

*Denny G. Frost*  
DEPUTY OIL & GAS INSPECTOR

AUG 09 1999

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

Pit Remediation and Closure Report

RECEIVED  
AUG 09 1999

OIL CON. DIV.

Operator:	Burlington Resources	Telephone:	(505) 326-9700
Address:	P.O. Box 4289, Farmington, NM 87499-4289		
Facility or Well Name:	Jicarilla 67 # 7	DP #	53081A
Location:	Unit or Qtr/QTR Sec "D" Sec 7, T 26 N, R 4 W County Rio Arriba		
Pit Type:	Separator: X Dehydrator: Other: <i>20-25W - CW</i>		
Land Type:	Jicarilla Apache		
Pit Location:	Pit dimensions: length: 14 ft width: 10 ft depth: 2 ft		
(Attach Diagram)	Reference: wellhead: X other:		
	Footage from reference: 108 feet		
	Direction from reference: 140 Degrees East North X		
	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)	10
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):			10

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Pit Remediation and Closure Report

Date Remediation Started:	10/31/96	Date Completed:	
Remediation Method:	Excavation: <u>X</u>	Approx. cubic yards:	752
(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: <u>Excavated contaminated material.</u>			
Groundwater Encountered:	No: <u>X</u>	Yes:	Depth:
Final Pit	Sample location: <u>See Pit Closure Verification sheet</u>		
Closure Sampling:			
(If multiple samples, attach sample results and diagram of sample locations and depths.)	Sample depth: <u>25 ft at sandstone</u>	Sample date: <u>11/5/96</u>	Sample time: <u>11:00 &amp; 12:10</u>
Sample Results:			
<u>Soil:</u>		<u>Water:</u>	
Benzene (ppm)	<u>1,244 Bottom / 0.028 Walls</u>	Benzene (ppb)	
Total BTEX (ppm)	<u>30.125 Bottom / ND Walls</u>	Toluene (ppb)	
Field Headspace (ppm)	<u>147 Bottom / 15 Four-Wall</u>	Ethylbenzene (ppb)	
TPH (ppm)	<u>1,161.5 Bottom / ND Wall</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	<u>11/7/96</u>	PRINTED NAME	<u>Guy L. Gaudetson</u>
SIGNATURE	<u>[Signature]</u>	AND TITLE	<u>Lease Operator</u>
AFTER REVIEW OF THE PIT CLOSURE INFORMATION PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE			
APPROVED:	Yes: <u>✓</u>	No:	(Reason) <u>Spray / Close</u>
SIGNED:	<u>[Signature]</u>	DATE:	<u>11/8/96</u>

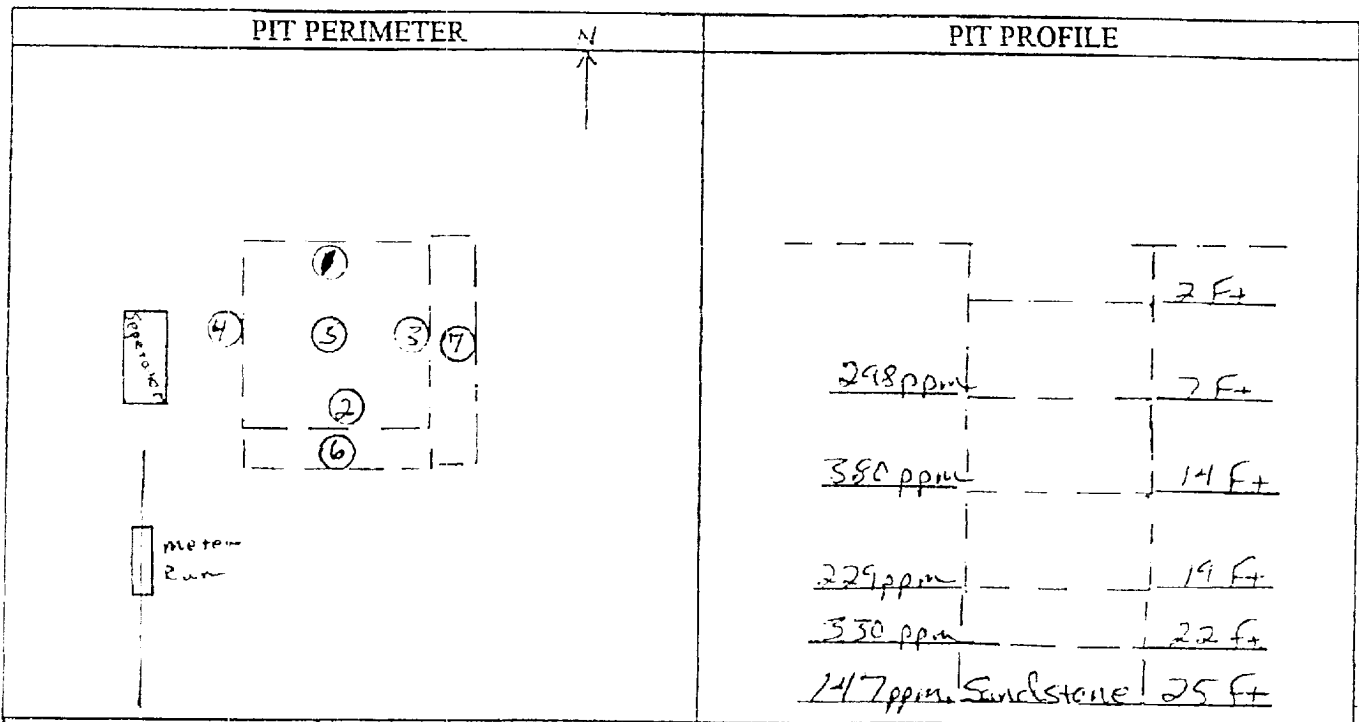
# BURLINGTON RESOURCES

## PIT CLOSURE VERIFICATION SHEET

Location: Heavilla 6.7 #7 DP# 5081A Lease No. Heavilla Tribal  
 Contractor: Philip Eni Consultant Initials: JP Cont. # 67  
 Date Started: 10-31-96 Date Finished:

### Excavation & Soil Information

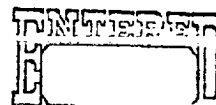
Dimensions (approx.): 28' FT. x 29' FT. x 25' FT. Deep Cubic Yards: (bcy) 7.52  
 Soil Remediated ☒ On Site ☐ Off Site If off site name location (s)



OVM Results:								
Sample ID	1	2	3	4	5	6	7	8
Headspace PID (ppm)	51	93	147	05	147	6.2	07	
Sample ID	9	10	11	12	13	Comp 1	Comp 2	Comp 3
Headspace PID (ppm)						130 ppm 147	4-100.0 ppm 12	

Laboratory Results:			
Sample ID	106-53081A-3-1'	106-53081A-4-1'	
BTEX RM8020 (ppm)	30.125	ND	
TPH RM8015 (ppm)	1161.5	ND	

OFF. (505) 325-5667



LAB: (505) 325-1556

**TPH - Gasoline / Diesel Range Organics**

Attn: *Craig A. Bock*  
Company: *Burlington Resources*  
Address: *3535 E. 30th Street*  
City, State: *Farmington, NM 87401*

Date: *7-Nov-96*  
COC No.: *C2104*  
Sample No. *12756*  
Job No. *2-1000*

Project Name: *Burlington Resources - Jicarilla 67 #7*  
Project Location: *M6-53081A-3V; Bottom @ 25ft.*  
Sampled by: *JP*  
Analyzed by: *DC/HR*  
Sample Matrix: *Soil*

Date: *5-Nov-96* Time: *11:00*  
Date: *7-Nov-96*

**Laboratory Analysis**

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)	920.1	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	241.4	mg/kg	5.0	mg/kg
	TOTAL	1161.5		mg/kg

**Quality Assurance Report**

GRO QC No.: *0493-STD*  
DRO QC No.: *0489-STD*

**Calibration Check**

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Gasoline Range (C5 - C9)	<50	ppb	1,350	1,343	0.5	15%
Diesel Range (C10 - C28)	<5.0	ppm	100	107	7.1	15%

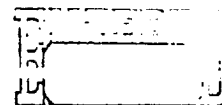
**Matrix Spike**

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Gasoline Range (C5-C9)	111	92	(70-130)	13	20%
Diesel Range (C10-C28)	90	95	(70-130)	4	20%

**Method** - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by: *[Signature]*

OFF: (505) 325-5667



LAB: (505) 325-1554

**AROMATIC VOLATILE ORGANICS**

Attn: **Craig A. Bock**  
Company: **Burlington Resources**  
Address: **3535 E. 30th Street**  
City, State: **Farmington, NM 87401**

Date: **7-Nov-96**  
COC No.: **C2104**  
Sample No.: **12756**  
Job No.: **2-1000**


Project Name: **Burlington Resources - Jicarilla 67 #7**  
Project Location: **M6-53081A-3V: Bottom @ 25ft.**

Sampled by: **JP** Date: **5-Nov-96** Time: **11:00**  
Analyzed by: **DC** Date: **6-Nov-96**  
Sample Matrix: **Soil**

**Laboratory Analysis**

Component	Result	Units of Measure	Detection Limit	Units of Measure
Benzene	1244.2	ug/kg	0.2	ug/kg
Toluene	971.1	ug/kg	0.2	ug/kg
Ethylbenzene	3697.1	ug/kg	0.2	ug/kg
m,p-Xylene	19586.1	ug/kg	0.2	ug/kg
o-Xylene	4626.7	ug/kg	0.2	ug/kg
	<b>TOTAL</b>	<b>30125.2</b>		<b>ug/kg</b>

**Method** - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by:   
Date: **11/7/96**

OFF: (505) 325-5667



LAB: (505) 325-1556

### AROMATIC VOLATILE ORGANICS

Attn: *Craig A. Bock*  
Company: *Burlington Resources*  
Address: *3535 E. 30th Street*  
City, State: *Farmington, NM 87401*

Date: 7-Nov-96  
COC No.: C2104  
Sample No. 12757  
Job No. 2-1000

Project Name: *Burlington Resources - Jicarilla 67 #7*  
Project Location: *M6-53081A-4V: 4 Wall Composite*  
Sampled by: *IP*  
Analyzed by: *DC*  
Sample Matrix: *Soil*

Date: 5-Nov-96 Time: 12:10  
Date: 6-Nov-96

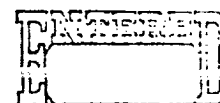
### Laboratory Analysis

Parameter	Result	Units of Measure	Detection Limit	Units of Measure
Benzene	<0.2	ug/kg	0.2	ug/kg
Toluene	9.2	ug/kg	0.2	ug/kg
Ethylbenzene	4.3	ug/kg	0.2	ug/kg
m,p-Xylene	12.5	ug/kg	0.2	ug/kg
o-Xylene	2.3	ug/kg	0.2	ug/kg
TOTAL		28.3		ug/kg

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: *[Signature]*  
Date: 11/7/96

OFF: (505) 325-5667



LAB: (505) 325-1556

**TPH - Gasoline / Diesel Range Organics**

Attn: **Craig A. Bock**  
 Company: **Burlington Resources**  
 Address: **3535 E. 30th Street**  
 City, State: **Farmington, NM 87401**

Date: **7-Nov-96**  
 CDC No.: **C2104**  
 Sample No. **12757**  
 Job No. **2-1000**

Project Name: **Burlington Resources - Jicarilla 67 #7**  
 Project Location: **M6-53081A-4V; 4 Wall Composite**  
 Sampled by: **JP**  
 Analyzed by: **DC/HR**  
 Sample Matrix: **Soil**

Date: **5-Nov-96** Time: **12:10**  
 Date: **7-Nov-96**

**Laboratory Analysis**

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)	< 5.0	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	< 5.0	mg/kg	5.0	mg/kg
TOTAL	< 5.0	mg/kg		

**Quality Assurance Report**

GRO QC No.: **0493-STD**  
 DRO QC No.: **0489-STD**


**Calibration Check**

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Gasoline Range (C5 - C9)	< 50	ppb	1,350	1,343	0.5	15%
Diesel Range (C10 - C28)	< 5.0	ppm	100	107	7.1	15%

**Matrix Spike**

Parameter	1- Percent Recovered	2- Percent Recovered	Limit	%RSD	Limit
Gasoline Range (C5-C9)	111	92	(70-130)	13	20%
Diesel Range (C10-C28)	90	95	(70-130)	4	20%

**Method** - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by:   
 Date: **11/1/96**

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: <u>BURLINGTON RESOURCES</u>		Telephone: <u>(505) 326-9700</u>	
Address: <u>P.O. BOX 4289, Farmington, NM 87499-4289</u>			
Facility or Well Name: <u>Jicarilla 67#7 DP#53081A</u>			
Location: Unit: <u>6</u>		Sec. <u>20</u> T. <u>25</u> N R. <u>05</u> W County <u>La Arriba</u>	
Land Type: <u>Jicarilla Apache</u>			
Date Remediation Started: <u>10-31-96</u>		Date Completed: _____	
Remediation Method: Landfarmed <input checked="" type="checkbox"/>		Approx. cubic yards _____	
Composted _____		_____	
Other _____		_____	
Depth to Ground Water: (pts.) <u>10</u>		Final Closure Sampling: Sampling Date: _____ Time _____ Sampling Results: Field Headspace (ppm) _____ TPH (ppm) _____ Method _____ Other _____	
Distance to an Ephemeral Stream: (pts.) <u>0</u>			
Distance to Nearest Lake, Playa, or Watering Pond: (pts.) <u>0</u>			
Wellhead Protection Area: (pts.) <u>0</u>			
Distance to Surface Water: (pts.) <u>0</u>			
Ranking Score (Total Points): <u>10</u>			
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF			
DATE _____		PRINTED NAME _____	
SIGNATURE _____		AND TITLE _____	
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE			
APPROVED: YES _____ NO _____ (REASON) _____			
SIGNED: _____		DATE: _____	



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 67-7</u>	
Location: Unit or Qtr/Qtr Sec <u>G</u> Sec <u>20</u> T <u>25</u> N <u>R 5</u> W County <u>Rio Arriba</u>	
Land Type: <u>Range</u>	
Date Remediation Started: <u>10/31/96</u> Date Completed: <u>2/3/99</u>	
Remediation Method: Landfarmed <u>X</u> Approx. cubic yards <u>752</u> Composted _____ Other _____	
Depth to Groundwater: (pts) <u>10</u> Distance to an Ephemeral Stream (pts) <u>0</u> Distance to Nearest Lake, Playa, or Watering Pond (pts) <u>0</u> Wellhead Protection Area (pts) <u>0</u> Distance to Surface Water (pts) <u>0</u>  <b>RANKING SCORE (TOTAL POINTS):</b> <u>10</u>	<b>Final Closure Sampling:</b>  Sampling Date: <u>2/3/99</u> Time: <u>12:00</u>  Sample Results:  Field Headspace (ppm) <u>ND</u>  TPH (ppm) <u>&lt;10</u> Method <u>8015</u>  Other: _____
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF DATE: <u>2/11/99</u> PRINTED NAME <u>VIRGIL CHAVEZ</u> SIGNATURE <u>[Signature]</u> AND TITLE <u>ENV. SPECIALIST</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 _____ (REASON) _____ SIGNED: <u>[Signature]</u> DATE: <u>4-5-99</u>	





# Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

**Client:** Energen Resources

**Project:** Jicarilla 67-7

**Sample ID:** Landfarm Comp #1

**Lab ID:** 0399W00710

**Matrix:** Soil

**Condition:** Cool/Intact

**Date Reported:** 02/05/99

**Date Sampled:** 02/03/99

**Date Received:** 02/04/99


**Date Analyzed:** 02/05/99

Parameter	Analytical Result	PQL	Units
<b>METHOD 8015 - GRO</b>			
Gasoline Range Organics	<5	5	mg/Kg
Gasoline Range Organics as Gasoline	<5	5	mg/Kg

Reference: GRO - USEPA Method for Determination of Gasoline Range Organics, Revision 5, February 1992.

WTPH-G Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Department of Ecology, Revision 3, October 1991.

Reviewed By:

  
Sharon Williams, Organic Lab Supervisor



# Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

**Client:** Energen Resources

**Project:** Jicarilla 67-7

**Sample ID:** Landfarm Comp #1

**Lab ID:** 0399W00710

**Matrix:** Soil

**Condition:** Cool/Intact

**Date Reported:** 02/10/99

**Date Sampled:** 02/03/99

**Date Received:** 02/04/99

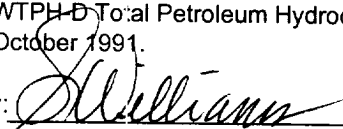
**Date Analyzed:** 02/08/99

Parameter	Analytical Result	PQL	Units
<b>METHOD 8015 - DRO</b>			
Diesel Range Organics	<5	5	mg/Kg
Diesel Range Organics as Diesel	<5	5	mg/Kg
<b>Quality Control - Surrogate Recovery</b>			
	%	<b>QC Limits</b>	
o-Terphenyl(SUR-8015)	120	70 - 130	

Reference: DRO - USEPA Method for Determination of Diesel Range Organics. Revision 2, February 1992.

WTPH-D Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Department of Ecology, Revision 3, October 1991.

Reviewed By:

  
Sharon Willams, Organic Lab Supervisor



## CHAIN OF CUSTODY RECORD

[illegible]