

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

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

Form C-144
June 1, 2004

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: CAULKINS OIL CO Telephone: _____ e-mail address: _____
Address: 1409 W AZTEC BLVD AZTEC, NM 87410
Facility or well name: BREECH A #125 API #: 30-039-06616 U/L or Qtr/Qtr D SEC 8 T 26N R 6W
County: RIO ARriba Latitude 36 30.440 N Longitude 107 29.754 W NAD: 1927 ☒ 1983 ☐
Surface Owner: Federal ☒ State ☐ Private ☐ Indian ☐

Pit

Type: Drilling ☐ Production ☒ Disposal ☐

Workover ☐ Emergency ☐

Lined ☐ Unlined ☒

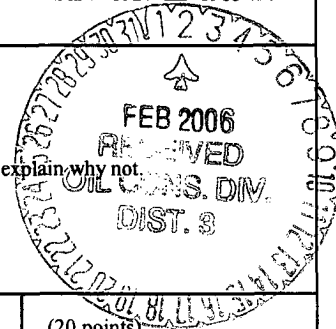
Liner Type: Synthetic ☒ Thickness _____ mil Clay ☐
Pit Volume 18 bbl

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
(0 points)

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
(0 points)

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:

Meter: 33435

Beelock

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: 10/3/05

Printed Name/Title Mark Harvey for Williams Field Services

Signature Mark Harvey FOR WFS

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. 4

Signature Henry Zep

Date: FEB 02 2006

ADDENDUM TO OCD FORM C-144

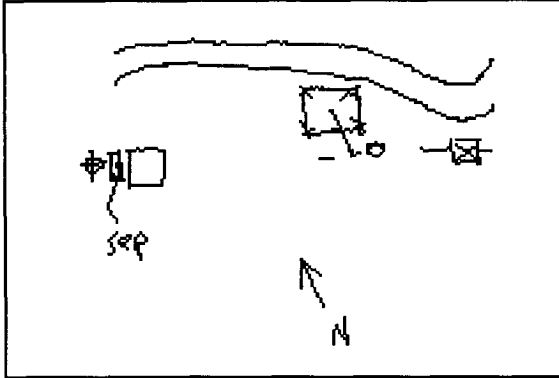
Operator: CAULKINS OIL CO

API 30-039-06616

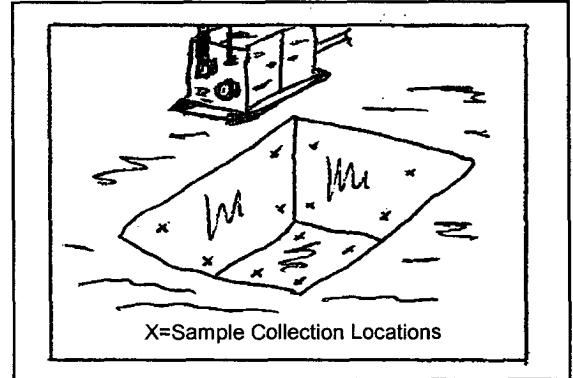
Well Name: BREECH A #125

Meter: 33435

Facility Diagram:



Sampling Diagram:



Pit Dimensions

Length 10 Ft.

Width 10 Ft.

Depth 1 Ft.

Location of Pit Center

Latitude 36 30.440 N

Longitude 07 29.709 W

(NAD 1927)

Pit ID

334351

Pit Type

Other

Date Closure Started: 6/6/05

Date Closure Completed: 6/6/05

Closure Method: Excavated, Blended, Treated Soil Returned

Bedrock Encountered ? ☒

Cubic Yards Excavated: 21

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 | |
|-------------|-------------|------------|--------------------|-----------------|-----------------|------------|----------|-------|-------------------|
| 132206JUN05 | 6/6/05 | 145 | 78 | 0 | 1200 | EX Confirm | Walls | 3 | See Risk Analysis |
| 132806JUN05 | 6/6/05 | 109 | 118.36 | 0.36 | 760 | EX Confirm | Flr | 4 | See Risk Analysis |
| 151817MAY05 | 5/17/05 | | 1902 | 52 | 550 | ASSESS | Flr | 2.5 | |

Lab Project Number: 6095256
Client Project ID: NM PITS - 2ND QUARTER 05

Lab Sample No: 608179560 Project Sample Number: 6095256-009 Date Collected: 05/17/05 15:18
Client Sample ID: 151817MAY05 Matrix: Soil Date Received: 05/19/05 08:45

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|------------|---------|-------|--------------|----|----------|----|---------|------|--------|
|------------|---------|-------|--------------|----|----------|----|---------|------|--------|

GC Semivolatiles

| | | | | | | | | | |
|--------------------------------|------------------------|-------|-----|--|--------------------|------|------------|---|--|
| Total Extractable Hydrocarbons | Prep/Method: OA2 / OA2 | | | | | | | | |
| Mineral Spirits | ND | mg/kg | 14. | | 1.4 05/24/05 12:14 | RMN1 | | | |
| Jet Fuel | ND | mg/kg | 14. | | 1.4 05/24/05 12:14 | RMN1 | | | |
| Kerosene | ND | mg/kg | 14. | | 1.4 05/24/05 12:14 | RMN1 | | | |
| Diesel Fuel | ND | mg/kg | 14. | | 1.4 05/24/05 12:14 | RMN1 | 68334-30-5 | | |
| Fuel Oil | ND | mg/kg | 14. | | 1.4 05/24/05 12:14 | RMN1 | 68334-30-5 | | |
| Motor Oil | ND | mg/kg | 14. | | 1.4 05/24/05 12:14 | RMN1 | | | |
| Total Petroleum Hydrocarbons | 550 | mg/kg | 14. | | 1.4 05/24/05 12:14 | RMN1 | | 6 | |
| n-Tetracosane (S) | 138 | % | | | 1.0 05/24/05 12:14 | RMN1 | 646-31-1 | | |
| p-Terphenyl (S) | 115 | % | | | 1.0 05/24/05 12:14 | RMN1 | 92-94-4 | | |
| Date Extracted | 05/21/05 | | | | 05/21/05 | | | | |

Organics Prep

| | | | | | | | | | |
|------------------|------------------|---|--|--|--------------|------|--|--|--|
| Percent Moisture | Method: SM 2540G | | | | | | | | |
| Percent Moisture | 29.6 | % | | | 1.0 05/20/05 | JMF1 | | | |

GC Volatiles

| | | | | | | | | | |
|----------------------------|--|-------|-------|--|--------------------|-----|-----------|--|--|
| Aromatic Volatile Organics | Prep/Method: EPA 5030 Medium Soil / EPA 8021 | | | | | | | | |
| Benzene | 52000 | ug/kg | 14000 | | 284 05/23/05 14:36 | SHF | 71-43-2 | | |
| Ethylbenzene | 130000 | ug/kg | 14000 | | 284 05/21/05 13:23 | SHF | 100-41-4 | | |
| Toluene | 420000 | ug/kg | 14000 | | 284 05/21/05 13:23 | SHF | 108-88-3 | | |
| Xylene (Total) | 1300000 | ug/kg | 37000 | | 284 05/21/05 13:23 | SHF | 1330-20-7 | | |
| a,a,a-Trifluorotoluene (S) | 92 | % | | | 1.0 05/21/05 13:23 | SHF | 98-08-8 | | |

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6096223
Client Project ID: N. Mex Pit Program Spring 2005

Lab Sample No: 608256277 Project Sample Number: 6096223-011 Date Collected: 06/06/05 13:22
Client Sample ID: 132206JUN05 Matrix: Soil Date Received: 06/15/05 09:10

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|--------------------------------|------------------------|-------|--------------|----|-------------------------|----|------------|------|--------|
| GC Semivolatiles | | | | | | | | | |
| Total Extractable Hydrocarbons | Prep/Method: OA2 / OA2 | | | | | | | | |
| Mineral Spirits | ND | mg/kg | 11. | | 1.1 06/18/05 07:26 RMN1 | | | | |
| Jet Fuel | ND | mg/kg | 11. | | 1.1 06/18/05 07:26 RMN1 | | | | |
| Kerosene | ND | mg/kg | 11. | | 1.1 06/18/05 07:26 RMN1 | | | | |
| Diesel Fuel | ND | mg/kg | 11. | | 1.1 06/18/05 07:26 RMN1 | | 68334-30-5 | | |
| Fuel Oil | ND | mg/kg | 11. | | 1.1 06/18/05 07:26 RMN1 | | 68334-30-5 | | |
| Motor Oil | ND | mg/kg | 11. | | 1.1 06/18/05 07:26 RMN1 | | | | |
| Total Petroleum Hydrocarbons | 1200 | mg/kg | 11. | | 1.1 06/18/05 07:26 RMN1 | | | | 1 |
| n-Tetracosane (S) | 101 | % | | | 1.0 06/18/05 07:26 RMN1 | | 646-31-1 | | |
| p-Terphenyl (S) | 95 | % | | | 1.0 06/18/05 07:26 RMN1 | | 92-94-4 | | |
| Date Extracted | 06/15/05 | | | | 06/15/05 | | | | |

Organics Prep

| | | | | | | | | | |
|------------------|------------------|---|--|--|--------------|--|-----|--|--|
| Percent Moisture | Method: SM 2540G | | | | | | | | |
| Percent Moisture | 10.6 | % | | | 1.0 06/16/05 | | CPR | | |

GC/MS Volatiles

| | | | | | | | | | |
|---------------------------|--|-------|-----|--|------------------------|--|------------|--|---|
| UST VOCs in Soil | Prep/Method: EPA 5030 Medium Soil / EPA 8260 | | | | | | | | |
| Benzene | ND | ug/kg | 280 | | 5.6 06/20/05 18:49 JKL | | 71-43-2 | | |
| Toluene | ND | ug/kg | 280 | | 5.6 06/20/05 18:49 JKL | | 108-88-3 | | |
| Ethylbenzene | ND | ug/kg | 280 | | 5.6 06/20/05 18:49 JKL | | 100-41-4 | | |
| Xylene (Total) | 78000 | ug/kg | 840 | | 5.6 06/20/05 18:49 JKL | | 1330-20-7 | | |
| Dibromofluoromethane (S) | 108 | % | | | 1.0 06/20/05 18:49 JKL | | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 109 | % | | | 1.0 06/20/05 18:49 JKL | | 17060-07-0 | | |
| Toluene-d8 (S) | 146 | % | | | 1.0 06/20/05 18:49 JKL | | 2037-26-5 | | 3 |
| 4-Bromofluorobenzene (S) | 141 | % | | | 1.0 06/20/05 18:49 JKL | | 460-00-4 | | 3 |

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6096223

Client Project ID: N. Mex Pit Program Spring 2005

Lab Sample No: 608256285
Client Sample ID: 132806JUN05

Project Sample Number: 6096223-012
Matrix: Soil

Date Collected: 06/06/05 13:28
Date Received: 06/15/05 09:10

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|--------------------------------|------------------------|-------|--------------|----|-------------------------|----|------------|------|--------|
| GC Semivolatiles | | | | | | | | | |
| Total Extractable Hydrocarbons | Prep/Method: OA2 / OA2 | | | | | | | | |
| Mineral Spirits | ND | mg/kg | 11. | | 1.1 06/18/05 07:46 RMN1 | | | | |
| Jet Fuel | ND | mg/kg | 11. | | 1.1 06/18/05 07:46 RMN1 | | | | |
| Kerosene | ND | mg/kg | 11. | | 1.1 06/18/05 07:46 RMN1 | | | | |
| Diesel Fuel | ND | mg/kg | 11. | | 1.1 06/18/05 07:46 RMN1 | | 68334-30-5 | | |
| Fuel Oil | ND | mg/kg | 11. | | 1.1 06/18/05 07:46 RMN1 | | 68334-30-5 | | |
| Motor Oil | ND | mg/kg | 11. | | 1.1 06/18/05 07:46 RMN1 | | | | |
| Total Petroleum Hydrocarbons | 760 | mg/kg | 11. | | 1.1 06/18/05 07:46 RMN1 | | | 1 | |
| n-Tetracosane (S) | 111 | % | | | 1.0 06/18/05 07:46 RMN1 | | 646-31-1 | | |
| p-Terphenyl (S) | 103 | % | | | 1.0 06/18/05 07:46 RMN1 | | 92-94-4 | | |
| Date Extracted | 06/15/05 | | | | 06/15/05 | | | | |

Organics Prep

| | | | | | | | | | |
|------------------|------------------|---|--|--|--------------|--|-----|--|--|
| Percent Moisture | Method: SM 2540G | | | | | | | | |
| Percent Moisture | 9.7 | % | | | 1.0 06/16/05 | | CPR | | |

GC/MS Volatiles

| | | | | | | | | | |
|---------------------------|--|-------|-----|--|------------------------|--|------------|---|--|
| UST VOCs in Soil | Prep/Method: EPA 5030 Medium Soil / EPA 8260 | | | | | | | | |
| Benzene | 360 | ug/kg | 280 | | 5.5 06/20/05 19:06 JKL | | 71-43-2 | | |
| Toluene | 19000 | ug/kg | 280 | | 5.5 06/20/05 19:06 JKL | | 108-88-3 | | |
| Ethylbenzene | 11000 | ug/kg | 280 | | 5.5 06/20/05 19:06 JKL | | 100-41-4 | | |
| Xylene (Total) | 88000 | ug/kg | 830 | | 5.5 06/20/05 19:06 JKL | | 1330-20-7 | | |
| Dibromofluoromethane (S) | 103 | % | | | 1.0 06/20/05 19:06 JKL | | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 106 | % | | | 1.0 06/20/05 19:06 JKL | | 17060-07-0 | | |
| Toluene-d8 (S) | 134 | % | | | 1.0 06/20/05 19:06 JKL | | 2037-26-5 | 3 | |
| 4-Bromofluorobenzene (S) | 127 | % | | | 1.0 06/20/05 19:06 JKL | | 460-00-4 | 3 | |

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 NMOCDC / 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.*