## JICARILLA APACHE TRIBE

**ENVIRONMENTAL PROTECTION OFFICE** 

SUBMIT 1 COPY TO

NATURAL

RESOURCE DEPT

AND OIL GAS

ADMINISTRATION

P O. BOX 507 DULCE, NEW MEXICO 87528

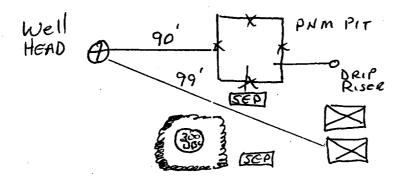


## PIT REMEDIATION AND CLOSURE REPORT

PH REMEDIATION	AND OLOGONE ME. ON	OIL CON. DIV.
Operator: PNM Gas Services ( Con	OCO ) Telephone:	DIST. 3 324-3764
Address: 603 W. Elm Street Farmington, NM 8	37401	
Facility or Well Name: Arc Apach	e J-19.	
Location: Unit: D Sec. 6		ounty Rio Arriba
Pit Type: Separator X Dehydrator	Other Line	Drip
Land Type:		
Pit Location: Pit dimensions: length	_ខ្មែ width ខ្មែ	depth 2'
(Attach diagram) Reference: wellhe	ead X other	
Footage from reference:	90'	
Direction from reference:	Du € Degrees X East	North
	of West	South
Depth to Ground Water:	Less than 50 feet 50 feet to 99 feet	(20 points) (10 points)
(Vertical distance from conteminants to seasonal high water elevation of ground water)	Greater than 100 feet	( 0 points)
Wellhead Protection Area:	Yes No	(20 points) Ø
(Less than 200 feet from a private domestic water source, or; less than 1,000 feet from all other water sources)		
Distance to Surface Water:	Less than 200 feet 200 feet to 1,000 feet	(20 points) (10 points)
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Greater than 1,000 feet	( 0 points)
Distance to Ephemeral Stream (dry wash):	Less than or equal to 100 feet Greater than 100 feet	(10 points) (0 points)
(Horizontal distance to all downgradient streams having a width of at least 10 feet)		
Distance to Nearest Lake, Playa, or Watering	Less than or equal to 100 feet Greater than 100 feet	(10 points) Ø
Pond: (Horizontal distance to all downgradient lakes, playas, and livestock or wildlife		
water ponds)	RANKING SCORE (TOTAL	POINTS):

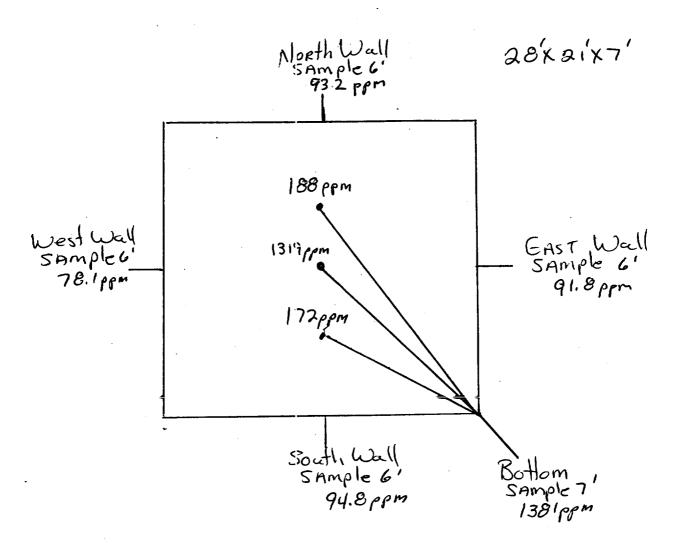
Remediation Method: Excavation X Approx. Cubic Yards	Date Remediation Started:	7/22/98	Date Completed:	198 9/2/98
Other 20 yds Over burden  Remediation Location: Onsite Offsite Schmitz RANCH Schmitz RANCH New Mexico  General Description of Remedial Action:  Removed Contaminated Soil from all four Side walls as to get a below 100 ppm headagner reading. Pit bettom is sandstone. 3 Pt Composite of Pit bettom.  Exchantian Size 28 x 2/x 7 6 8  Ground Water Encountered: No X yes Depth  Final Pt Closure Sample Location Alorth, East, South, wast side walls and legarm of sample locations and depths.)  Sample Results  Soil: Benzene (ppm) 1381  Total BTEX (ppm 107.42 Toluene (ppb)  Total BTEX (ppm 107.42 Ethylbenzene (ppb)  Total BTEX (ppm 107.42 Toluene (ppb)  Total Stephane 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 MY BELIEF DATE 8/29/98 PRINTED NAME Roy Burnham  SIGNATURE Roy Burnham AND TITLE Environmental Technician II  AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE APPROVED: YES NO (REASON): R.A. A.H.a.c.L.c.	Remediation Method:	Excavation X	Approx. Cubic Yards	132 RB 1520 under.
Other 20 115 Over burden  Remediation Location: Onsite Offsite T.N.T. Land form  Schmitz Ranch  Alew Mexico  General Description of Remedial Action:  Remedial Description of Remedial Action:  Remediation Land Land Land Description Accordance  To Jicarilla Apache Title Pit Closure Information Action:  New Jerus Stand Land Land Land Complete To The Best Of My Knowledge And My Belliption Date 2/25/98 PRINTED NAME Roy Burnham  AND TITLE Environmental Technician II  After Review Of The Pit Closure Information, Pit Closure Is Approved in Accordance  To Jicarilla Apache Title Pit Closure Ordinance.  Approved: Yes No Remedial Action:  Approved: Approved in Accordance  Onside Title Pit Closure To Dinance.  Approved: Yes No Remedial Action:  Approved: Approved in Accordance  Onside Title Pit Closure Title Pit Closure Information, Pit Closure Is Approved in Accordance  Onside Title Pit Closure Title Pit Closure Information, Pit Closure Is Approved in Accordance  Onside Title Pit Closure Title Pit Closure Information, Pit Closure Is Approved in Accordance	appropriate	Landfarmed	Amount Landfarmed (cubic yds)	132
General Description of Remedial Action:  Removed Contaminated Soil from all four Side walls as to get a below 100 ppm headspace reading. Pit bottom:  Sandstone: 3 Pt Composite of Pit bottom:  Exchartion Size 28'x 21'x Total  Ground Water Encountered: No X Yes Depth  Final Pit Closure Sample Location Aloreth. East, South, west side walls ample seated and diagram of sample locations and depths.  Sample date 7/2z/98 Sample time 1531  Sample Results  Soil: Benzene (ppm) 520 Water: Benzene (ppb)  Total BTEX (ppm 107.42 Toluene (ppb)  Field headspace (ppm) 1381 Total Xylenes (ppb)  Total Xylenes (ppb)  Ground Water 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 MY BELIEF DATE 8/29/98 PRINTED NAME Roy Burnham  SIGNATURE Ray Burnham AND TITLE Environmental Technician II  AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE OPDINANCE.  APPROVED: YES NO (REASON): R.A. A Ha check		Other 20 yd5 over	burden	
Removed Contaminated Soil from all four Side walls as to get a below loo ppm headspace reading. Pit better is sandsone. 3 Pt Composite of Pit better.  Exchantion Size 28'x 21'x FE  Ground Water Encountered: No X Yes Depth  Final Pit Closure Sample Location Alorth, East, South, West Side walls and diagram of sample samples, attach sample locations and depths.)  Sample depth 7/  Sample depth 7/  Sample depth 7/2z/98 Sample time 153/  Sample Results  Soil: Benzene (ppm) .520 Water: Benzene (ppb)  Total BTEX (ppm 107.42 Toluene (ppb)  Field headspace (ppm)   138/  TPH 980 ppm Method  Ground Water Sample: Yes No X (If yes, attach sample results)  I HEREBY CERTIFY THAT THE INFORMATION AFIOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND MY BELIEF  DATE 8/29/98 PRINTED NAME Roy Burnham  SIGNATURE Roy Burnham AND TITLE Environmental Technician II  AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.  APPROVED: YES NO (REASON): R-A, A Ha c Le d	(i.e., landfarmed onsite, name	Onsite	Schmitz R	guch
Final Pit Closure Sampling:  (if multiple samples, attach sample result and diagram of sample locations and depths.)  Sample date  7/2z/98  Sample time  153/  Sample Results  Soil: Benzene (ppm)  Total BTEX (ppm 107.42  Field headspace (ppm) 138/  TPH 980 ppm Method  Ground Water 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 MY BELIEF  DATE  B/29/98  PRINTED NAME  Roy Burnham  SIGNATURE  APPROVED: YES  NO (REASON):  Reason:  Alorth, East, South, West Side Walfs  7/  22/98  Sample time 153/  Toluene (ppb)  Toluene (ppb)  Ethylbenzene (ppb)  Total Xylenes (ppb)  Total Xylenes (ppb)  PRINTED NAME Roy Burnham  SIGNATURE Roy Burnham  SIGNATURE Roy Burnham  APPROVED: YES  NO (REASON):  R-A, A Ha C Le C	Removed Contas to get a bottom is sand	aminated Soil from below 100 ppm Islane. 3 At Con	headspace reading.	P.+
Sampling:  (if multiple samples, attach sample result and diagram of sample locations and depths.)  Sample date  7/2z/98  Sample time  153/  Sample Results  Soil: Benzene (ppm)  Total BTEX (ppm 107.42  Field headspace (ppm) 138/  TPH 980 ppm Method  Ground Water Sample: Yes No X (if yes, attach sample results)  I HEREBY CERTIFY THAT THE INFORMATION ABIOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND MY BELIEF  DATE  8/24/98  PRINTED NAME Roy Burnham  SIGNATURE Roy Burnham  SIGNATURE Roy Burnham  AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE OFDINANCE.  APPROVED: YES  NO (REASON): R.A. A Hached  ROY BURN ARCORDANCE	Ground Water Encounter	ed: No $\underline{\chi}$ Yes	Depth	
Sample date  Sample date  7/2z/98  Sample time  153/  Toluene (ppb)  Total BTEX (ppm 107.42 Ethylibenzene (ppb)  Total Xylenes (ppb)  FIEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND MY BELIEF  DATE  8/29/98  PRINTED NAME Roy Burnham  SIGNATURE  ROY BURNHAM  SIGNATURE  ROY BURNHAM  AND TITLE  Environmental Technician II  AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.  APPROVED: YES  NO  (REASON):  RAY  ROY  RAY  ROY  REASON):  RAY  ROY  ROY  ROY  ROY  ROY  ROY  ROY			0 . 1 //	-side walk
Soil: Benzene (ppm) 1520 Water: Benzene (ppb)  Total BTEX (ppm 167.42 Toluene (ppb)  Field headspace (ppm) 1381 Ethylbenzene (ppb)  TPH 980 ppm Method  Ground Water Sample: Yes No X (lif yes, attach sample results)  I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND MY BELIEF  DATE 8/29/98 PRINTED NAME Roy Burnham  SIGNATURE Roy Burnham  SIGNATURE Roy Burnham AND TITLE Environmental Technician II  AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE OF:DINANCE.  APPROVED: YES NO (REASON): R-A. A Hacked	sample result and diagram of sample locations and depths.)	Sample depth $\frac{7}{1}$ Sample date $\frac{7}{2z/98}$		53 <i>i</i>
Total BTEX (ppm 107.42 Toluene (ppb)  Field headspace (ppm) 1381 Ethylbenzene (ppb)  TPH 980 ppm Method  Ground Water 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 MY BELIEF  DATE 8/29/98 PRINTED NAME Roy Burnham  SIGNATURE ROY BURNHAM AND TITLE Environmental Technician II  AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE OF DINANCE.  APPROVED: YES NO (REASON): R-A. A Ha check	_		Water: Benzene (ppb)	
Total Xylenes (ppb)  Frequence (ppb)  Total Xylenes	То		Toluene (ppb)	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND MY BELIEF  DATE  B/29/98  PRINTED NAME  Roy Burnham  SIGNATURE  ROY BURNHAM  AND TITLE  Environmental Technician II  AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE OFIDINANCE.  APPROVED: YES  NO  (REASON):  R-A. A Hacked		0.4		
KNOWLEDGE AND MY BELIEF  DATE  B/29/98  PRINTED NAME  Roy Burnham  SIGNATURE  ROY BURNHAM  AND TITLE  Environmental Technician II  AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE OFIDINANCE.  APPROVED: YES  NO  (REASON):  R-A, A Hacked	Ground Water Sample:	Yes No	χ (If yes, attach samp	ie results)
TO JICARILLA APACHE TRIBE PIT CLOSURE OFIDINANCE.  APPROVED: YES NO (REASON): R.A. A Hacked	DATE 8/2	ELIEF 9/98 PRIN	TED NAME Roy Burnham	
· · · · · · · · · · · · · · · · · · ·	TO JICARILLA APACHE T	NO (REASON	E. N): <u>R-A. AHa</u>	CCORDANCE Lecl

# Site DRAWING



Sec-6 T-25N R-5W Conoco





OFF: (505) 325-5667



LAB: (505) 325-1556

### TECHNOLOGIES, LTD.

## On Site Technologies, LTD.

Date: 04-Aug-98

**CLIENT:** 

PNM - Public Service Company of NM

Project:

PNM Pit Remediation

Lab Order:

9807067

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

## ANALYTICAL REPORT

Date: 04-Aug-98

Client:

PNM - Public Service Company of NM

Work Order:

9807067

Lab ID:

9807067-04A

Matrix: SOIL

Project:

PNM Pit Remediation

Client Sample Info: Axi Apache J-19

Client Sample ID: 9807221531; 3pt. Comp. Bottom

Collection Date: 7/22/98 3:31:00 PM

COC Record: 7069

Parameter	Result	PQL	Qual Units	DF	Date Analyzed
DIESEL RANGE ORGANICS	SW8015			Analyst: HR	
T/R Hydrocarbons: C10-C28	. 980	25	mg/Kg	1	7/30/98
BTEX	SW8020A			Analyst: DC	
Benzene	520	500	μ <b>g</b> /Kg	500	7/27/98
Toluene	21000	1000	μg/Kg	500	7/27/98
Ethylbenzene	9900	500	μ <b>g</b> /Kg	500	7/27/98
m,p-Xylene	60000	1000	μg/Kg	500	7/27/98
o-Xylene	16000	500	μg/Kg	500	7/27/98
·	10742	٥			
·	107.41	20 PPn	0		

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quant tation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

#### ANALYTICAL REPORT

Date: 04-Aug-98

Client:

PNM - Public Service Company of NM

Work Order:

9807067

7007007

9807067-03A

Matrix: SOIL

Lab ID: Project:

**PNM** Pit Remediation

Client Sample Info: Axi Apache J-19

Client Sample ID: 9807221530; 4pt. Comp. Walls

Collection Date: 7/22/98 3:30:00 PM

COC Record: 7069

Parameter	Result	PQL	Qual Units	DF	Date Analyzed
DIESEL RANGE ORGANICS	SW8015			Analyst: HR	
T/R Hydrocarbons: C10-C28	. ND	25	mg/Kg	1	7/28/98

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surr: - Surrogate



Well Name:

Well Legals:

Pit Type:

Horizontal Distance to Surface Water:

Groundwater Depth:

Axi Apache J #19 Unit D, Sec 6, T25N, R5W Line Drip Greater than 1,000 feet Greater than 100 feet

### **RISK ANALYSIS**

PNM requests closure of their former pit on the Axi Apache J #19 well site using a limited risk analysis based on the following conditions:

- 1. Groundwater is estimated to be at a depth of 189 feet based upon the elevation of the site and the elevation of the nearest "listed" or "named" wash (Tapacito Canyon). (Reference: Gonzales Mesa, NM series 7.5 minute topographic map.)
- 2. The site is located outside of the "vulnerable area" as defined under OCC Order No. R-7940-C.
- 3. PNM excavated 152 cubic yards of soil from the former pit. Subsurface lateral contamination has been remediated (see attached map and analytical results for the side wall profiles). Source removal minimizes the possibility of surface water contamination.
- 4. Sandstone was encountered at 7 feet below ground surface. <u>Bedrock/sandstone</u> provides a barrier between remaining contamination and groundwater. Vertical migration through bedrock or sandstone to groundwater is unlikely.
- 5. PNM excavated and performed remediation to the maximum depth and horizontal extent practicable.

PNM believes their former pit on the Axi Apache J #19 well site poses minimal threat to groundwater, human health and the environment based upon our past experience in excavating over 800 pits.