

*Denny L. Fort*  
**DEPUTY OIL & GAS INSPECTOR**

AUG 09 1999

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

*OK*  
**RECEIVED**  
 JUN 24 1999

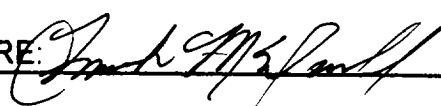
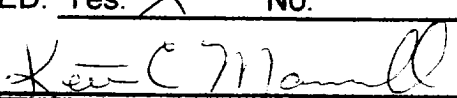
**OIL CON. DIV.**  
**DIST. 3**

Pit Remediation and Closure Report

Operator:	Taurus Exploration U.S.A., Inc			Telephone:	(505) 325-6800		
Address:	2198 Bloomfield Hwy, Farmington, NM 87401						
Facility or Well Name:	Jicarilla 94-3A						
Location:	Unit or Qtr/QTR			Sec "C"	Sec 22, T 27 N,	R 3 W	County Rio Arriba
Pit Type:	Separator:	Dehydrator:	Other: X - Abandoned Separator Pit				
Land Type:	Range						
Pit Location:	Pit dimensions: length: 45 ft width: 45 ft depth: 9 ft						
(Attach Diagram)							
Reference:	wellhead: X		other:				
Footage from reference:	130 feet						
Direction from reference:	10	Degrees	X East	North	X		
				of			
			West	South			
Depth To Groundwater:	Less than 50 feet		(20 points)				
(Vertical distance from	50 feet to 99 feet		(10 points)				
contaminants to seasonal	Greater than 100 feet		(0 points)		0		
high water elevations of							
groundwater)							
Distance to an Ephemeral Stream:	Less than 100 feet		(10 points)				
(Downgradient dry wash greater than	Greater than 100 feet		(0 points)		0		
ten feet in width)							
Distance to Nearest Lake, Playa, or Watering	Less than 100 feet		(10 points)				
Pond: (Downgradient lakes, playas, and	Greater Than 100 feet		(0 points)		0		
livestock or wildlife watering ponds)							
Wellhead Protection Area:	Yes		(20 points)				
(Less than 200 feet from a private	No		(0 points)		0		
domestic water source, or less than							
1000 feet from all other water sources)							
Distance To Surface Water:	Less than 100 feet		(20 points)				
(Horizontal distance to perennial	100 feet to 1000 feet		(10 points)				
lakes, ponds, rivers, streams, creeks,	Greater than 1000 feet		(0 points)		0		
irrigation canals and ditches.)							
RANKING SCORE (TOTAL 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:	<u>X</u>	Approx. cubic yd <u>605</u>
(Check all appropriate sections)	Landfarmed:	<u>X</u>	Insitu Bioremediation:
	Other:		
Remediation Location:	On-site:	<u>X</u>	Off-site:
(I.e. landfarmed on site, name and location of off site location)			
General Description of Remedial Action:	Soil was excavated and landfarmed on location.		
Groundwater Encountered:	No: <u>X</u>	Yes:	Depth:
Final Pit Closure Sampling:	Sample location: Pit bottom @ 9 feet below surface. Pit walls were analyzed for Headspace (see attachment).		
(If multiple samples, attach sample results and diagram of sample locations and depths.)	Sample depth:	<u>9 feet</u>	
	Sample date:	<u>7/30/98</u>	Sample time: <u>1240</u>
Sample Results:			
<u>Soil:</u>		<u>Water:</u>	
Benzene (ppm)	<u>ND</u>	Benzene (ppb)	
Total BTEX (ppm)	<u>ND</u>	Toluene (ppb)	
Field Headspace (ppm)	<u>201</u>	Ethylbenzene (ppb)	
TPH (ppm)	<u>&lt;5</u>	Total Xylenes (ppb)	
Groundwater Sample:	Yes:	No: <u>X</u>	
(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:	8/25/98	Frank McDonald	
SIGNATURE:	 AND TITLE: Env. Division Manager		
AFTER REVIEW OF THE PIT CLOSURE INFORMATION PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE			
APPROVED:	Yes: <u>X</u>	No:	(Reason)
SIGNED:			DATE: 9-2-98

Client : Taurus Exploration U.S.A. Inc.

Date Started : July 28, 1998 Date Completed : July 30, 1998

Location : <u>Jicartilla 94 - 3A</u>		Overview of Location and Sampling :	
Quad : <u>C</u> Section : <u>22</u>			
Range : <u>3 W</u> Township: <u>27 N</u>			
Pit : Abandoned Separator Pit Reference : 130° N 10 E from wellhead Initial Size : 25' x 25' x 3' deep Final Size : 45' x 45' x 9' deep Yds. Excavated : 605 cy Depth to Groundwater: >100' Nearest Water Source: >1000' Nearest Surface Water: >1000' Nearest Ephemeral Stream: >1000' EPO Ranking Score: 0 TPH Closure Standard: 5000			
Comments : Top soil - 9' Soil is moist, dark brown, clay/foam with light staining, and a strong hydrocarbon odor. 9' Soil is moist, light brown, clay with no staining or odor. A sample from the center bottom at 9' was sent to IML for GRO/DRO and BTEX analysis.		Pit Profile : East to West :	
Pit Profile : North to South :		Pit Profile : East to West :	

Environmental Specialist : VC

Cimarron Oilfield Services

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

August 18, 1998

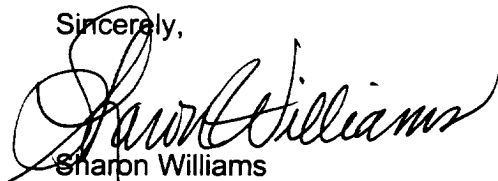
Mr. McDonald:

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.

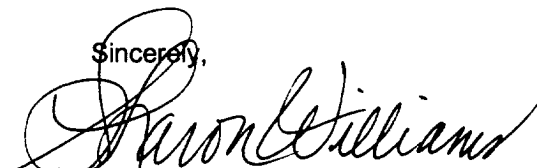
GRO analysis on the samples were performed by Method GRO-USEPA Method for Determination of Gasoline Range Organics, Rev.5, Feb. 1992. WTPH-G Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Dept. of Ecology, Rev. 6, 1991.

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 Test Methods for Evaluation of Solid Waste, SW-846, USEPA, 1986 and Methods for Chemical Analysis of Water and Waste, 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.

Sincerely,



Sharon Williams  
Organic Analyst

## DIESEL RANGE ORGANICS - DRO

### Taurus Exploration U.S.A., Inc.

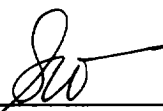
Project ID:	Jicarilla 94-3A Sep/Prod. Tank Pit	Report Date:	08/18/98
Sample ID:	C Bottom @ 9'	Date Sampled:	07/30/98
Lab ID:	0398G04327	Date Received:	08/03/98
Sample Matrix:	Soil	Date Analyzed:	08/06/98
Condition:	Cool/Intact		

TPH DIESEL-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
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:

## GASOLINE RANGE ORGANICS - GRO

### 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:	0398G04327	Date Received:	08/03/98
Sample Matrix:	Soil	Date Analyzed:	08/06/98
Condition:	Cool/Intact		

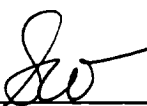
TPH GAS-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
------------------------------	--------	-----------------

Gasoline-Range Petroleum Hydrocarbons	ND	5.0 mg/kg
---------------------------------------	----	-----------

ND - Analyte not detected at the stated detection limit.

Reference:

Comments:

  
Reported By:

  
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:	0398G04327	Time Sampled:	12:40
Sample Matrix:	Soil	Date Received:	08/03/98
Condition:	Cool/Intact	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.

<b>Quality Control:</b>	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	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.

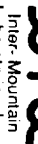
**Comments:**

Analyst



Review



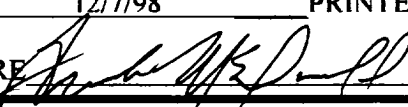
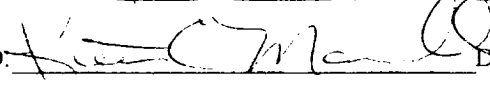


## CHAIN OF CUSTODY RECORD

[illegible]

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

**ON-SITE SOIL REMEDIATION REPORT**

Operator: <u>Taurus Exploration USA Inc.</u> Telephone: <u>(505) 325 - 6800</u>	
Address: <u>2198 Bloomfield Hwy, Farmington N.M. 87401</u>	
Facility or Well Name: <u>Jicarilla 94 - 3 A</u>	
Location: Unit or Qtr/Qtr Sec <u>C</u> Sec <u>22</u> T <u>27 N</u> R <u>3 W</u> County <u>Rio Arriba</u>	
Land Type: <u>Range</u>	
Date Remediation Started: <u>July 28, 1998</u> Date Completed: <u>November 10, 1998</u>	
Remediation Method: Landfarmed <u>X</u> Approx. cubic yards <u>605</u>	
Composed <u>      </u>	
Other <u>      </u>	
<p>Depth to Groundwater: (pts) <u>0</u></p> <p>Distance to an Ephemeral Stream (pts) <u>0</u></p> <p>Distance to Nearest Lake, Playa, or Watering Pond (pts) <u>0</u></p> <p>Wellhead Protection Area (pts) <u>0</u></p> <p>Distance to Surface Water (pts) <u>0</u></p> <p><b>RANKING SCORE (TOTAL POINTS):</b> <u>0</u></p>	<p style="text-align: center;"><b>Final Closure Sampling:</b></p> <p>Sampling Date: <sup>10<sup>th</sup></sup> <u>11/8/98</u> Time: <u>15:20</u></p> <p>Sample Results:</p> <p>Field Headspace (ppm) <u>17.5</u></p> <p>TPH (ppm) <u>443</u> Method <u>8015</u></p> <p>Other: <u>      </u></p>
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF	
DATE: <u>12/7/98</u> PRINTED NAME <u>FRANK MCDONALD</u>	
SIGNATURE <u></u> AND TITLE <u>ENV. DIVISION MANAGER</u>	
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION. ON-SITE SOIL REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.	
APPROVED: YES <u>X</u> NO <u>      </u> (REASON) <u>NO Backfill</u>	
SIGNED: <u></u> DATE: <u>12-17-98</u>	




**GASOLINE RANGE ORGANICS - GRO****TAURUS EXPLORATION U.S.A., INC.**

Project ID:	Jicarilla 94-3A	Report Date:	11/20/98
Sample ID:	Land Farm	Date Sampled:	11/10/98
Lab ID:	0398G06653	Date Received:	11/11/98
Sample Matrix:	Soil	Date Analyzed:	11/11/98
Condition:	Cool/Intact		

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:   
Reviewed By:

**DIESEL RANGE ORGANICS - DRO****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: 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%

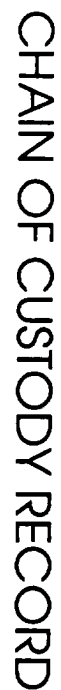
ND - Analyte not detected at the stated detection limit.

**Reference:****Comments:**

Reported By:



Reviewed By:



# CHAIN OF CUSTODY RECORD

Client/Project Name		Project Location		ANALYSES / PARAMETERS							
Sampler: (Signature)		Chain of Custody Tape No.									
Taurus Exploration Willard/SK		Sic 94-34									
Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	Remarks					
Land Farm	11-5-98	1500		Soil	1	X	Cool / Fract Head Delivered				
Relinquished by: (Signature) <i>[Signature]</i>		Date	Time	Received by: (Signature)	Date Time						
Relinquished by: (Signature) <i>[Signature]</i>		11-11-98	0755	Received by: (Signature)	Date Time						
Relinquished by: (Signature)		Date	Time	Received by Laboratory: (Signature)	Date Time						
Inter-Mountain Laboratories, Inc.		57887									