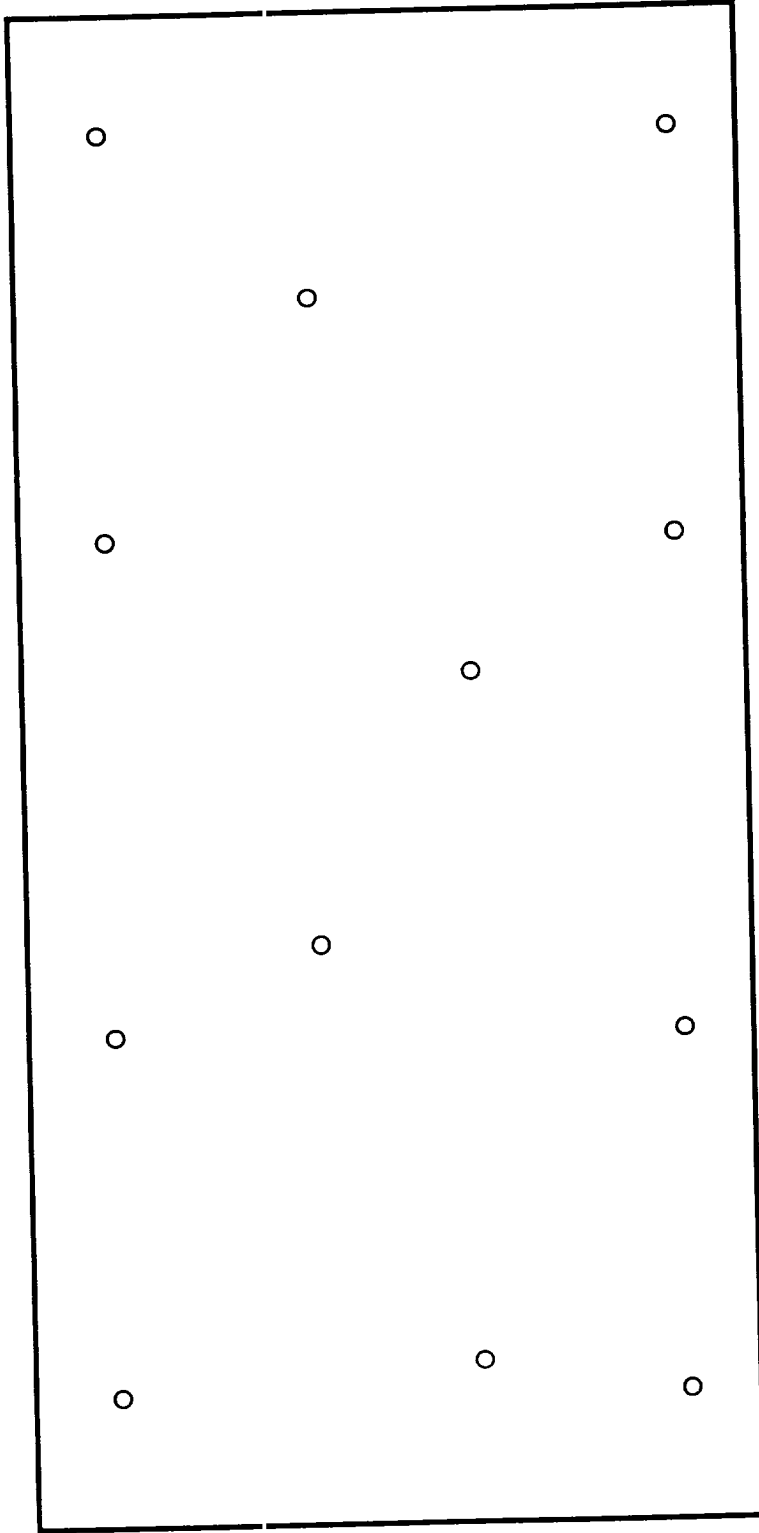
*** Sample specific analytical Detector Limit is determined by multiplying the sample Dilution Factor by the listed method Detection Limit. ***
*** Results relate only to the items tested. ***

WELL NAME: JAT 124 # 1 CELL # 2

SAMPLE DATE: 11/11/98

DIMENSIONS: 90' X 60' X 12"

○ = SAMPLE AREA



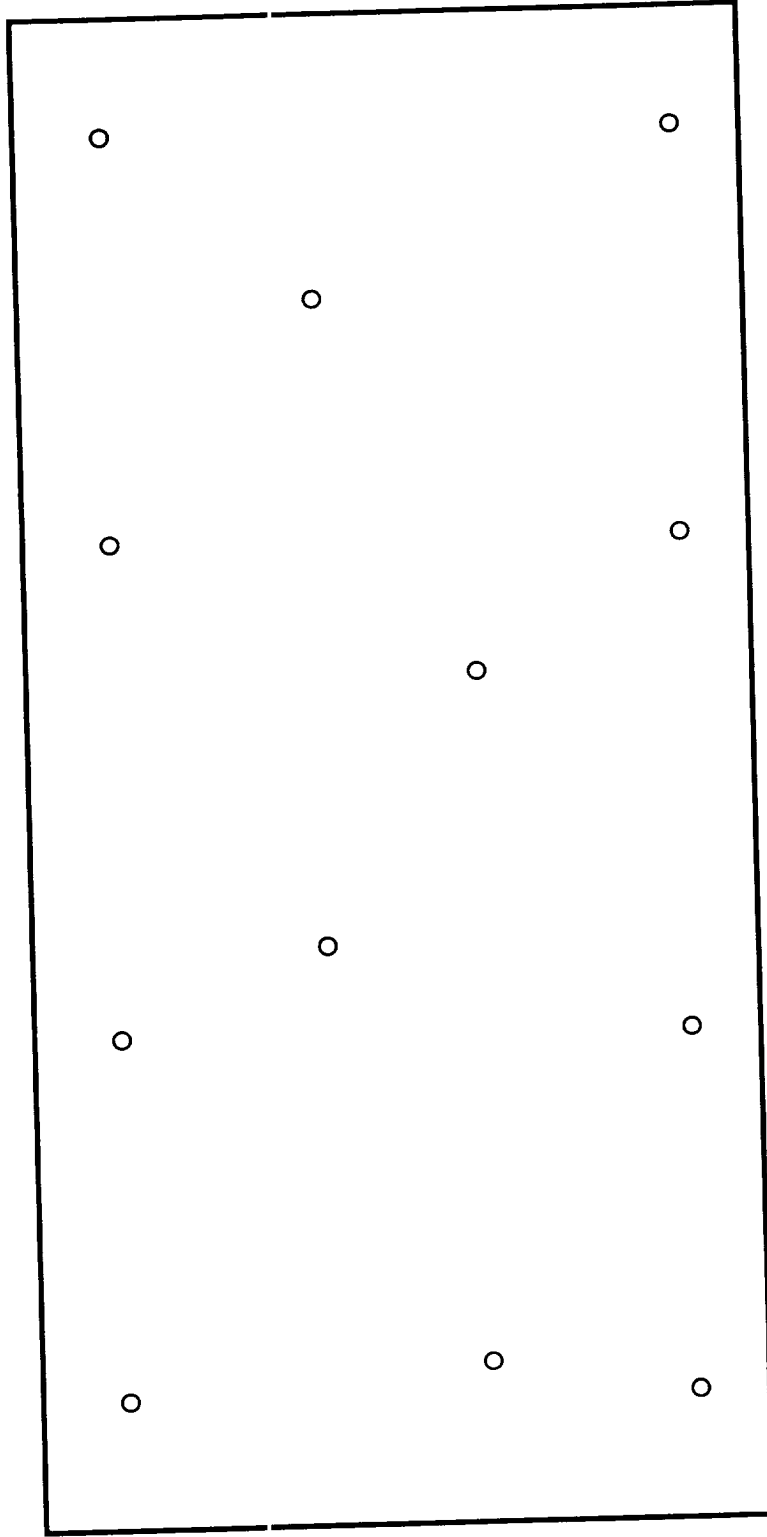
NOTES: ALL SAMPLES TAKEN 10" TO 12" INTO CELL.
12 POINT COMPOSITE SAMPLE

WELL NAME: JAT 124 # 1 CELL # 1

SAMPLE DATE: 11/11/98

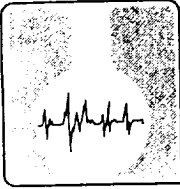
DIMENSIONS: 110' X 75' X 12"

○ = SAMPLE AREA



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

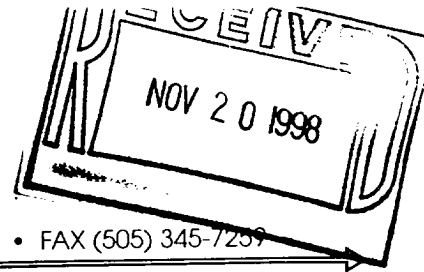
12 POINT COMPOSITE SAMPLE



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APACHE CORPORATION
attn: JEFF CROSS
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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: **9811109 JICARILLA PIT CLOSURES**

William P. Blava
William P. Blava, President of Assaigai Analytical Laboratories, Inc.

Client Sample ID: **JAT 124 #1 CELL 1** Sample Matrix: **SOIL** Sample Collected: **11/11/98 14:00:00**

Fraction	QC Group	CAS #	Result	Units	Dilution Factor	Detection Limit	* Sequence	Run Date
Test: SW846 801C/B/8020A Purgeable VOCs by GC/PID-ELCD								
9811109-01A	X98513	71-43-2	Benzene	ND	mg / Kg	250	0.005	XG.1998.996-17 11/13/98
	X98513	100-41-4	Ethylbenzene	ND	mg / Kg	250	0.005	XG.1998.996-17
	X98513	95-47-6	o-Xylene	ND	mg / Kg	250	0.005	XG.1998.996-17
	X98513		P/M-Xylenes	ND	mg / Kg	250	0.01	XG.1998.996-17
	X98513	108-88-3	Toluene	ND	mg / Kg	250	0.005	XG.1998.996-17
Test: SW846 801A Diesel Range Organics by GC/FID								
9811109-01B	X98501		Diesel Range Organics	ND	mg / Kg	25	25	XG.1998.1006-9 11/13/98

Client Sample ID: **JAT 124 #1 CELL 2** Sample Matrix: **SOIL** Sample Collected: **11/11/98 14:10:00**

Fraction	QC Group	CAS #	Result	Units	Dilution Factor	Detection Limit	* Sequence	Run Date
Test: SW846 8010B/8020A Purgeable VOCs by GC/PID-ELCD								
9811109-02A	X98513	71-43-2	Benzene	ND	mg / Kg	250	0.005	XG.1998.996-18 11/13/98
	X98513	100-41-4	Ethylbenzene	ND	mg / Kg	250	0.005	XG.1998.996-18
	X98513	95-47-6	o-Xylene	ND	mg / Kg	250	0.005	XG.1998.996-18
	X98513		P/M-Xylenes	ND	mg / Kg	250	0.01	XG.1998.996-18
	X98513	108-88-3	Toluene	ND	mg / Kg	250	0.005	XG.1998.996-18
Test: SW846 8015A Diesel Range Organics by GC/FID								
9811109-02B	X98501		Diesel Range Organics	ND	mg / Kg	25	25	XG.1998.1006-10 11/13/98



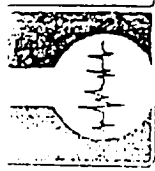
Assaigai Analytical Laboratories, Inc.
Certificate of Analysis

Client: **APACHE CORPORATION**
 Project: **9811109 JICARILLA PIT CLOSURES**

Client Sample ID	JAT 124 #1 CELL 3A	Sample Matrix	SOIL	Sample Collected	11/11/98 14:20:00
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Fraction	QC Group	CAS #	Result	Units	Dilution Factor	Detection Limit *	Sequence	Run Date
Test: SW846 8010E/8020A Purgeable VOCs by GC/PID-ELCD								
9811109-03A	X98513	71-43-2	Benzen:	ND	mg / Kg	250	0.005	XG.1998.996-19 11/13/98
	X98513	100-41-4	Ethylbenz:ne	ND	mg / Kg	250	0.005	XG.1998.996-19
	X98513	95-47-6	o-Xylen:	ND	mg / Kg	250	0.005	XG.1998.996-19
	X98513		P/M-Xyler es	ND	mg / Kg	250	0.01	XG.1998.996-19
	X98513	108-88-3	Toluene:	ND	mg / Kg	250	0.005	XG.1998.996-19
Test: SW846 8015A Diesel Range Organics by GC/FID								
9811109-03B	X98501		Diesel Range (rganics	ND	mg / Kg	25	25	XG.1998.1009-12 11/16/98

*** 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. ***



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Chain of Custody Record

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

JOHN JEFFERSON, D.E.
ALBUQUERQUE, NEW MEXICO 87109
(505) 345-9964

Lab job no.: 11091 Date: _____ of _____ of _____
 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 Button
 Contract / Purchase Order / Quote _____

Analysis Required
 Remarks

Anal. Fraction Number	Field Sample Number / Location	Date	Time	Sample Type	Type / Size of Container	Preservation Temp.	Chemical
1A	JAT 124#1 Core	11/11/98	2:00	SOIL	4 oz glass	ICE	
1B	" " Core 1	}	"	}	}	}	}
2A	" " Core 2		2:00				
2B	" " Core 2		"				
3A	" " Core 3		2:30				
3B	" " Core 3		"				

No. of Containers
 BTX
 DRO
 TKN

Relinquished by: Signature: <u>Danny Button</u> Printed: <u>DANNY BUTTON</u> Company: <u>APACHE CORP</u> Reason: _____	Received by: Signature: <u>[Signature]</u> Printed: _____ Company: _____ Reason: _____
Date: <u>11/11/98</u> Time: _____	Date: <u>11-12-98</u> Time: <u>08:15</u>
Method of Shipment: _____ Shipment No.: _____ Special Instructions: _____	After analysis, samples are to be: <input type="checkbox"/> Disposed of (additional) <input type="checkbox"/> Stored (30 days max) <input type="checkbox"/> Stored over 30 days (add fee) <input type="checkbox"/> Returned to customer

LABORATORY