CA642 0/-185X

JICARILLA APACHE TRIBE

JENNY 2. Four ENVIRONMENTAL PROTECTION OFFICE

P.O. BOX 507

DULCE, NEW MEXICO 87528

NATURAL RESOURCE DEPT

AUG 2 4 1999

PIT REMEDIATION AND CLOSURE REPORT

	The 15051324 5884
Operator: CONOCO, INC	Telephone: (505) 324-5884
Address: 3315 Bloomfield Hwy., Farmingt	on, NM 87401
Facility or Well Name: TICARILLA E #	
Location: Unit or Qtr/Qtr Sec C Sec ZZ TZ	
Pit Type: Separator Dehydrator Other_ o	20mpress 3R
Land Type: RANGE	
Pit Location: Pit dimensions: length	other, width, depth6'
Footage from reference:	
Direction from reference:	Degrees X East North X of West South
	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)
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):

CAGYZ COMPR. PIT

	0/2./08
Date Remediation Sta	nrted: Date Completed:9/2.(98
Remediation Method:	
sections)	Landfarmed X Insitu Bioremediation
	Other
Remediation Location (i.e. landfarmed onsite, name and location of offsite facility)	
General Description	of Remedial Action: Excavation. BEDROCK BOROM. REK ASSESSED.
Groundwater Encoun	tered: No <u>2</u> Yes Depth
Final Pit: Closure Sampling: (if multiple samples,	Sample location see Attached Documents
attach sample results and diagram of sample	Sample depth 3 (NORTH SIDEWALL) PIT BUTTOM @ 7 OUT = 761 ppm
locations and depths)	Sample date9/21/98 Sample time1130
	Sample Results
	Soil: Benzene (ppm) Water: Benzene (ppb)
	Total BTEX (ppm) Toluene (ppb)
	Field Headspace (ppm) D.O Ethylbenzene (ppb)
	TPH (ppm) ~D Total Xylenes (ppb)
Groundwater Sampl	e: Yes No <u>×</u> (If yes, attach sample results)
I HEREBY CERTIF KNOWLEGE AND I	Y THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY BELIEF
DATE	9/2/ 18 PRINTED NAME Jeffrey C. Blagg, P.E.# 11607
SIGNATURE O	My C. Slogg AND TITLE President
AFTER REVIEW O TO THE JICARILL	F THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE A APACHE TRIBE PIT CLOSURE ORDINANCE.
APPROVED: YES	X NO (REASON) RA. Attached
SIGNED:	- Ma DATE: 10-1-98

3 00392111	?	10
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BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 874 (505) 632-1199	413 C.O.C. ND:
FIELD REPORT: CLOSURE VERIFICATION)N PAGE No: of
QUAD/UNIT C SEC: 22 TWP 260 RNG. 4W PM:NM CNTY RA ST:	DATE STARTED 9/21/98
CTR/FOOTAGE: 800 FNL 2075 FWL CONTRACTOR: JUC	SPECIALIST:
EXCAVATION APPROX. 17 FT. x 14 FT. x 6 FT. DEEP C	CUBIC YARDAGE: 40
DISPOSAL FACILITY: ON-SITE REMEDIATION M	ETHOI)
LEASE: CONFLACT #104	FORMATION: PC
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 18 DEPTH TO GPOUNDWATER. >/ 00 / NEAPEST WATER SOURCE >/ 000 / NEAPEST : NMOCO PANKING SCOPE	FT NSOE FROM WELLHEAD. SURFACE WATER >/000 / CHECK ONE PIT ABANDONED STEEL TANK INSTALLED FIBERGLASS TANK INSTALLED
SIDEWALLS - MOSTLY DK. YELL. BROWN SAND, NON COHESIVE WAS APPARENT STAINING OR HE DOOR DBJE EXCAUATION NO APPARENT HE DDOR IN AM	LY OF THE OUM SAMPLES
BEDROCK (SANDSTONE) LT. GRAY VERY HARD, S OUM SAMPLE. BEDROCK RISK ASSESSED	
BEDROCK RISK ASSESSED BOTTOM ETED 4181 CA CHIAT	IDNS
BEDROCK ROMON STAMPLE. BEDROCK ROMON FIELD 418.1 CALCULAT: SCALE TIME SAMPLE I.D. LAB NO: WEIGHT (g) IN L. FR	IDNS REGN DILUTION READING CALC. ppm
BEDROCK ROMON STAMPLE. FIELD 418.1 CALCULATION SCALE TIME SAMPLE I.D. LAB NO: WEIGHT (g) M.L. FR 1130 De 3' TPH-2040 5 20	IDNS REGN DILUTION READING CALC. ppm
BEDROCK ROMON STAMPLE. BEDROCK ROMON FIELD 418.1 CALCULAT: SCALE TIME SAMPLE I.D. LAB NO: WEIGHT (g) IN L. FR	IDNS REGN DILUTION READING CALC. ppm
BEDROCK ROMON STAMPLE . FIELD 418.1 CALCULAT SCALE TIME SAMPLE I.D. LAB NO WEIGHT (g) INCL. FR 1130 0 2 3 1 TPH-2040 5 20	IDNS REGN DILUTION READING CALC. ppm
BEDROCK BOTTOM SCALE TIME SAMPLE I.D. LAB NO: WEIGHT (g) MILL FR 1130 De3' TPH-2040 5 20 OVM	IDNS REGN DILUTION READING CALC. ppm
BEDROCK ROTTOM SCALE TIME SAMPLE I.D. LAB NO: WEIGHT (g) MILL FR 1130 De 3' TPH-2040 S 20 OVM PIT PERIMETER N. RESULTS SAMPLE FELD MEADSPACE	PIT PROFILE
BEDROCK ROTTOM SCALE TIME SAMPLE I.D. LAB NO: WEIGHT (g) ITTL. FR 1130 De 3' TPH-2040 S ZO OVM PIT PERIMETER N. RESULTS RESULTS A DOWN SAMPLE FIELD HEADSPACE PID (EPPT) A PLOPE OPPLICATION A PICE PID (EPPT) A P	PIT PROFILE
BEDROCK ROTTOM SCALE TIME SAMPLE I.D. LAB NO: WEIGHT (g) IT L. FR 1130 De 3' TPH-2040 S ZO OVM PIT PERIMETER N RESULTS SAMPLE I.D. FILLD HEADSPACE PID (PPM) SIOPE DIRECTION 1 e 3' 0.0 2 e 3' 0.0	PIT PROFILE
BEDROCK ROTTOM SCALE TIME SAMPLE I.D. LAB NO: WEIGHT (g) IT L. FR 1130 De 3' TPH-2040 5 20 OVM PIT PERIMETER N RESULTS RESULTS SAMPLE FIELD HEADSPACE PID (EPM) 1 C 3' 0.0 2 C 7' 0.0 3 C 7' 0.0 4 C 7' 0.0	PIT PROFILE
BEDROCK ROTTOM SCALE TIME SAMPLE I.D. LAB NO: WEIGHT (g) IN: L. FR 1130 De 3' TPH-2040 S ZO OVM PIT PERIMETER N RESULTS SAMPLE FIELD HEADSPACE PID (spm) TLOPE DIRECTION 2 e 3' 0.0 3 e 3' 0.0 4 e 4' 0.0 5 e 7' 761 6'	PIT PROFILE
BEDROCK ROTTOM SCALE TIME SAMPLE I.D. LAB NO: WEIGHT (g) MIL FR 1130 De 3' TPH-2040 S ZO OVM PIT PERIMETER N RESULTS SAMPLE FIELD HEADSPACE PID (ppm) THOSE SAM	PIT PROFILE
BEOLOCK BOTTOM SCALE TIME SAMPLE ID. LAB NO. WEIGHT (g) ITL. FR 1130 De 3' TPH-2040 S ZO OVM PIT PERIMETER RESULTS FIELD PERIMETER OVM PIT PERIMETER SAMPLE FIELD PERIMETER PID (ppm) 1 C 3' 0.0 2 C 3' 0.0 2 C 3' 0.0 4 C 4' 0.0 5 C 7' 761 6'] IT	PIT PROFILE
BEOLOCK ROTTOM SCALE TIME SAMPLE LD LAB NO WELSHT (g) IN L FR 1130 De 3' TPH-2040 S ZO OVM PIT PERIMETER N RESULTS FIELD 418.1 CALCULAT OVM RESULTS FIELD 418.1 CALCULAT OVM PIT PERIMETER N RESULTS FIELD 418.1 CALCULAT OVM A OVM PIT PERIMETER N RESULTS FIELD 418.1 CALCULAT OVM A OVM PIT PERIMETER N RESULTS A OVM A OVM PIT PERIMETER N RESULTS FIELD 418.1 CALCULAT OVM A OVM A OVM PIT PERIMETER N RESULTS A OVM A OVM FIELD 418.1 CALCULAT OVM A OVM A OVM FIELD 418.1 CALCULAT OVM A OVM FIELD 418.1 CALCULAT OVM A OVM A OVM FIELD 418.1 CALCULAT OVM FIELD 418.1 CALCULAT OVM A OVM FIELD 418.1 CALCULAT OVM FIELD 418.1 CALCULAT OVM A OVM FIELD 418.1 CALCULAT OVM FIELD 418.1 CALCULAT OVM FIELD 418.1 CALCULAT OVM A OVM FIELD 418.1 CALCULAT OVM FIELD	PIT PROFILE
BEDLOCK ROTTOM SCALE TIME SAMPLE I.D. LAB NO WEIGHT (g) IT IT IN	PIT PROFILE BEARDER (35)
BEOLOCK ROTTOM SCALE TIME SAMPLE I.D LAB NO WEIGHT (g) IN L. FR 1130 De 3' TPH-2040 S ZO OVM PIT PERIMETER RESULTS SAMPLE FIELD HEADSPACE PID (EPM) TLOPE DIRECTION 1 23' 0.0 2 2 3' 0.0 3 3 3 A IN A 3 3 A A IN A	PIT PROFILE BEARDER (35)
BEDROCK BOTTOM SCALE TIME SAMPLE ID LAB NO WEIGHT (9) IN THE SAMPLE ID LAB NO WEIGHT	PIT PROFILE BEARDER (35)
BEDLOCK ROTTOM SCALE TIME SAMPLE I.D. LAB NO WEIGHT (g) IT IT IN	PIT PROFILE BEARDER (35)
BEDROCK BOTTOM SCALE TIME SAMPLE ID LAB NO WEIGHT (g) IN L SE 1130 De 3' TPH-2040 S OVM PIT PERIMETER RESULTS SAMPLE FIELD HARDSPACE DIRECTION 103 O.O. 3 0 3 0 0 4 0 4 0 0 5 0 7 7 61 6 1 A WELL HEAD	PIT PROFILE BEARDORY LT GROY
BEDROCK BOTTOM SCALE TIME SAMPLE I.D. LAB NO: WEIGHT (9) MIL FR 1130 De 3' TPH-2040 S Ze OVM PIT PERIMETER N RESULTS FIELD 418.1 CALCULAT OVM RESULTS SAMPLE FIELD MADSPACE PID (Epm) 1 e 3' 0.0 3 e 3' 0.0 4 e 4' 0.0 5 e 7' 761 A BEDROCK A BEDROCK SAMPLE FIELD MADSPACE PID (Epm) A BEDROCK A LAB SAMPLES SAMPLE SAMPLE SAMPLE SAMPLES SAMPLE SAMPLES SAMPL	PIT PROFILE BEARDORY LT GROY

6Well Name: Jicarilla E #11

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizonal Distance to Surface Water:

Vicinity Groundwater Depth:

Unit C, Sec. 22, T26N, R4W
Compressor Pit
Pictured Cliffs
Non Vulnerable
> 1000 ft.
> 100 ft.

RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 6 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 sandstone bedrock located 6 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.
- 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.
- 4. Well site located within the <u>non-vulnerable area</u> and is approximately 0.01 miles southwest of the nearest vulnerable area boundary (Wild Horse Canyon wash).

(Refer to Schmitz Ranch Point 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 subsurface lateral impact from the earthen pit is very limited and 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). CONOCO requests pit closure approval on this location.

BLAGG ENGINEERING, INC.

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:

Conoco

Sample ID:

1 @ 3'

Project #:

Project Location:

Jicarilla E # 11

Date Analyzed: Date Reported:

09-21-98 09-21-98

Laboratory Number:

TPH-2040

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	%
TPH mg/kg	TPH mg/kg	*Diff.
		-
236	220	7.02

^{*}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 - CA642

Analyst

Review

BLAGG ENGINEERING, INC.

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

Field TPH-Worksheet

Client: Conoco Project #:

Sample ID: 1 @ 3' Date Analyzed: 09-21-98 Project Location: Jicarilla E # 11 Date Reported: 09-21-98

Laboratory Number: TPH-2040 Sample Matrix: Soil

Sample Weight: 5.00 grams Volume Freon: 20.00 mL

Dilution Factor: 1 (unitless) TPH Reading: 3 mg/kg

TPH Result: 12.0 mg/kg
Reported TPH Result: 12 mg/kg
Actual Detection Limit: 20.0 mg/kg
Reported Detection Limit: 20 mg/kg

QA/QC: Original Duplicate %

TPH mg/kg TPH mg/kg Diff.

----- 236 220 7.02

Comments: Compressor Pit - CA642

CA642

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: Conoco, Inc.	Telephone: (505) 324-5884
Address: 3315 Bloomfield Hwy., Farmingt	con, NM 87401
Facility or Well Name: TEARILLA E # 1	
Location: Unit or Qtr/Qtr Sec_C Sec_ZZ T_25	N R YW County RIS ARRIGA
Land Type: RANGE	
Date Remediation Started: 9/21/98	Date Completed:5/A/99
Remediation Method: Landfarmed	Approx. cubic yards 40
Composted	
Other	
epth To Groundwater: (pts.)	Final Closure Sampling:
Distance to an Ephemeral Stream (pts.)	Sampling Date: $\frac{5/17/99}{1000}$ Time: $\frac{1000}{1000}$
Distance to Nearest Lake, Playa, or Watering Pond (pts.)	Sample Results:
Wellhead Protection Area: (pts.)	Field Headspace (ppm) O.O
Distance To SurfaceWater: (pts.)	TPH (ppm) 3.6 Method 8015 Other
RANKING SCORE (TOTAL POINTS):	Outer
I HEREBY CERTIFY THAT THE INFORMATION ABOVE KNOWLEGE AND BELIEF	IS TRUE AND COMPLETE TO THE BEST OF MY
DATE 5/19/99 PRINTED N.	AME Jeffrey C. Blagg, P.E. #11607
SIGNATURE Jeffy C. Blogg	_ AND TITLE President
AFTER REVIEW OF THE SOIL REMEDIATION INFORMAL ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT	ATION, ON-SITE REMEDIATION IS APPROVED IN CLOSURE ORDINANCE.
APPROVED: YES NO (REASON)	
SIGNED: DATE:	6-3-99

	INEERING, INC. OMFIELD, NM 87413 632-1199 C.E.C. NE 2677
FIELD REPORT: LANDFARM/COM	POST PILE CLOSURE VERIFICATION
NAME TICARIULA E WELL #: //	0.75
QUAD UNIT C SEC: 22 TWP: 260 RNG. 400	FNVIRONMENTA
BOUNES AT Chi	
REMEDIATION SYSTEM: LANDERFM	APPROX. CUBIC YARDAGE: 40
LAND USE: RANGE	LIFT DEPTH (ft): Z
FIELD INTER & PEMARKS:	
IEFTH TI IFILMI #ATER _>1667 NEAREST WATER SOURCE	
NMBCD TRH CLBSURE STD	5000 PPM 1/21/98
AN YELL BROWN JAND NON COHES	INF TIGHT & MOIST FROM TAMPLING DEPTHS
KAMEE FROM 12-18 MCHES NO	INE SLIGHTLY MOIST FIRM SAMPLING DEPTHS APPARENT DISCULARTION OR STANNING OBSERVED
NO ATPARENT HE OVOR DETECTED	IN DIM SAMPLE, COLLECTED 5 PT. COMPOSITE
FOR LAB ANALYSIS.	
CLOSED	
43368)	
FIELD 418	B: CALCULATIONS
BAMP. TME SAMPLE (D. LAB No: WEIGHT	(g) ml. FREON DILUTION READING CALC form
	· · · · · · · · · · · · · · · · · · ·
SKETCH/SAMPLE LOCATIONS N	
LANDTROM SAMPLE PT. LANDTREZ JESIGNATION	
LANDITEZ SEMPLE PI.	OVM RESULTS LAB SAMPLES
T	SAMPLE FELC HEADSPACE SAMPLE ANALYSIS TVE MESICAL
	10 PD 30FF, 0 TPH 1000 3.6
3 zz'	
	<u> </u>
10 (116, \$600)	
HEAD HEAD	
	SCALE
	SCALE
	0 FT
TRAVEL NOTES: 14_LOUT: MA	ONSTE 5/17/99



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Gasoline Range (C5 - C	:10\	3.6	0.2
Parameter		Concentration (mg/Kg)	Det. Limit (mg/Kg
Client: Sample ID: Laboratory Number: Chain of Custody No: Sample Matrix: Preservative: Condition:	Blagg / CONOCO LF - 1 F271 6677 Soil Cool Cool and Intact	Project #: Date Reported: Date Sampled: Date Received: Date Extracted: Date Analyzed: Analysis Requested:	403410 05-19-99 05-17-99 05-18-99 05-18-99 05-19-99 8015 TPH

ND - Parameter not detected at the stated detection limit.

References:

Diesel Range (C10 - C28)

Total Petroleum Hydrocarbons

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

ND

3.6

SW-846, USEPA, December 1996.

Comments:

Jicarilla E #11 Landfarm. 5 Pt. Composite.

Den L. Que

Review Jende

0.1

0.2

CHAIN OF CUSTODY RECORD

Cool - Ice/Blue Ice		(505) 632-0615	(505)				
Received Intact	87401	5796 U.S. Highway 64	5796 U.S. Highway 64 Farmington, New Mexico 87401				
۲ ۷							
Sample Receipt		ECH CH	FOVIROTECH IC				
	Signature)	Received by: (Signature)				ture)	Relinquished by: (Signature)
	Signature) - /	Received by: (Signature)				ture)	Relinquished by: (Signature)
5.18.99 705	Signature)	Received by: (Signature)	Date Time 5/18/99 0705			ture)	Relinquished by (Signature)
			_				
5 PT. COMPOSITE	4	J	5012	F271	1000	s/17/9 1000	11
	(8015)	Cont	Sample Matrix	Lab Number	Sample Time	Sample Date	Sample No./ Identification
MATERY - COST	<u>\$</u>	o. of					UTW
Remarks				Client No.			Sampler:
ETERS	ANALYSIS / PARAMETERS		CANDERPORT	Project Location Tic NRILLA		C2010CD	Client / Project Name SLAGG / C