

District I
1625 N. French 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: HILLSTROM #002 API #: 30-045-23353 U/L or Qtr/Qtr M SEC 35 T 32N R 12W
County: SAN JUAN Latitude 36.56.258 N Longitude 108.04.184 W 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 38 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)

0

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

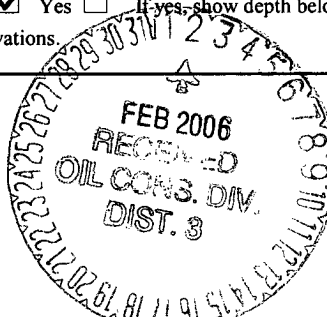
Ranking Score (TOTAL POINTS):

0

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:

Bedrock



Meter: 34654

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: _____

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:

Printed Name/Title

DEPUTY OIL & GAS INSPECTOR, DIST. 3

Signature

Denny Fent

Date:

FEB 02 2006

ADDENDUM TO OCD FORM C-144

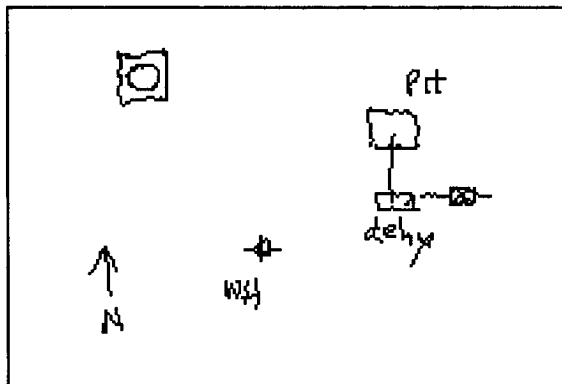
Operator: BURLINGTON RESOURCES OIL & GAS COMPANY LP

API 30-045-23353

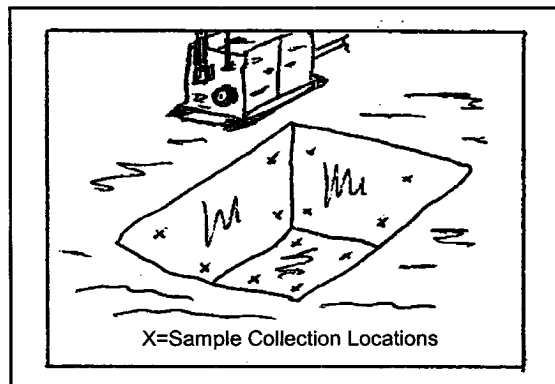
Well Name: HILLSTROM #002

Meter: 34654

Facility Diagram:



Sampling Diagram:



Pit Dimensions

Length 12 Ft.

Width 12 Ft.

Depth 1.5 Ft.

Location of Pit Center

Latitude 36 56.264 N

Longitude 08 04.158 W

(NAD 1927)

Pit ID

346541

Pit Type

Glycol Dehydrator

Date Closure Started: 2/28/05

Date Closure Completed: 2/28/05

Closure Method: Excavated, Blended, Treated Soil Returned

Bedrock Encountered ? ☒

Cubic Yards Excavated: 24

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	
112322JAN05	1/22/05		219	0	1700	ASSESS	Flr	3	
151428FEB05	2/28/05	179	268	0	2100	EX Confirm	Walls	4	See Risk Analysis
152028FEB05	2/28/05	232	91.3	0	1200	EX Confirm	Flr	4.5	See Risk Analysis

Lab Project Number: 6092681

Client Project ID: NM Pits 02/18-03/04/2005

Lab Sample No: 607961810
Client Sample ID: 151428FEB05

Project Sample Number: 6092681-027

Matrix: Soil

Date Collected: 02/28/05 15:14

Date Received: 03/10/05 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	12.	1.2	03/11/05 22:25	WAW			
Jet Fuel	ND	mg/kg	12.	1.2	03/11/05 22:25	WAW			
Kerosene	ND	mg/kg	12.	1.2	03/11/05 22:25	WAW			
Diesel Fuel	ND	mg/kg	12.	1.2	03/11/05 22:25	WAW	68334-30-5		
Fuel Oil	ND	mg/kg	12.	1.2	03/11/05 22:25	WAW	68334-30-5		
Motor Oil	ND	mg/kg	12.	1.2	03/11/05 22:25	WAW			
Total Petroleum Hydrocarbons	2100	mg/kg	12.	1.2	03/11/05 22:25	WAW		1	
n-Tetracosane (S)	177	%		1.0	03/11/05 22:25	WAW	646-31-1	2	
p-Terphenyl (S)	107	%		1.0	03/11/05 22:25	WAW	92-94-4		
Date Extracted	03/10/05				03/10/05				

Organics Prep

Percent Moisture	Method: SM 2540G								
Percent Moisture	18.8	%		1.0	03/10/05	ALJ1			

GC/MS Volatiles

UST VOCs in Soil

Prep/Method: EPA 5030 Medium Soil / EPA 8260

Benzene	ND	ug/kg	2900	57.3	03/16/05 02:21	AEP	71-43-2		
Toluene	17000	ug/kg	2900	57.3	03/16/05 02:21	AEP	108-88-3		
Ethylbenzene	11000	ug/kg	2900	57.3	03/16/05 02:21	AEP	100-41-4		
Xylene (Total)	240000	ug/kg	8600	57.3	03/16/05 02:21	AEP	1330-20-7		
Dibromofluoromethane (S)	105	%		1.0	03/16/05 02:21	AEP	1868-53-7		
1,2-Dichloroethane-d4 (S)	114	%		1.0	03/16/05 02:21	AEP	17060-07-0		
Toluene-d8 (S)	108	%		1.0	03/16/05 02:21	AEP	2037-26-5		
4-Bromofluorobenzene (S)	108	%		1.0	03/16/05 02:21	AEP	460-00-4		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6092681
Client Project ID: NM Pits 02/18-03/04/2005

Lab Sample No: 607961828 Project Sample Number: 6092681-028 Date Collected: 02/28/05 15:20
Client Sample ID: 152028FEB05 Matrix: Soil Date Received: 03/10/05 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	03/11/05 22:47	WAW			
Jet Fuel	ND	mg/kg	11.	1.1	03/11/05 22:47	WAW			
Kerosene	ND	mg/kg	11.	1.1	03/11/05 22:47	WAW			
Diesel Fuel	ND	mg/kg	11.	1.1	03/11/05 22:47	WAW	68334-30-5		
Fuel Oil	ND	mg/kg	11.	1.1	03/11/05 22:47	WAW	68334-30-5		
Motor Oil	ND	mg/kg	11.	1.1	03/11/05 22:47	WAW			
Total Petroleum Hydrocarbons	1200	mg/kg	11.	1.1	03/11/05 22:47	WAW			1
n-Tetracosane (S)	154	%		1.0	03/11/05 22:47	WAW	646-31-1		2
p-Terphenyl (S)	101	%		1.0	03/11/05 22:47	WAW	92-94-4		
Date Extracted	03/10/05				03/10/05				

Organics Prep

Percent Moisture	Method: SM 2540G								
Percent Moisture	13.4	%		1.0	03/10/05	ALJ1			

GC/MS Volatiles

UST VOCs in Soil Prep/Method: EPA 5030 Medium Soil / EPA 8260									
Benzene	ND	ug/kg	110	2.3	03/14/05 13:27	AEP	71-43-2		
Toluene	8600	ug/kg	110	2.3	03/14/05 13:27	AEP	108-88-3		
Ethylbenzene	5700	ug/kg	110	2.3	03/14/05 13:27	AEP	100-41-4		
Xylene (Total)	77000	ug/kg	340	2.3	03/14/05 13:27	AEP	1330-20-7		
Dibromofluoromethane (S)	102	%		1.0	03/14/05 13:27	AEP	1868-53-7		
1,2-Dichloroethane-d4 (S)	114	%		1.0	03/14/05 13:27	AEP	17060-07-0		
Toluene-d8 (S)	152	%		1.0	03/14/05 13:27	AEP	2037-26-5		7
4-Bromofluorobenzene (S)	104	%		1.0	03/14/05 13:27	AEP	460-00-4		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6091199
Client Project ID: NM Pits

Lab Sample No: 607849999 Project Sample Number: 6091199-009 Date Collected: 01/22/05 11:23
Client Sample ID: 112322JAN05 Matrix: Soil Date Received: 01/26/05 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	12.	1.2	02/02/05 04:21	RMN1			
Jet Fuel	ND	mg/kg	12.	1.2	02/02/05 04:21	RMN1			
Kerosene	ND	mg/kg	12.	1.2	02/02/05 04:21	RMN1			
Diesel Fuel	ND	mg/kg	12.	1.2	02/02/05 04:21	RMN1	68334-30-5		
Fuel Oil	ND	mg/kg	12.	1.2	02/02/05 04:21	RMN1	68334-30-5		
Motor Oil	ND	mg/kg	12.	1.2	02/02/05 04:21	RMN1			
Total Petroleum Hydrocarbons	1700	mg/kg	12.	1.2	02/02/05 04:21	RMN1		4	
n-Tetracosane (S)	194	%		1.0	02/02/05 04:21	RMN1	646-31-1	5	
p-Terphenyl (S)	99	%		1.0	02/02/05 04:21	RMN1	92-94-4		
Date Extracted	01/31/05				01/31/05				

Organics Prep

Percent Moisture Method: SM 2540G
Percent Moisture 17.7 % 1.0 01/31/05 ALJ1

GC Volatiles

Aromatic Volatile Organics Prep/Method: EPA 5030 Medium Soil / EPA 8021

Benzene	ND	ug/kg	2800	56.2	01/27/05 13:45		71-43-2		
Ethylbenzene	11000	ug/kg	2800	56.2	01/27/05 13:45		100-41-4		
Toluene	78000	ug/kg	2800	56.2	01/27/05 13:45		108-88-3		
Xylene (Total)	130000	ug/kg	7300	56.2	01/27/05 13:45		1330-20-7		
a,a,a-Trifluorotoluene (S)	135	%		1.0	01/27/05 13:45		98-08-8	2	

REPORT OF LABORATORY ANALYSIS

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Environmental Services
188 CR 4900
Bloomfield, NM 87413

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.

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 cessation of discharge and regional climatic conditions.
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.

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 (compared to documented risk exposure information) and the fact that recommended 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.*