JICARILLA APACHE TRIBE Comp - RISKENVIRONMENTAL PROTECTION OFFICES - OK MATERIAL PROTECTION OFFICES

P.O. BOX 507

P.U. BOA 307
DULCE, NEW MEXICO 87528

PIT REMEDIATION AND CLOSURE REPORT

OUL CONT. TOURS

	Tolenhouse: (1808) 326-9200
Operator: AMOCO PRODUCTION COMPANY	Telephone
Address: 200 Amoco Court, Farmington,	NM 87401
Facility or Well Name:	18ACT # 147 - 3
Location: Unit or Qtr/Qtr Sec_A_ Sec_6 T	rzsk R SW County RIO ARRIBA
Pit Type: Separator Dehydrator Other	BLOW
Land Type: RANEE	
I it Location.	43', width 40', depth_ 14'
(Attach diagram) Reference: wellhead X	_, other
Footage from reference:3	348
Direction from reference:	Degrees East North of
	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)
groundwater) Distance to an Ephemeral Stream (Downgradient dry wash greater than ten feet in width)	Less than 100 feet (10 points) Greater than 100 feet (0 points)
Distance to Nearest Lake, Playa, or Watering Pond (Downgradient lakes, playas and livestock or wildlife watering ponds)	
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or: less than	Yes (20 points) O No (0 points)
1000 feet from all other water sources) Distance To SurfaceWater: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 100 feet (20 points) 100 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)
	RANKING SCORE (TOTAL POINTS):

		8760	9 BLOW PIT
_			1 /2
	ed:	 -	rds
Remediation Method: Check all appropriate	Excavation		
sections)	Landfarmed 🔀	Insitu Bioremedial	ion
	Other		
Remediation Location: (i.e. landfarmed onsite, name and location of offsite facility)	Onsite X Offsite		
	Remedial Action: _Excavat	ion. Bottom HALF &	OF EXECUTION CONSISTED
DE BEDRSCH THE	REFORE NO TRA RNALY.	sis uns compreses	. RISK ASSESSED.
Groundwater Encounte	red: No X Yes	Depth	
	ample location see Attach	ned Documents	
Closure Sampling: (if multiple samples, _			
attach sample results and diagram of sample	Sample depth 12 ' (P	it Bottom)	
locations and depths)	ample date8/19/98	Sample ti	me
	sample Results		
	•	Water:	Benzene (ppb)
			Toluene (ppb)
	Field Headspace (ppm		Ethylbenzene (ppb)
			Total Xylenes (ppb)
Groundwater Sample:	Yes No		
KNOWLEGE AND BE	LIEF		OMPLETE TO THE BEST OF MY
DATE	8/9/98, printe	D NAME Buddy D.	Shaw
SIGNATURE BLOS	8/19/98 PRINTER Cy D. Shaw AND	TITLE Environme	ental Coordinator
PRINCE OF	THE PIT CLOSURE INFORMA APACHE TRIBE PIT CLOSUR	TION, PIT CLOSURE IS	S APPROVED IN ACCORDANCI
APPROVED: YES	NO (REASON)	R.A AHACL	col
SIGNED:	mall DA	ге: <u>9-9-98</u>	

3003906181 LOCATION NO: 87609 BLAGG ENGINEERING, INC. CLIENT: AMOCO P.O. BOX 87, BLOOMFIELD, NM 87413 C.O.C. NO: _____ (505) 632-1199 CLOSURE VERIFICATION PAGE No: / of _ FIELD REPORT: DATE STARTED: 8/19/98 LOCATION: NAME: JICA. CONTR. 147 WELL #: 3 PIT: BLOW DATE FINISHED: QUAD/UNIT: A SEC: 6 TWP: 25N RNG: 5W PM: NM CNTY: RA ST: NM OTR/FOOTAGE: 1190 FNL 790 FEL CONTRACTOR: EXCAVATION APPROX. 43 FT. x 40 FT. x 14 FT. DEEP. CUBIC YARDAGE: _ DISPOSAL FACILITY: ON-THE REMEDIATION METHOD: LANDFORM FORMATION: JIC 147 ____ LEASE: ___ KANGE LAND USE: _ FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 348 FT. N43E FROM WELLHEAD. DEPTH TO GROUNDWATER: >100 NEAREST WATER SOURCE: >1000 NEAREST SURFACE WATER CHECK DNE : NMOCD RANKING SCORE: ____ NMOCD TPH CLOSURE STD: 5000 PPM ✓ PIT ABANDONED ___ STEEL TANK INSTALLED SOIL AND EXCAVATION DESCRIPTION: __ FIBERGLASS TANK INSTALLED TOP HALF OF ALL SIDEWALLS CONSISTED OF OK, YELL GRANGE SAND MON CONESIVE, DRY TO SLICHTLY MOIST NO APPARENT STAINING OBSERVED BOTTOM HALF CONSISTED OF PUSKY KED SHALE SOFT TO HARD STAINING NOT DISTINGUISHABLE NO APPARENT HE ODOR DETECTED WIND EXCAURTION OR ANY OF THE OVER SAMPLES, ALL SIDEWALL OUT SAMPLES COLLECTED FROM BEDROCK, THEREFORE NO TOH ANGUSTS WAS CONDUCTED BOTTOM - BEDROCK (SHOLE), ET. TO MED. GRAY IN COLOR, VERY HARD, STRONG HC RISK ASSESSED FIELD 418.1 CALCULATIONS BEDZOCK SAMPLE I.D. LAB No: WEIGHT (g) ML. FREON DILUTION READING CALC. ppm Bottom TIME 0830 **SCALE** FT **PROFILE** PIT PERIMETER AN A 1 OVM RESULTS 0.0 0.0 0.0 BEIROCK 0.0 (56) LAB SAMPLES रक्ष्मण्डा है ANALYSIS CALLOUT: 8/17/98-morn. ONSITE: 8/19/98-morn. TRAVEL NOTES:

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizonal Distance to Surface Water:

Vicinity Groundwater Depth:

Jicarilla Contract 147 #3
Unit A, Sec. 6, T25N, R5W
Blow Pit
Basin Dakota

Non Vulnerable

> 1000 ft.

> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered shale bedrock at 14 feet below grade.

No past or future threat to surface water or groundwater is likely based on the following considerations:

- 1. Past production fluids were contained locally by a relatively shallow shale bedrock located 14 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below shale bedrock.
- 2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.
- 3. Daily discharge into the earthen pit has been terminated (pit abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.
- Well site located within the <u>non-vulnerable area</u> and is approximately 0.75 miles southeast of the nearest vulnerable area boundary (Tapacito Creek).

(Refer to Gonzales Mesa Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), 1963, (vulnerable area boundary developed by Mr. William C. Olson, Hydrogeologist, Environmental Bureau, New Mexico Oil Conservation Division).

Based upon the information given, we conclude that the shale bottom creates enough of an impermeable barrier as to subdue impact to groundwater below it (please refer to AMOCO's report "Post Excavation Pit Closure Investigation Summary, July. 1995", with cover letter dated November 30, 1995). AMOCO requests pit closure approval on this location.

BJ609

SUBMIT 1 COPY TO

NATURAL RESOURCE DEPT

AND OIL & GAS ADMINISTRATION

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

PIT REMEDIATION AND CLOSURE REPORT

PROPUGMION COMPANY	Telephone: (505) 326-9200
Operator: AMOCO PRODUCTION COMPANY	
Address: 200 Amoco Court, Farmington, Ni	M 87401
TICARILLA CONTI	RDCT # 141-5
$\sigma = \sigma =$	SN R SW County KIO ARRIBA
Location: Unit or Qtr/Qtr Sec_7/ Sec_6	com PRESSOR
Pit Type: Separator Dehydrator Other	
Land Type:	
Pit Location: Pit dimensions: length	28'_, width_21'_, depth_12'
(Attach diagram) Reference: wellhead X,	other
Footage from reference: 165	
Direction from reference: 85	Degrees East North _X_
1	West South
	Less than 50 feet (20 points)
Depth To Groundwater: (Vertical distance from contaminants to seasonal high water elevation of	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 points)
Distance to an Ephemeral Stream (Downgradient dry wash greater than ten feet in width)	Less than 100 feet (10 points) Greater than 100 feet (0 points)
Distance to Nearest Lake, Playa, or Watering Pond (Downgradient lakes, playas and livestock or wildlife watering ponds)	Less than 100 feet (10 points) Greater than 100 feet (0 points)
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)
Distance To SurfaceWater: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 100 feet (20 points) 100 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)
	RANKING SCORE (TOTAL POINTS):

	BJ609 COMPK. PIT
D to Demodiation Sta	rted: Date Completed: 8/,9/98
	Excavation X Approx. cubic yards 200
'emediation Method: Check all appropriate	The state of the s
sections)	Landrainied
	Other
Remediation Location: (i.e. landfarmed onsite, name and location of	Onsite Offsite
offsite facility) General Description of	of Remedial Action: Excavation, BEDROCK BOTTOM, RISK ASSESSED,
Groundwater Encount	ered: No X Yes Depth
Final Pit:	Sample location _ see Attached Documents TPH conducted on
Closure Sampling:	(oum = 0.0 ppm)
(if multiple samples, attach sample results	Sample depth 12' (PIT BOTTOM)
and diagram of sample locations and depths)	Sample date $\frac{81998}{}$ Sample time $\frac{939}{}$
•	Sample Results Water: Benzene (ppb)
	Soil: Benzene (ppm)
	Total BIEA (ppin)
	Field Headspace (ppin)
	TPH (ppm) ND Total Xylenes (ppb)
Groundwater Sample	: Yes No _X (If yes, attach sample results)
I HEREBY CERTIFY KNOWLEGE AND B	THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY ELIEF
DATE	8 / 19 98 PRINTED NAME Buddy D. Shaw
SIGNATURE BUS	dy Sou AND TITLE Environmental Coordinator
DELIVERY OF	THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE APACHE TRIBE PIT CLOSURE ORDINANCE.
APPROVED: YES _	X NO (REASON) R.A. AttAched
SIGNED: Lew	C Man DATE: 9-9-98

	27/09
AMOCO BLAGG ENGINEERING, INC	LOCATION NO: BIGO9
DO BOX 87 BLOOMFIELD, NM	87413 C.D.C. ND:
(505) 632-1199	Cidio. No
GLOGUDE VERIFICAT	TION PAGE No: 1 of 1
FIELD REPORT: CLOSURE VERIFICAT	
7 DIT. COMPR	DATE STARTED: 8 98
OCATION: NAME: JICA. CONTR. 147 WELL #: 3 PIT: COMPR	DATE FINISHED:
TWP: ZSN RNG: SW PM. 10- TENTI- IN	ST:OM
OTR/FOOTAGE: 1190 FNL/790 FEL CONTRACTOR: P+5	ENVIRONMENTAL NU SPECIALIST:
QTR/FOOTAGE: 1190 FALT 190 FED CONTRACTOR	720
EXCAVATION APPROX. 28 FT. x 21 FT. x 12 FT. DEEP.	CUBIC YARDAGE:
XCAVATION APPROX FT. x FT. x REMEDIATION DISPOSAL FACILITY: DN SITE REMEDIATION	METHOD: LANDFRLM
DISPOSAL FACILITY: ONG SITE REMEDITATION	FORMATION: DR
AND USE: RANGE LEASE: JIC 147	PORMATION
THE CONTRACT V 165	FT NSSW) FROM WELLHEA
ELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 165	SUPERCE VATER >1000
NEAREST WATER SOURCE: NEAREST	CHECK ONE
ELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 103 DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEARE NMOCD RANKING SCORE: 5000 PPM	VPIT ABANDONED
MMICD RANKING SCORE: NMICCO THE CERSONS TO THE CERSON TO THE CERSO	STEEL TANK INSTALLED
SOIL AND EXCAVATION DESCRIPTION:	FIBERGLASS TANK INSTALLE
DK. YELL. ORANGE SAND, NON COHESTUE SLIGHTLY MOIS	
ARPARENT STAINING OR HE ODOR OBSERVED DET	ECTED WIN EXCAUATION .
A SOUTH S	SINGLARIA PETILIFICA IN 17
SOME LT GRAY DUSKY RED CLAY SHALE OBSEIVED ON SOUTH S BELOW GRADE, NO APPARENT HE ODOR IN ANY	OF THE SIDELIAM DUM TAMPI
RATION PROPERTY AND LITTERS HE TON	3,0002
BEDROCK RISK PSSESSED FIELD 418.1 CALCUMANTE IN LAB NO: WEIGHT (9) IN	ULATIONS L. FREON DILUTION READING CALC. ppn
	20 1:1 4 ND
SCALE 0930 De7' TPH-2016 5	ω 1.1
0 FT	
PIT PERIMETER 12	PIT PROFILE
OVM OVM	
RESULTS	کر ا
SAMPLE FIELD HEADSPACE	·
Z 9 PID (ppm)	. ¬
266, 0.0 15,	· \
7 0.0 1	111111111
21 0 0 0 A 70 5 C 12 / 277	BEDROCK
21 A D S A TO SE 121 277	(22)
Dour	
LAB SAMPLES SAMPLE ANALYSIS TIME	
SAMPLE ANALYSIS TIME	
	100 m-0:1
TRAVEL NOTES: CALLOUT: 8/17/98 - MORN. ONSITE: 8/	19/98 - MORN.

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizonal Distance to Surface Water:

Vicinity Groundwater Depth:

Jicarilla Contract 147 #3

Unit A, Sec. 6, T25N, R5W

Compressor Pit Basin Dakota

Non Vulnerable

> 1000 ft

> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 12 feet below grade.

No past or future threat to surface water or groundwater is likely based on the following considerations:

- Past production fluids were contained locally by a relatively shallow sandstone bedrock located 12 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below sandstone bedrock.
- 2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.
- Daily discharge into the earthen pit has been terminated (pit abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.
- 4. Well site located within the <u>non-vulnerable area</u> and is approximately 0.75 miles southeast of the nearest vulnerable area boundary (Tapacito Creek).

(Refer to Gonzales Mesa Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), 1963, (vulnerable area boundary developed by Mr. William C. Olson, Hydrogeologist, Environmental Bureau, New Mexico Oil Conservation Division).

Based upon the information given, we conclude that the sandstone bottom creates enough of an impermeable barrier as to subdue impact to groundwater below it (please refer to AMOCO's report "Post Excavation Pit Closure Investigation Summary, July, 1995", with cover letter dated November 30, 1995). AMOCO requests pit closure approval on this location.

P.O. Box 87, Bloomfield, New Mexico 87413 Phone: (505)632-1199 Fax: (505)632-3903

FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:

AMOCO

Project #:

Sample ID:

4 @ 7'

Date Analyzed:

08-19-98

Project Location:

Jicarilla Contract # 147 - 3

Date Reported:

08 - 19 - 98

%

*Diff.

6.78

Laboratory Number:

TPH-2016

Sample Matrix:

Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	ND	20

ND = Not Detectable at stated detection limits.

OA/QC:

QA/QC Sample	Duplicate	
TPH mg/kg	TPH mg/kg	
228	244	

^{*}Administrative Acceptance limits set at 30%.

Method:

Modified Method 418.1, Petroleum Hydrocarbons, Total

Recoverable, Chemical Analysis of Water and Waste,

USEPA Storet No.4551, 1978

Comments:

Compressor Pit - BJ609

Wehon Vel Analyst

P.O. Box 87, Bloomfield, New Mexico 87413 Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Client:

AMOCO

Project #:

Sample ID:

4 @ 7'

Date Analyzed:

08-19-98

Project Location:

Max Characters:

Jicarilla Contract # 147 - 3

Date Reported:

08-19-98

Laboratory Number:

TPH-2016

Sample Matrix:

Soil

Sample Weight:

5.00 grams

Volume Freon:

20.00 mL

Dilution Factor:

1 (unitless)

TPH Reading:

4 mg/kg

TPH Result:

16.0 mg/kg

Reported TPH Result:
Actual Detection Limit:

16 mg/kg

Actual Detection Limit: Reported Detection Limit:

20.0 mg/kg 20 mg/kg

QA/QC:

Original TPH mg/kg Duplicate TPH mg/kg % Diff.

228

244

6.78

Comments:

Comments:

Compressor Pit - BJ609

BJ609

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

	(505)326-9200
Operator: AMOCO PRODUCTION COMPANY	Telephone: (505) 326-9200
Address: 200 Amoco Court, Farmington, N	M 87401
Facility or Well Name:	7 # (4) -)
Location: Unit or Qtr/Qtr Sec A Sec 6 T 2	SN R SW County X10 AIDCISH
Pit Type: Separator Dehydrator Other	
Land Type: RAGE	
1 it Location.	16', width16', depth9'
(Attach diagram) Reference: wellhead X,	other
Footage from reference: 125	<u>5'</u>
Direction from reference: 30	Degrees East North
	_X West South _X
Depth To Groundwater: (Vertical distance from contaminants to seasonal high water elevation of	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 points)
groundwater) Distance to an Ephemeral Stream (Downgradient dry wash greater than ten feet in width)	Less than 100 feet (10 points) Greater than 100 feet (0 points)
Distance to Nearest Lake, Playa, or Watering Pond (Downgradient lakes, playas and livestock or wildlife watering ponds)	Less than 100 feet (10 points) Greater than 100 feet (0 points)
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) \bigcirc No (0 points) $_$
Distance To SurfaceWater: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 100 feet (20 points) 100 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)
	RANKING SCORE (TOTAL POINTS):

Date Remediation Sta Remediation Method: Theck all appropriate sections)	Tred: Date Completed: 8 9 98 Excavation Approx. cubic yards 50 Landfarmed Insitu Bioremediation
Remediation Location (i.e. landfarmed onsite, name and location of offsite facility) General Description Groundwater Encoun	of Remedial Action: Excavation Redrock Bottom -
Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)	Sample location see Attached Documents Sample depth 5' (west sidewow) Sample date 8 19 9 Sample time //∞ Sample Results Soil: Benzene (ppm) Total BTEX (ppm) Field Headspace (ppm) TOTAL Ethylbenzene TOTAL TOTAL TOTAL TOTAL <td< th=""></td<>
I HEREBY CERTIFY KNOWLEGE AND B	THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY ELIEF 8/19/98 PRINTED NAME Buddy D. Shaw AND TITLE Environmental Coordinator
TO THE JICARILLA	THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE APACHE TRIBE PIT CLOSURE ORDINANCE. NO (REASON) DATE:9-9-98

11000	DIACC	G ENGINEERING	INC.	LOCATION NO:	BT609
CLIENT: AMOCO	DO BOX 85	7 BLOOMFIELD,	MW Q1410	C.O.C. NO:	
	((505) 632-1199) 	T	
FIELD REPOR	RT: CLOS	SURE VERIF	ICATION	PAGE No: 1	
				DATE STARTED: 8	19/98
QUAD/UNIT: A SEC:	TWP ZSN RI	NG: SW PM:NM CM	NTY: PA ST: NM	DATE FINISHED:	
ATD (CDDTACE, //7979)	レープサン アしん し	JON HANGION			
	16	rem v 9 FT	DEEP. CUBIC	YARDAGE:	50
	7 (1)	F REMEDI	VIION WEILL	/1)	
TAND HEE. KANE	ال الما	EASE:			
	51/6	TER ADDODVIMATELY	125 FT.	530W_ FROM	METLHEN
TIELD NOTES & REMA DEPTH TO GROUNDWATER, >10	NEAREST WAT	ER SOURCE: >1000	NEAREST SURFA	CHECK ONE	<u> </u>
NMOCD RANKING SCORE:	NMOCD TPH CL	LOSURE STD: 5000 PF	···	FII WANNINGHED	
SOIL AND EXCAVATI	ION DESCRIPTI	□N:	· · · · · · · · · · · · · · · · · · ·	STEEL TANK INS FIBERGLASS TAN	TALLED K INSTALL
DK. YELL. OR	ANGE SAND	NON COHESIVE OR HC ODOR) C ETECTED IN ANY	SLKHTLY INDI	ETED WIN	EXCOUATION
NO APPALENT	T STAINING D	or he over the	OF THE SIL	DEWALL OVIL	SAMPLE
po mana	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
BOTTOM - BEDROC	CX (SHAVE) OUT	SKY YELL. BROWN SAMPLE.	m color,	HARD, NO AF	PACE~T
BEDROCK BEDROCK BOTTOM	TIME SAMPL	E I.D. LAB No: WEIGH	1 CALCULATIONS (g) mL. FREON	DILUTION READING	CALC. ppr
BEORXK	TIME SAMPL		1 CALCULATIONS (g) mL. FREON		
BEDROCK BOTTOM SCALE	TIME SAMPL	FIELD 418.	T (g) ML. FREON	DILUTION READING	CALC. ppi
BEOROCK BOTTON SCALE O FT PIT PERI	TIME SAMPL	FIELD 418. E I.D. LAB NO: WEIGH 5' TPH-2015 5	1 CALCULATIONS T (g) ML. FREON ZO	DILUTION READING	CALC. ppi
BEDROCK BOTTON SCALE O FT PIT PERIL	TIME SAMPL 1100 4)e	FIELD 418. E I.D. LAB NO: WEIGH 5' TPH-2015 5 OVM	T (g) ML. FREON	DILUTION READING /: / / PROFILI	CALC. ppi
BEDROCK BOTTON SCALE O FT PIT PERIL	TIME SAMPL 1100 Pe	FIELD 418. E I.D. LAB NO: WEIGHT 5' TPH - 2015 5 OVM RESULTS SAMPLE FIELD HEADSPACE	1 CALCULATIONS T (g) ML. FREON ZO	DILUTION READING	CALC. ppr
BEDROCK BOTTON SCALE O FT PIT PERIL	TIME SAMPL 1100 4)e	FIELD 418. E I.D. LAB NO: WEIGHT 5' TPH-2015 5 OVM RESULTS SAMPLE FIELD HEADSPACE PID (PPM) 1 2 6' 0.0	1 CALCULATIONS T (g) ML. FREON ZO	DILUTION READING /: / / PROFILI	CALC. ppr
BEDROCK BOTTON SCALE O FT PIT PERIL	TIME SAMPL 1100 4)e	FIELD 418. E I.D. LAB NO: WEIGHT 5' TPH-2015 5 OVM RESULTS SAMPLE FIELD HEADSPACE PID (ppm) 1 2 6	PIT	DILUTION READING /: / / PROFILI	CALC. ppi
BEDROCK BOTTON SCALE O FT PIT PERIL	TIME SAMPL 1100 4)e	FIELD 418. E I.D. LAB NO: WEIGHT S' TPH-2015 5 OVM RESULTS SAMPLE FIELD HEADSPACE PID (ppm) 1 2 6 0 0.0	1 CALCULATIONS T (g) ML. FREON ZO	DILUTION READING /: / PROFILI 16'	CALC. ppr
BEDROCK BOTTON SCALE O FT PIT PERIL	TIME SAMPL 1100 HOE METER D	OVM RESULTS SAMPLE FIELD HEADSPACE FIELD HE	PIT	DILUTION READING /: / PROFILI 16'	CALC. ppr
BEDROCK BOTTOM SCALE O FT PIT PERII	TIME SAMPL 1100 HOE METER D	OVM RESULTS SAMPLE FIELD HEADSPACE FIELD HE	PIT	DILUTION READING 1: 1 16' BEOROS	CALC. ppr
BEDROCK BOTTON SCALE O FT PIT PERIL	TIME SAMPL 1100 HOE METER D	OVM RESULTS SAMPLE ID FIELD HEADSPACE PID (ppm) 1 2 6 ' 0.0 3 2 5 ' 0.0 5 7 7 0.0	PIT	DILUTION READING 1: 1 16' BEOROS	CALC. ppr
BEDROCK BOTTOM SCALE O FT PIT PERII	TIME SAMPL 1100 HOE METER D	OVM RESULTS SAMPLE FIELD HEADSPACE FIELD HE	PIT	DILUTION READING 1: 1 16 16 16 16	CALC. ppr
BEDROCK BOTTOM SCALE O FT PIT PERII	TIME SAMPL 1100 HOE METER D	FIELD 418. E I.D. LAB NO: WEIGHT 5' TPH-2015 5 OVM RESULTS SAMPLE FIELD HEADSPACE PIB (ppm) 1 @ 6' 0.0 3 @ 5' 0.0 4 @ 5' 0.0 5 @ 10' 0.0 LAB SAMPLES SAMPLE ANALYSIS TIM	PIT	DILUTION READING 1: 1 16 16 16 16	CALC. ppr
BEDROCK BOTTOM SCALE O FT PIT PERII	TIME SAMPL 1100 HOE METER D	FIELD 418. E I.D. LAB NO: WEIGHT 5' TPH-2015 5 OVM RESULTS SAMPLE FIELD HEADSPACE PIB (ppm) 1 @ 6' 0.0 3 @ 5' 0.0 4 @ 5' 0.0 5 @ 10' 0.0 LAB SAMPLES SAMPLE ANALYSIS TIM	PIT	DILUTION READING 1: 1 16 16 16 16	CALC. ppr

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:

AMOCO

Project #:

Sample ID:

4 @ 5'

Date Analyzed:

08-19-98

Project Location:

Jicarilla Contract # 147 - 3

Date Reported:

08-19-98

Laboratory Number:

TPH-2015

Sample Matrix:

Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	ND	20

ND = Not Detectable at stated detection limits.

QA/QC:

QA/QC Sample	Duplicate TPU ma/kg	% *Diff.
TPH mg/kg 	TPH mg/kg 	— — — —
228	244	6.78

^{*}Administrative Acceptance limits set at 30%.

Method:

Modified Method 418.1, Petroleum Hydrocarbons, Total

Recoverable, Chemical Analysis of Water and Waste,

USEPA Storet No.4551, 1978

Comments:

Separator Pit - BJ609

Melion Vilgania

Review

P.O. Box 87, Bloomfield, New Mexico 87413 Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Max Characters: Client:

AMOCO

Project #:

Sample ID:

4 @ 5'

Date Analyzed:

Project Location:

Jicarilla Contract # 147 - 3

Date Reported: 08

08-19-98 08-19-98

Laboratory Number:

TPH-2015

Sample Matrix:

Soil

Sample Weight:

5.00 grams

Volume Freon:

20.00 mL

Dilution Factor:

1 (unitless)

TPH Reading:

4 mg/kg

TPH Result:

16.0 mg/kg

Reported TPH Result:

16 mg/kg

Actual Detection Limit:

20.0 mg/kg

Reported Detection Limit:

20 mg/kg

QA/QC:

Original TPH mg/kg

Duplicate TPH mg/kg % Diff.

228

244

6.78

Comments:

Comments:

Separator Pit - BJ609

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

SUBMIT 1 COPY TO

NATURAL RESOURCE DEP1

AND OIL & GAS ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT

Operator: AMOCO PRODUCTION	COMPANY	Telephone: (505) 326-9200
Address: 200 Amoco Court,	Farmington,	NM 87401
Facility or Well Name: <u>Scarius</u>	1 CONTRACT 12	17-3
Location: Unit or Qtr/Qtr Sec_A	Sec6 T_2	35N RSW County RO ARRIBA
Land Type: RANGE		
Date Remediation Started: 8 19	. 98	Date Completed: 4/9/99
Remediation Method: Landfarmed		Approx. cubic yards
Composted		
Other		
pth To Groundwater:	(pts.)	Final Closure Sampling:
Distance to an Ephemeral Stream	(pts.)	Sampling Date: <u>4799</u> Time: <u>1300</u>
Distance to Nearest Lake, Playa, or Watering Pond	(pts.)	Sample Results:
Wellhead Protection Area:	(pts.) <u>O</u>	Field Headspace (ppm) O.D TPH (ppm) 1.7 Method 8015
Distance To SurfaceWater:	(pts.) <u>O</u>	Other
RANKING SCORE (TOTAL POIN	TS): <u>O</u>	- Culci
I HEREBY CERTIFY THAT THE INFO KNOWLEGE AND BELIEF	RMATION ABOVI	E IS TRUE AND COMPLETE TO THE BEST OF MY
DATE 4/9/99 SIGNATURE BURLY S. S		NAME Buddy D. Shaw AND TITLE Environmental Coordinator
AFTER REVIEW OF THE SOIL REME ACCORDANCE TO THE JICARILLA	DIATION INFORM APACHE TRIBE PI	IATION, ON-SITE REMEDIATION IS APPROVED IN T CLOSURE ORDINANCE.
APPROVED: YES NO	(REASON)	
l .		
SIGNED:	DATE	:

BLAGG ENGINEERING, INC. LOCATION NO BS609 CLIENT: AMOCO P.O. BOX 87, BLOOMFIELD, NM 87413 C.O.C. NO: 6881 (505) 632-1199 FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION DATE STARTED: 4 7.99 LOCATION: NAME: 5:CARINA CONTRACT 147 WELL #: 3 PITS: SEP., BLOW, COMP. DATE FINISHED: _ QUAD/UNIT: A SEC: 6 TWP: 25N RNG: SIN PM: NM CNTY: RA ST:NM ENVIRONMENTAL REP OTR/FODTAGE: NE/4 NE/4 CONTRACTOR: PAS SOIL REMEDIATION: APPROX. CUBIC YARDAGE: 750 REMEDIATION SYSTEM: LANDFARM LIFT DEPTH (ft): Z LAND USE: RANGE FIELD NOTES & REMARKS: DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000' NMOCD RANKING SCORE O NMOCD TPH CLOSURE STD 5000 PPM MODERATE YELLOWISH BROWN SAND, NON BOHESIVE, SLIGHTLY MOIST, FIRM NO APPARENT STAINING, NO HC ODOR DETECTED, SAMPLING DEPTHS RANGE FROM 6"-18" TOOK A S PT. COMPOSITE BAMPLE FOR LAB ANGLUSIS. CLOSED FIELD 418.1 CALCULATIONS WEIGHT (9) ML. FREON DILUTION READING CALC. ppm SAMP. TIME SAMPLE I.D. LAB NO: SKETCH/SAMPLE LOCATIONS LAB SAMPLES OVM RESULTS RESULTS ANALYSIS TIME FIELD HEADSPACE PID (ppm) SAMPLE SAMPLE 153, 1.7 (8015) 1300 0.0 LF.1 180' 586° E

2011		
SCALE		
0	FT	

TRAVEL NOTES: CALLOUT: N/A

ONSITE: 4 7.99



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Biagg / AMOCO	Project #:	403410
Sample ID:	LF - 1	Date Reported:	04-09-99
Laboratory Number:	E988	Date Sampled:	04-07-99
Chain of Custody No:	6881	Date Received:	04-08-99
Sample Matrix:	Soil	Date Extracted:	04-08-99
Preservative:	Cool	Date Analyzed:	04-09-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	1.7	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	1.7	0.2

ND - Parameter not detected at the stated detection limit.

References:

Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, December 1996.

Comments:

Jicarilla Contract 147 - 3 Landfarm.

5 Pt. Composite.

Dew L. Cejewan

Stacy W Sendler

CHAIN OF CUSTODY RECORD

		andraph			
Client / Project Name	Project Location Strive - / Carl		AN	ANALYSIS / PAHAME EHS	
BLAKE/AMOCO	SICARILLA CO	SICARILLA CONTRACT 147-3		Remarks	arks
Sampler:	Client No.		ers		
H	07-75070	07-70	lo. of stained		
9	Lab Number	Sample Matrix			
Colitination Control	346-1	287	\ \ \	ST. CONPOSITE	BITE
1. 1.	C				
				SAIRE	MESERVE-
				Cool	
					Date Time
Relinquished by: (Signature)		Date Time Reco	Received by: (Signature)	4.8	<u>رة</u>
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)		Rec	Received by: (Signature)		
		ECVIDOTECH IOC.		Sample Receipt	Receipt
					Z Z
		5796 U.S. Highway 64	ghway 64	Received Intact	7
		Farmington, New Mexico 874 (505) 632-0615	Mexico 8/401 2-0615	Cool - Ice/Blue Ice	