Denny D. Tout DEPUTY OIL & GAS INSPECTOR

Jicarilla Apache Tribe Environmental Protection Office P.O. Box 507 Dulce, New Mexico 87528



AUG 0 9 1999

Pit Remediation and Closure Report

OIL CON. DIV. DIST. 3

⁄1											
1	Operator:	Taurus Explorat	ion U.S.A.	, Inc	Telephone:		(505)	325-6800			
	Address:	2198 Bloomfeld	Hwy, Fan	ming	ton, NM 87401						
4	Facility or Well N	Name:	Jicarilla 9	4-3/	1						
	Location:	Unit or Qtr/QTR	Sec "C"	Sec	22, T 27 N, R	3 W	Count	y	Rio	Arriba	
	Pit Type:	Separator:	Dehydrat	or:	Other: X - A	band	doned	Separator I	Pit		
ı	Land Type:	Range									
l											
I	Pit Location:	Pit dimensions:	length: 45	5 ft	width: 45 ft		depth	9 ft			
l	(Attach Diagram))							-		
		Reference:	wellhead:	Χ	other:						
	Footage	from reference:	130 f	eet	· · · · · · · · · · · · · · · · · · ·				•		
	Direction	from reference:	10		Degrees	X	East	North	<u>X</u>		
								of			
							West	South			
	Depth To Ground	twater:		- 	Logo than 50	do od		(00 mminta)			
н	(Vertical distance				Less than 50 50 feet to 99			(20 points)			
н	contaminants to			Cr.	eater than 100		•	(10 points)		^	
()	high water elevat			Gi	eater than 100	1001		(0 points)		0	
Ш	groundwater)	ions of									
	g. our awator)										
	Distance to an E _l	ohemeral Stream	:		Less than 100	feet	((10 points)			
I	(Downgradient dr	y wash greater ti	nan	Gr	eater than 100	feet		(0 points)		0	
H	ten feet in width)										
и	Distance to Near			g	Less than 100 t	feet	(10 points)			
11	Pond: (Downgrad	· ·		Gre	ater Than 100	feet		(0 points)		0	
ľ	livestock or wildli	fe watering pond	s)					·			
H	Wellhead Protect				`	Yes	(20 points)			
Ш	Less than 200 fe	=				No		(0 points)		0	
H	domestic water so										
ľ	1000 feet from all	other water soul	ces)								
	Distance To Surfa	ace Water:			Less than 100 f	feet	ſ	20 points)			
k	Horizontal distan	ice to perennial			0 feet to 1000 f			10 points)			
H	akes, ponds, rive	•	ks,		ater than 1000 f		`	(0 points)		0	ĺ
II.	rrigation canals a		•			•		(= = = = = = = = = = = = = = = = = = =			_
		,		R	ANKING SCOR	RE (T	OTAL	SCORE)		0	

Jicarilla Apache Tribe Environmental Protection Office P.O. Box 507 Dulce, New Mexico 87528

Pit Remediation and Closure Report

Date Remediation Started:	7/28/98	Date Completed	7/30/98
Remediation Method:	Excavation:	Х	Approx. cubic yaı 605
(Check all appropriate	Landfarmed:	X	Insitu Bioremediation:
sections)	Other:		•
Remediation Location:	On-site:	X	Off-site:
(l.e. landfarmed on site,			
name and location of		•	
off site location)			
General Description of Remedial	Action:	Soil was excavat	ted and landfarmed on location.
Groundwater Encountered:	No: X	Yes:	Depth:
Final Pit	Sample location	: Pit bottom @ 9 fe	eet below surface. Pit
Closure Sampling:			ce (see attachment).
(If multiple samples,			
attach sample results			
and diagram of sample	Sample depth:	9 feet	
locations and depths.)	Sample date:	7/30/98	Sample time: 1240
Sample Results:			•
Şoil:			Water:
Benzene (ppm)	ND	•	Benzene (ppb)
Total BTEX (ppm)	ND	•	Toluene (ppb)
Field Headspace (ppm)	201	Eth	nylbenzene (ppb)
TPH (ppm)	<5	•	tal Xylenes (ppb)
Groundwater Sample:	Yes:	•	No: X
(If yes, attach sample results.)		_	*************************************
I HEREBY CERTIFY THAT TH	E INFORMATIO	ON ABOVE IS T	RUE AND COMPLETE TO
THE BEST OF MY KNOWLED			
DATE: 8/25/98		1	Frank McDonald
		······	
SIGNATURE: Jack 4	3//au//	AND TITLE:	Env. Division Manager
	The state of the s	<u> </u>	
AFTER REVIEW OF THE PIT	CLOSURE INF	ORMATION PIT	CLOSURE IS APPROVED
IN ACCORDANCE TO THE JIC			
		1100 11100 00 111	
APPROVED: Yes: X	No:	(Reason)	
	M		
SIGNED: Xem ()	land		DATE: 9-2-98

Pit Profile : North to South : Comments: Top soil - 9' Soil is moist, dark brown, clay/loam with TPH Closure Standard: EPO Ranking Score: Reference: 130' N 10 E Quad: Nearest Surface Water: Nearest Water Source: from wellhead Initial Size: 25' x 25' x 3' deep Final Size: 45' x 45' x 9' deep Range Vearest Ephemeral Stream: >1000 Depth to Groundwater: Pit: Abandoned Separator Pit rds. Excavated: 605 cy ocation : North 3 W C Jicarilla 94 - 3A A sample from the center bottom at 9' was sent to IML for GRO/DRO and BTEX analysis. light staining, and a strong hydrocarbon odor.

9' Soil is moist, light brown, clay with no staining or odor. Section: Township: >1000° ×100 5000 Sample # Location 27 N = ぉ 6 2 0 S. Wall 07 C.Bun. @ 9 W. Wall @ 7 N. Wall @ 7" South /10fl/ OVM 201 38 83 55 Pit Profile : East to West : Overview of Location and Sampling: East Earthen Pit Surface Gradient **†** 3 Pit Tank Separator Wellhaed Production Tank / 20 ft West Meter Ruh 10 ft | Dehydrater

Environmental Specialist: VC

Cimarron Oilfield Services

Page 1 of 1

2506 W. Main Street Farmington, New Mexico 87401

Frank McDonald Cimarron Oilfield Service Co. P. O. Box 3235 Farmington, NM 87401

August 18, 1998

Mr. McDonald:

Enclosed, please find the reports for the samples submitted for Taurus Exploration to our laboratory on August 3, 1998.

If you have any questions about the result of these analyses, please don't hesitate to call at your convenience.

We appreciate your business!

Sincerely,

Sharon Williams

Organics Lab Supervisor

Enclosure

xc: File

Taurus Exploration U.S.A., Inc.

Case Narrative

On August 3, 1998, two soil samples were submitted to Inter-Mountain Laboratories - Farmington for analysis. The samples were received intact. The samples were identified by project "Jicarilla 94-3A and Jicarilla 67-18". Total Petroleum Hydrocarbons as Diesel Range Organics (DRO); Gasoline Range Organics (GRO); Benzene-Toluene-Ethylbenzene-Xylenes (BTEX) were performed on the samples as per the accompanying Chain of Custody forms.

DRO analysis on the samples were performed by Method DRO - USEPA Method for Determination of Diesel Range Organics, Revision 3, 05/08/92. WTPH - D Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Department of Ecology, Revision 3, October 1991.

GRO analysis on the samples were performed by Method GRO-USEPA Method for Determination of Gasoline Range Organics, Rev.5, Feb. 1992. WTPH-G Total Petroelum Hydrocarbons Analytical Methods for Soil, Washington State Dept. of Ecology, Rev. 6, 1991.

BTEX analysis on the samples were performed by EPA method 5030B, Purge and Trap, and EPA Method 8021B, Aromatic Volatile Hydrocarbons, using and OI Analytical 4560 Purge and Trap and a Hewlett Packard 5890 Gas Chromatograph, equipped with a photoionization detector.

It is the policy of this laboratory to employ, whenever possible, preparatory and analytical methods which have been approved by regulatory agencies. The methods used in the analyses of the samples reported herein are found in <u>Test Methods for Evaluation of Solid Waste</u>, SW-846,USEPA, 1986 and <u>Methods for Chemical Analysis of Water and Waste</u>, EPA-600/4 -79-020, USEPA, 1983.

Quality control reports appear at the end of the analytical package and may be identified by title. If there are any questions regarding the information presented in this package, please feel free to call at your convenience.

Sharon Williams Organic Analyst

2506 W. Main Street Farmington, New Mexico 87401

DIESEL RANGE ORGANICS - DRO

Taurus Exploration U.S.A., Inc.

Project ID:

Jicarilla 94-3A Sep/Prod. Tank Pit

Report Date:

08/18/98

Sample ID: Lab ID: C Bottom @ 9' 0398G04327

Date Sampled: Date Received:

07/30/98

Sample Matrix:

Soil

Date Analyzed:

08/03/98 08/06/98

Condition:

Cool/Intact

Diesel-Range Petroleum Hydrocarbons

<5.0

5.0 mg/kg

ND - Analyte not detected at the stated detection limit.

Reference:

Comments:

Reported By:

Reviewed By

2506 W. Main Street Farmington, New Mexico 87401

GASOLINE RANGE ORGANICS - GRO

Taurus Exploration U.S.A., Inc.

Project ID:

Jicarilla 94-3A Sep/Prod. Tank Pit

08/18/98

Sample ID:

C Bottom @ 9'

Lab ID:

0398G04327

Date Sampled: 07/30/98 Date Received: 08/03/98

Report Date:

Sample Matrix:

Soil

Date Analyzed: 08/06/98

Condition:

Cool/Intact

TOU GAS DANCE (MODEDA	en4E\	DECIN T	DETECT	
TPH GAS-RANGE (MOD EPA		RESULT	DETECT	ION LIMIT

Gasoline-Range Petroleum Hydrocarbons

ND

5.0 mg/kg

ND - Analyte not detected at the stated detection limit.

Reference:

Comments:

Reviewed By:

VOLATILE AROMATIC HYDROCARBONS

Taurus Exploration U.S.A., Inc.

Project ID:

Jicarilla 94-3A Sep/Prod. Tank Pit

Report Date: 08/18/98

Sample ID:

C. Bottom @ 9'

Date Sampled: 07/30/98

Lab ID:

Time Sampled: 12:40

Sample Matrix:

0398G04327

Date Received: 08/03/98

Condition:

Cool/Intact

Soil

Date Extracted: NA Date Analyzed: 08/06/98

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND	10.0
Toluene	ND	50.0
Ethylbenzene	ND	50.0
m,p-Xylenes	ND	50.0
o-Xylene	ND	50.0

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate

Percent Recovery

Acceptance Limits

Bromofluorobenzene

84%

70%-130%

Reference:

Method 5030, Purge and Trap; Method 8021B, Aromatic Volatile Organics; Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental

Protection Agency, Revision 2, December, 1996.

Comments:

Review



CHAIN OF CUSTODY RECORD

1633 Terra Avenue Sheridan, Wyoming 82801 Telephone (307) 672-8945	Relinquished by: (Signature)	CHULLAUR W. (Signature)	Hinduished by: (Signature)) ic 94-34 (Bty Og' >130/8)	Sample No./ Identification	Sampler: (Signature)	Client/Project Name
Inter-N 1701 Phillips Circle Gillette, Wyoming 82718 Telephone (307) 682-8945													12.40	ite Time		a USH
Inter-Mc Dircle ling 82718 7) 682-8945													0	Lab Number	Cha	1 Inc
Inter-Mountain Laboratories, Inc. X	0	8/3/C	8/28						/					mber	Chain of Custody Tape No.	Project Location
Untain Laborato	1 1 P	Date Time	Date Time 8/3/68 8:00					/					50.1	Matrix	y Tape No.	1
Ories, Inc. 1160 Ress Bozeman, Telephone	Received	Received	ne Received				/			ļ				rix		94-3A 50
S, Inc. 1160 Research Drive Bozeman, Montana 59718 Telephone (406) 586-8450		by: (t	by: (8									_	~	No. of Contain		Sep / Prad /
9718 8450	by laboratory: (Signature)	1	8		1							-	1	8020 BTC	PRO	AN
11183 State Hwy. 30 College Station, TX 7	re)		C.ON		*									BIE	*/	ALYSES /
11183 State Hwy. 30 College Station, TX 77845 Telephone (409) 776-8945				1		C					-					ANALYSES / PARAMETERS
	Date 8-3-5	Date	Date		bande	J im									Remarks	TERS
54832	Date Time 8:3-98-08/2		Date Time	- 10 (1) - 10	alinea	tact										

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

ON-SITE SOIL REMEDIATION REPORT

Operator: Taurus Exploration USA Inc. Telephone: (505) 325 - 6800						
Address: 2198 Bloomfield Hwy, Farming	ton N.M. 87401					
Facility or Well Name: <u>Jicarilla 94 – 3 A</u>						
Location: Unit or Qtr/Qtr Sec_C_Sec_2	22_T_27 N_R_3 W County Rio Arriba_					
Land Type: Range						
Date Remediation Started: July 28,1998	Date Completed:November 10, 1998					
Remediation Method: Landfarmed X	Approx. cubic yards605					
Composed						
Other						
Depth to Groundwater: (pts) 0 Final Closure Sampling:						
Distance to an Ephemeral Stream (pts)0	10 ^{-1.0} Sampling Date:					
Distance to Nearest Lake, Playa, or Watering Pond (pts)0	Sample Results:					
Wellhead Protection Area (pts)0	Field Headspace (ppm) <u>17.5</u> TPH (ppm) <u>443</u> Method <u>8015</u>					
Distance to Surface Water (pts)0	Other:					
RANKING SCORE (TOTAL POINTS): 0						
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF DATE: 12/7/98 PRINTED NAME FRANK MCDONALD						
SIGNATURE AND	SIGNATURE AND TITLE ENV. DIVISION MANAGER					
AFTER REVIEW OF THE SOIL REMEDIATION INFOR APPROVED IN ACCORDANCE TO THE JICARILLA APPROVED: YES NO (REASON)						
SIGNED: TWO DA	ATE: 12-17-98					

				Environmental Specialist : JE	Environme
		,			
analysis	eadspace. Sample # 3 sent to IML for 8015 analysis	point composite samples analyzed by headspace.	mposite sample	4 - 5 point co	
			Soil is light brown - Clay loam No staining or odor		Comments :
	1 1				
and arms	1 1	•••			
) N					
	Wel I head		12		
N			11	r	
	Surface Gradient		10	5 Point Composites	4
			9		
ω ω			8		
Met er Run	(H t)Tank Me		7	605 cubic yards	Yds:
(6		
ω 	Semarator	1	5	20' X 120' X 1.5'	
Dehydrat ør \				30' X 30' X 1.5'	Size:
ω ω		1		- '	· ,_
		+	2 Comp 2	Reference: 70 ft N 10 E	Reference
4	Farthen Fit	+	at		
4		tion OVM	Sample # Location	Separator	Pit:
4 4			3 W	27 N Range:	Township:
			12	c section.	
North	Product i on Tank		22	C Section :	O E E
				Jicarilla 94 - 3 A	Location :
	Overview of Landfarm and Sampling :	_			

GASOLINE RANGE ORGANICS - GRO

TAURUS EXPLORATION U.S.A., INC.

Project ID:

Jicarilla 94-3A

Sample ID:

Land Farm

Lab ID:

0398G06653

Sample Matrix:

Soil

Condition:

Cool/Intact

Report Date:

11/20/98

Date Sampled: Date Received:

11/10/98

11/11/98

Date Analyzed:

11/11/98

TPH GAS-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
Gasoline-Range Petroleum Hydrocarbons	429	5.0 mg/Kg
Total Purgeable Hydrocarbons	412	5.0 mg/Kg

QUALITY CONTROL - SURROGATE RECOVERY	% Recovery	QC limits
Bromofluorobenzene	103%	70-130%

ND - Analyte not detected at the stated detection limit.

Reference:

Comments:

Reported By:

DIESEL RANGE ORGANICS - DRO

TAURUS EXPLORATION U.S.A., INC.

Project ID:

Jicarilla 94-3A

Sample ID:

Land Farm

Lab ID:

0398G06653

Cool/Intact

Sample Matrix:

Soil

Condition:

Report Date:

11/20/98

Date Sampled:

11/10/98

Date Received:

11/11/98

Date Analyzed:

11/18/98

TPH DIESEL-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
Diesel-Range Petroleum Hydrocarbons	14	5.0 mg/Kg
Total Extractable Hydrocarbons	14	5.0 mg/Kg

QUALITY CONTROL - SURROGATE RECOVERY	%Recovery	QC Limits
o-Terphenyl	73%	70-130%

ND - Analyte not detected at the stated detection limit.

Reference:

Comments:

Reported By:

Reviewed By:



CHAIN OF CUSTODY RECORD

		College Station, TX 77845 Telephone (409) 776-8945		Montana 59/18 (406) 586-8450	Bozeman, Montana 59/18 Telephone (406) 586-8450	Telephone	7401 26-4737	Telephone (505) 326-4737	Ġ	Telephone (307) 682-8945		Telephone (307) 672-8945
57687	5 1	3 State Hwy. 30)rive	1160 Research Drive	1160 F	treet	2506 West Main Street		1701 Phillips Circle		1633 Terra Avenue
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				bao'	No. of Contai		Matrix		Lab Number	Time	Date	Sample No./ Identification
	arks	Remarks			ners		No.	Chain of Custody Tape No.	Chain of Cu		S	Sampler: (Signature)
	S	ANALYSES / PARAMETERS	ANALY				-3A	ic 94-3		high	Speca	Taures E
								Project Location	Proje			Client/Project Name