

District I  
1625 N. Hobbs Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-144  
June 1, 2004

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐

**WFS CLOSURE**

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator: **BURLINGTON RESOURCES OIL & GAS CO** Telephone:

e-mail address:

Address: **801 CHERRY ST FORT WORTH, TX 76102**

Facility or well name: **SAN JUAN 27.5 UNIT #035**

API #: **30-039-06786**

U/L or Qtr/Qtr **M** SEC **33** T **27N** R **5W**

County: **RIO ARriba**

Latitude **36.52669**

Longitude **-107.36953**

NAD: 1927 ☒ 1983 ☐

Surface Owner: Federal ☒ State ☐ Private ☐ Indian ☐

**Pit**

Type: Drilling ☐ Production ☒ Disposal ☐

Workover ☐ Emergency ☐

Lined ☐ Unlined ☒

Liner Type: Synthetic ☒ Thickness mil Clay ☐

Pit Volume 77 bbl

**Below-grade tank**

Volume: bbl Type of fluid:

Construction Material:

Double-walled, with leak detection? Yes ☒ If not, explain why not.

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)

Less than 50 feet  
50 feet or more, but less than 100 feet  
100 feet or more

(20 points)  
(10 points)  
(0 points)

10

Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)

Yes  
No

(20 points)  
(0 points)

0

Distance to surface water: (Horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet  
200 feet to 1,000 feet  
Greater than 1,000 feet

(20 points)  
(10 points)  
(0 points)

0

**Ranking Score (TOTAL POINTS):**

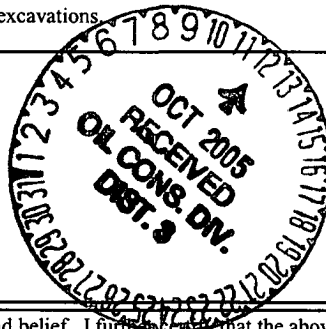
10

**If this is a pit closure:** (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☒ offsite ☐ If offsite, name of facility \_\_\_\_\_. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☒ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

~~How deep is~~  
bedrock

~~DELETED~~



Meter: **86325**

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☒

Date: 9/27/05

Printed Name/Title **Mark Harvey for Williams Field Services** Signature Mark Harvey

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval: **DEPUTY OIL & GAS INSPECTOR, DIST. 9**

Printed Name/Title \_\_\_\_\_ Signature Deputy

**OCT 12 2005**  
Date: \_\_\_\_\_

# **ADDENDUM TO OCD FORM C-144**

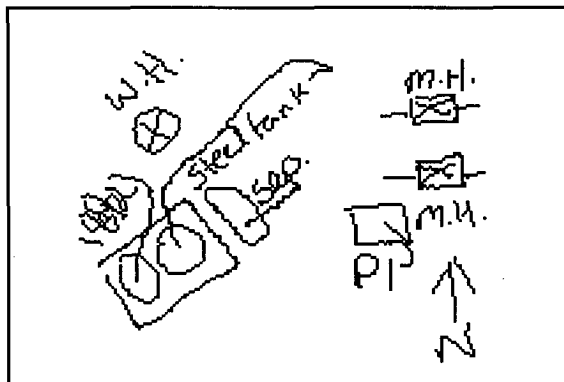
**Operator:** BURLINGTON RESOURCES OIL & GAS COMPANY LP

**API** 30-039-06786

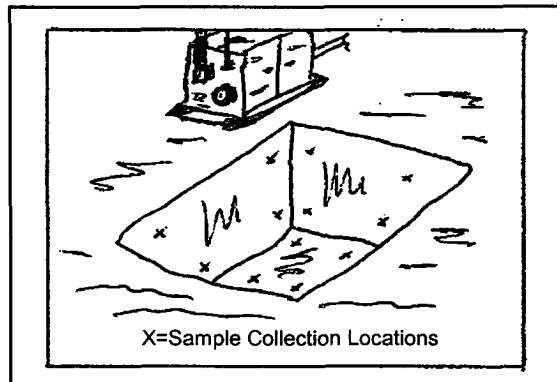
**Well Name:** SAN JUAN 27 5 UNIT #035

**Meter:** 86325

**Facility Diagram:**



**Sampling Diagram:**



**Pit Dimensions**

Length 12 Ft.

Width 12 Ft.

Depth 3 Ft.

**Location of Pit Center**

Latitude 36.52679

Longitude -107.36922

(NAD 1927)

**Pit ID**

863251

**Pit Type**

Glycol Dehydrator

**Date Closure Started:** 4/28/03

**Date Closure Completed:** 4/28/03

**Closure Method:** Excavated, Blended, Treated Soil Returned

**Bedrock Encountered ?** ☒

**Cubic Yards Excavated:** 31

**Vertical Extent of Equipment Reached ?** ☐

**Description Of Closure Action:**

Contaminated soil was removed and treated then returned to the excavation following sampling of the walls and floor.

BEDROCK limited vertical excavation and/or prevented sampling. This condition limits deleterious environmental effects.

**Pit Closure Sampling:**

Sample ID	Sample Date	Head Space	BTEX Total (mg/kg)	Benzene (mg/kg)	TPH DRO (mg/kg)	Purpose	Location	Depth
135719JUL02	7/19/02		1273	83	1600	ASSESS		3
145928APR03	4/28/03	1412	58.7	0	370	EX Confirm	Flr	4
150128APR03	4/28/03	2			0	EX Confirm	Walls	4

See Risk Analysis

Lab Project Number: 6061217

Client Project ID: N.M. PIT ASSESSMENTS

Lab Sample No: 605310473  
Client Sample ID: 135719JUL02

Project Sample Number: 6061217-002  
Matrix: Soil

Date Collected: 07/19/02 13:57  
Date Received: 07/26/02 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/kg	12.		1.2 08/05/02 19:37	MIM			
Jet Fuel	ND	mg/kg	12.		1.2 08/05/02 19:37	MIM			
Kerosene	ND	mg/kg	12.		1.2 08/05/02 19:37	MIM			
Diesel Fuel	1600	mg/kg	12.		1.2 08/05/02 19:37	MIM	68334-30-5	5	
Fuel Oil	ND	mg/kg	12.		1.2 08/05/02 19:37	MIM	68334-30-5		
Motor Oil	ND	mg/kg	12.		1.2 08/05/02 19:37	MIM			
n-Tetracosane (S)	134	%			1.0 08/05/02 19:37	MIM	646-31-1	2	
p-Terphenyl (S)	82	%			1.0 08/05/02 19:37	MIM	92-94-4		
Date Extracted					08/01/02				

#### Organics Prep

Percent Moisture	Method:								
Percent Moisture	16.9	%			1.0 07/31/02	MAM			

#### GC Volatiles

Aromatic Volatile Organics	Prep/Method: EPA 5030 Medium Soil / EPA 8021								
Benzene	83000	ug/kg	5700		114 07/31/02 09:53		71-43-2		
Ethylbenzene	ND	ug/kg	5700		114 07/31/02 09:53		100-41-4		
Toluene	540000	ug/kg	5700		114 07/31/02 09:53		108-88-3		
Xylene (Total)	650000	ug/kg	14000		114 07/31/02 09:53		1330-20-7		
a,a,a-Trifluorotoluene (S)	880	%			1.0 07/31/02 09:53		98-08-8	3,6	

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6070179  
Client Project ID: NM PIT PROGRAM

Lab Sample No: 606046720 Project Sample Number: 6070179-005 Date Collected: 04/28/03 14:59  
Client Sample ID: 145928APR03 Matrix: Soil Date Received: 05/06/03 09:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
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### GC Semivolatiles

Total Extractable Hydrocarbons	Prep/Method: OA2 / OA2								
Mineral Spirits	ND	mg/kg	11.	1.1	05/08/03 01:57	MIM			
Jet Fuel	ND	mg/kg	11.	1.1	05/08/03 01:57	MIM			
Kerosene	ND	mg/kg	11.	1.1	05/08/03 01:57	MIM			
Diesel Fuel	ND	mg/kg	11.	1.1	05/08/03 01:57	MIM	68334-30-5		
Fuel Oil	ND	mg/kg	11.	1.1	05/08/03 01:57	MIM	68334-30-5		
Motor Oil	ND	mg/kg	11.	1.1	05/08/03 01:57	MIM			
Total Petroleum Hydrocarbons	370	mg/kg	11.	1.1	05/08/03 01:57	MIM		4	
n-Tetracosane (S)	108	%		1.0	05/08/03 01:57	MIM	646-31-1		
p-Terphenyl (S)	92	%		1.0	05/08/03 01:57	MIM	92-94-4		
Date Extracted	05/07/03				05/07/03				

### Organics Prep

Percent Moisture	Method: SM 2540G								
Percent Moisture	8.4	%		1.0	05/08/03	MAM			

### GC Volatiles

Aromatic Volatile Organics	Prep/Method: EPA 5030 Medium Soil / EPA 8021								
Benzene	ND	ug/kg	520	10.4	05/08/03 14:33	SDS	71-43-2		
Ethylbenzene	3700	ug/kg	520	10.4	05/08/03 14:33	SDS	100-41-4		
Toluene	15000	ug/kg	520	10.4	05/08/03 14:33	SDS	108-88-3		
Xylene (Total)	40000	ug/kg	1300	10.4	05/08/03 14:33	SDS	1330-20-7		
a,a,a-Trifluorotoluene (S)	92	%		1.0	05/08/03 14:33	SDS	98-08-8		

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6070179  
Client Project ID: NM PIT PROGRAM

Lab Sample No: 606046787      Project Sample Number: 6070179-011      Date Collected: 04/29/03 15:01  
Client Sample ID: 150128APR03      Matrix: Soil      Date Received: 05/06/03 09:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>GC Semivolatiles</b>									
Total Extractable Hydrocarbons	Prep/Method: 0A2 / 0A2								
Mineral Spirits	ND	mg/kg	11.		1.1 05/08/03 03:30	MIM			
Jet Fuel	ND	mg/kg	11.		1.1 05/08/03 03:30	MIM			
Kerosene	ND	mg/kg	11.		1.1 05/08/03 03:30	MIM			
Diesel Fuel	ND	mg/kg	11.		1.1 05/08/03 03:30	MIM	68334-30-5		
Fuel Oil	ND	mg/kg	11.		1.1 05/08/03 03:30	MIM	68334-30-5		
Motor Oil	ND	mg/kg	11.		1.1 05/08/03 03:30	MIM			
n-Tetracosane (S)	105	%			1.0 05/08/03 03:30	MIM	646-31-1		
p-Terphenyl (S)	83	%			1.0 05/08/03 03:30	MIM	92-94-4		
Date Extracted	05/07/03				05/07/03				

**Organics Prep**

Percent Moisture      Method: SM 2540G  
Percent Moisture      9.4      %      1.0 05/08/03      MAM

**REPORT OF LABORATORY ANALYSIS**

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Environmental Services  
188 CR 4900  
Bloomfield, NM 8413

### Pit Closure and Retirement Addendum- Risk Assessment

This site is located in the NMOCD / USBLM defined "Non Vulnerable Area". These agencies have predetermined that historical use of unlined pits in this area have limited potential to adversely affect ground water. This is primarily due to the depth to ground water, lack of vertical migration of contaminants, and distant proximity to river drainages.

The sample analyzed for confirmation at this site exhibited elevated levels of total petroleum hydrocarbons (TPH) and / or BTEX. Toxicity information indicates that the measured levels pose little risk to human health and the environment. This conclusion is based in part on the information below:

#### Toxicity Information

Toxicity values for TPH have not been established due to the variability of the chemical makeup of TPH. Normally, the toxicity is based on the toxicity of particular constituents of concern that may be present and which are evaluated based on health-based standards. The most common constituents examined include benzene, ethylbenzene, toluene, and xylene.

In the absence of constituents of concern or when the concentrations of the constituents of concern are low, the acceptable level of TPH is established by considering the following:

- No liquid product should remain in the soil
- The TPH should not harm vegetation
- The TPH concentrations should not create an odor nuisance
- Hydrocarbon vapors which may emanate from the impacted soil should not generate harmful or explosive vapors
- Site monitoring should indicate that TPH levels are stable or declining

#### Environmental and Site Conditions

Based on an evaluation of site topography and available well data, this site is believed to have ground water greater than 100' below ground surface. The absence of continuous transport mechanisms limits continued migration of contaminants in soil. Notwithstanding, bedrock was discovered at the pit (i.e. excavation) bottom. This condition retards vertical migration of contaminants and serves to significantly limit potential groundwater impact.

While residual TPH and/or BTEX exists at this site, closure of this site is warranted for the following reasons:

1. The majority of soils that exhibited high levels of TPH and BTEX have been treated to enhance degradation in-situ.
2. Residual TPH concentrations are below levels considered problematic based on the criteria above.
3. Discharge at the site has been eliminated to prevent any future impacts to soils.
4. Depth to groundwater is estimated at greater than 100'.
5. Vertical migration of contamination is limited due to bedrock.
6. TPH / BTEX concentrations will not increase and will degrade over time from natural and enhanced processes occurring in-situ.
7. Further excavation at the site is not practicable due to bedrock.

Since there are no nearby receptors or domestic water sources, this site poses little risk to human health and the environment. Closure is justified based on the relatively low total petroleum hydrocarbon (TPH) concentration and the fact that all closure criteria cannot be practically attained. Additional information may be found in the Technical Background Document titled: *Risk Based Closure of Unlined Surface Impoundment Sites, San Juan Basin, New Mexico.*