

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

*Risk
defined
extent
of plume*

Submit 1 copy to
appropriate
District Office
and 1 copy to
the Santa Fe Office

(Revised 3/9/94)

PIT REMEDIATION AND CLOSURE REPORT

Operator: Bannon Energy Incorporated Telephone: _____

Address: 30-039-21959

Facility Or: Tonkin #3, Meter 90582
Well Name _____

Location: Unit or Qtr/Qtr Sec M Sec 17 T 24 R 3 County Rio Arriba

Pit Type: Separator _____ Dehydrator _____ Other Drip

Land Type: BLM _____, State _____, Fee X Other _____

Pit Location: Pit dimensions: length 25', width 24', depth 3'

(Attach diagram)

Reference: wellhead X, other _____

Footage from reference: 165'

Direction from reference: 167 Degrees X East North _____
of
_____ West South _____

| | | |
|--------------------------|-----------------------|-----------------------|
| Depth To Ground Water | 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) <u>20</u> |
| high water elevation of | | |
| ground water.) | | |

| | |
|--|-------------------------|
| Wellhead Protection Area: | Yes (20 points) |
| (Less than 200 feet from a private | No (0 points) <u>0</u> |
| domestic water source, or; less than | |
| 1000 feet from all other water sources.) | |

| | | |
|--|------------------------|----------------------|
| Distance To Surface Water: | Less than 200 feet | (20 points) |
| (Horizontal distance to perennial | 200 feet to 1000 feet | (10 points) |
| lakes, ponds, rivers, streams, creeks, | Greater than 1000 feet | (0 points) <u>0</u> |
| irrigation canals and ditches.) | | |

RANKING SCORE (TOTAL POINTS): 20

Date Remediation Started: 10/25/94 Date completed: 10/25/94

Remediation Method: Excavation X Approx. cubic yards 20

(Check all appropriate sections.)

Landfarmed _____ Insitu Bioremediation _____

Other _____

Remediation Location: Onsite _____ Offsite Envirotech
(i.e. landfarmed onsite,
name and location of
offsite facility)

General Description of Remedial Action: Some line markers. Pit has some oil and water in it. Had to solidify pit with one truck. Dug out two loads so that it wouldn't seep up through the cap. Closed pit.

Ground Water Encountered: No X Yes _____ Depth _____

Final Pit:
Closure Sampling:
(if multiple samples,
attach sample results
and diagram of sample
locations and depths)

Sample location Four walls and center of pit composite

Sample depth 12'

Sample Date 10/25/94 Sample time 14:10

Sample Results

Benzene(ppm) Not reported

Total BTEX(ppm) Not reported

Field headspace(ppm) 49

TPH 81900

Ground Water Sample: Yes _____ No X (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

1/8/03

Signature

Scott T. Pope

Printed Name

Scott T. Pope

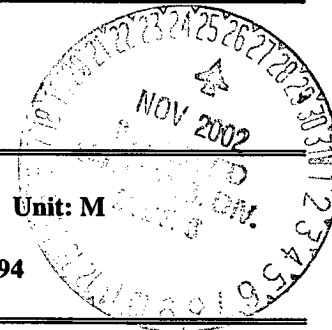
and Title

Senior Env. Scientist



PIT CLOSURE REQUEST

Tonkin #3
Meter/Line ID 90582



SITE DETAILS

Legals - Twn: 24N

Rng: 3W

Sec: 17

Unit: M

NMOCD Hazard Ranking: 20

Land Type: Fee

Operator: Bannon Energy Incorporated

Pit Closure Date: 10/25/94

RATIONALE FOR RISK-BASED CLOSURE

The pit noted above was assessed and ranked according to the criteria in the New Mexico Oil Conservation Division's (NMOCD) Unlined Surface Impoundment Closure Guidelines.

A test pit was excavated to 12 feet (ft) below ground surface (bgs) where a soil sample was collected for field headspace analysis and laboratory analysis for TPH. Groundwater was not encountered in the test pit. Headspace analysis indicated an organic vapor content of 49 ppm; laboratory analysis indicated a TPH concentration of 81,900 mg/kg. The TPH measurement exceeded recommended remediation levels for the Hazard Ranking Score of 20.

Approximately 20 cubic yards of soil were excavated and hauled to Envirotech, a commercial landfarm, for treatment and disposal. The pit was backfilled with clean soil and graded in a manner to direct surface runoff away from the pit area.

A Phase II boring was completed to refusal at 32 ft bgs. No groundwater was encountered in the soil boring. One laboratory sample was collected at 30-32 ft bgs. Headspace analysis indicated an organic vapor content of 0 ppm; laboratory analysis indicated a benzene concentration of <0.5 mg/kg, a total BTEX concentration of <3 mg/kg, and a TPH concentration of <20 mg/kg. The benzene, TPH and BTEX concentrations were below recommended remediation levels for the Hazard Ranking Score.

No Phase III activities were conducted.

El Paso Field Services requests closure of the above mentioned production pit location for the following reasons:

- The primary source, discharge to the pit, has been removed for over eight years.
- The test pit was backfilled and the former pit area graded to direct surface runoff away from the former pit.
- Backfilling the pit with clean soil eliminated the potential for direct contact with hazardous constituents by livestock or the public; i.e., direct contact exposure pathways are incomplete.
- Groundwater was not encountered in the soil boring to 32 ft bgs.
- There are no water supply wells or other sources of fresh water extraction within 1,000 feet of the site.
- Benzene, total BTEX, and TPH concentrations in the soil sample collected at the base of the Phase II soil boring at 32 ft bgs were non-detect, indicating that no significant downward constituent migration is occurring.



PIT CLOSURE REQUEST

- A majority of the impacted soil has been removed and residual hydrocarbons in the soil will likely degrade by natural attenuation with minimal risk to human health and the environment.

ATTACHMENTS

Field Pit Assessment Form

Revised Field Pit Assessment Form

Field Pit Remediation/Closure Form

Phase II Soil Boring Log

Laboratory Analytical Results

REVISED
FIELD PIT SITE ASSESSMENT FORM

GENERAL

Meter: 90582 Location: Tonkin #3
 Operator #: _____ Operator Name: _____ P/L District: _____
 Coordinates: Letter: M Section 17 Township: 24 Range: 3
 Or Latitude _____ Longitude _____
 Pit Type: Dehydrator _____ Location Drip: _____ Line Drip: _____ Other: _____
 Site Assessment Date: 4/14/98 Area: _____ Run: _____

SITE ASSESSMENT

NMOCD Zone: (From NMOCD Maps) **Land Type:** BLM ☐ (1)
 State ☐ (2)
 Fee ☒ (3)
 Indian _____
 Inside ☐ (1)
 Outside ☒ (2)
Depth to Groundwater
 Less Than 50 Feet (20 points) ☒ (1)
 50 Ft to 99 Ft (10 points) ☐ (2)
 Greater Than 100 Ft (0 points) ☐ (3)
Wellhead Protection Area
 Is it less than 1000 ft from wells, springs or other sources of fresh water extraction?, or; Is it less than 200 ft from a private domestic water source?
☐ (1) YES (20 points) ☒ (2) NO (0 points)
Horizontal Distance to Surface Water Body
 Less Than 200 Ft (20 points) ☐ (1)
 200 Ft to 1000 Ft (10 points) ☐ (2)
 Greater Than 1000 Ft (0 points) ☒ (3)
 Name of Surface Water Body _____
 (Surface Water Body: Perennial Rivers, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)
 Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only)
☐ (2) > 100'
TOTAL HAZARD RANKING SCORE: 20 POINTS

REMARKS

Remarks : Site has been re-assessed, due to initial assessment including washes as a Surface Water Body. Site is <50' vertical from center of Medio Canyon.

FIELD PIT SITE ASSESSMENT FORM

SK 10/28/94 - see Notes on Back

GENERAL

Meter: 90-582 Location: ✓ Tonkin #3
 Operator #: 0430 Operator Name: Bannon Energy P/L District: Ojito
 Coordinates: Letter: M Section 17 Township: 24 Range: 3
 Or Latitude _____ Longitude _____
 Pit Type: Dehydrator _____ Location Drip: X Line Drip: _____ Other: _____
 Site Assessment Date: 10/25/94 Area: 08 Run: 83

SITE ASSESSMENT

NMOCD Zone:

(From NMOCD
Maps)

Inside

Outside

Land Type:

BLM

State

Fee

Indian

☐ (1)

☐ (2)

☒ (3)

☐ (1)

☒ (2)

Depth to Groundwater

Less Than 50 Feet (20 points)

☒ (1)

50 Ft to 99 Ft (10 points)

☐ (2)

Greater Than 100 Ft (0 points)

☐ (3)

Wellhead Protection Area :

Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? ☐ (1) YES (20 points) ☒ (2) NO (0 points)

Horizontal Distance to Surface Water Body

Less Than 200 Ft (20 points)

☒ (1)

200 Ft to 1000 Ft (10 points)

☐ (2)

Greater Than 1000 Ft (0 points)

☐ (3)

Name of Surface Water Body Medio Canyon

(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)

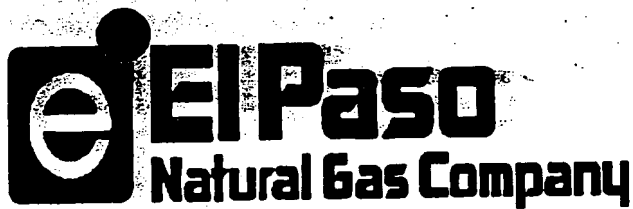
Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only)
☐ (2) > 100'

TOTAL HAZARD RANKING SCORE: 40 POINTS

REMARKS

Remarks : Redline Book: Inside, Vulnerable Zone
Two pits, location drip pit has liquid in it, Will close one pit.

PUSH IN



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Outside the GWV Zone

SAMPLE IDENTIFICATION

| | Field ID | Lab ID |
|----------------------------|--------------------------------|------------------------|
| SAMPLE NUMBER: | KP 334 ^{10/31/94} 335 | 946454 |
| MTR CODE SITE NAME: | 90582 | N/A |
| SAMPLE DATE TIME (Hrs): | 10-25-94 | 1410 |
| SAMPLED BY: | N/A | |
| DATE OF TPH EXT. ANAL.: | 10-28-94 | 10-28-94 |
| DATE OF BTEX EXT. ANAL.: | N/A | N/A |
| TYPE DESCRIPTION: | VG | Dark brown sand + clay |

REMARKS:

RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|----------------|--------|-------|------------|---|------|-------|
| | | | DF | Q | M(g) | V(ml) |
| TPH (418.1) | 81900 | MG/KG | | | 100 | 28 |
| HEADSPACE PID | 49 | PPM | | | | |
| PERCENT SOLIDS | 89.4 | % | | | | |

-- TPH is by EPA Method 418.1 --

irrelative:

= Dilution Factor Used

Approved By:

Date:

11/3/94

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 90582 Location: Tonkin #3

Coordinates: Letter: m Section 17 Township: 24 Range: 3

Or Latitude _____ Longitude _____

Date Started : 10-25-94 Area: 0.8 Run: 83

FIELD OBSERVATIONS

Sample Number(s): 18335

Sample Depth: 12' Feet

Final PID Reading 049 PID Reading Depth 12' Feet

Yes No

Groundwater Encountered ☐ (1) ☒ (2) Approximate Depth _____ Feet

CLOSURE

Remediation Method :

Excavation ☒ (1) Approx. Cubic Yards 20

Onsite Bioremediation ☐ (2)

Backfill Pit Without Excavation ☐ (3)

Soil Disposition:

Envirotech ☒ (1) ☐ (3) Tierra

Other Facility ☐ (2) Name: _____

Pit Closure Date: 10/25/94

Pit Closed By: B.E.I.

REMARKS

Remarks : Some Line markers. Pit Has some oil & water
in it. Had to solidify Pit with one truck. dug out two loads so that
it wouldn't seal up through the cap. Closed Pit

Signature of Specialist: Kelly Padilla

[illegible]



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

| | | |
|----------------------------|-------------------|-----------|
| | Field ID | Lab ID |
| SAMPLE NUMBER: | HAB1 | 980560 |
| MTR CODE SITE NAME: | 90582 | Tonkin #3 |
| SAMPLE DATE TIME (Hrs): | 8/6/98 | 1432 |
| PROJECT: | Phase II Drilling | |
| DATE OF TPH EXT. ANAL.: | 8/13/98 | 8/14/98 |
| DATE OF BTEX EXT. ANAL.: | 8/10/98 | 8/11/98 |
| TYPE DESCRIPTION: | VG | SOIL |

Field Remarks: 30-32'

RESULTS

| PARAMETER | RESULT | UNITS | QUALIFIERS | | | |
|----------------|--------|-------|------------|---|------|-------|
| | | | DF | Q | M(g) | V(ml) |
| BENZENE | <0.5 | MG/KG | | | | |
| TOLUENE | <0.5 | MG/KG | | | | |
| ETHYL BENZENE | <0.5 | MG/KG | | | | |
| TOTAL XYLENES | <1.5 | MG/KG | | | | |
| TOTAL BTEX | <3 | MG/KG | | | | |
| TPH (MOD.8015) | <20 | MG/KG | | | | |
| HEADSPACE PID | 0 | PPM | | | | |
| PERCENT SOLIDS | 89.3 | % | | | | |

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 87.2 % for this sample All QA/QC was acceptable.
Narrative:

DF = Dilution Factor Used

Approved By:

John L. L...

Date:

8/25/98

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Albuquerque, New Mexico 87401

505-226-2262 FAX (505) 326-2388

Borehole # BH-1

Well # NA

Page 1 of 1

Project Number 19643 Phase 1001.77

Project Name EPFS PITS >10

Project Location TONKIN #3 9058Z

Elevation

Borehole Location LTR: M S: 17 T: 24 R: 3

GWL Depth NA

Drilled By K. PADILLA C. LOVATO

Well Logged By G. CHANCE H. BRADBURY

Date Started 8/6/98

Date Completed 8/6/98

Drilling Method 4 1/4 ID HSA

Air Monitoring Method PID

| Depth (Feet) | Sample Number | Sample Interval | Sample Type & Recovery (inches) | Sample Description Classification System: USCS | USCS Symbol | Depth Lithology Change (feet) | Air Monitoring Units: PPM | | | Drilling Conditions & Blow Counts |
|-----------------|------------------|--------------------|--|--|----------------|--|------------------------------|-----|-----------|---|
| | | | | | | | BZ | BH | S/HS | |
| 0 | | | | | | | | | | BZ=Breathing Zone BH=Borehole S/HS=Sample/Headspace |
| 5 | | | | | | | | | | |
| 10 | | | | Backfill to 12 feet | | | 0 | 154 | | |
| 15 | 1 | 15-17' | 18 | DK GRY CLAY, vstiff, med plastic, dry | | | 3 | 122 | 8 1635 | 13:50 hrs |
| 20 | 2 | 20-22' | 12 | DR ben sandy SILT, vFINE SAND, dense; moist | | | | | 11 185 | 14:00 hrs |
| 25 | 3 | 25-27' | 18 | DR GRY silty SAND. FINE SAND, med dense, moist | | | 3 | 50 | 0 5 | 14:13 hrs |
| 30 | 4 | 30-32' | 18 | lt. brown silty SAND, FINE, loose, dry, trace interbedded clay | | | 3 | 18 | 0 0 | 14:32 hrs |
| 35 | | | | TOB 32' | | | | | | drilling harder |
| 40 | | | | | | | | | | |

Comments:

Sample HAB1 collected from 30-32' and sent to lab for TPH and BTEX. GW NOT ENCOUNTERED BH GROVED TO SURFACE.

Geologist Signature

Holly Bradbury



GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015 MODIFIED (DIRECT INJECT)
CLIENT : EL PASO FIELD SERVICES PINNACLE I.D.: 808033
PROJECT # : (none)
PROJECT NAME : PHASE II DRILLING

| SAMPLE | | MATRIX | DATE | DATE | DATE | DIL. |
|--------|-------------|--------|---------|-----------|----------|--------|
| ID. # | CLIENT I.D. | | SAMPLED | EXTRACTED | ANALYZED | FACTOR |
| 04 | 980560 | NON-AQ | 8/6/98 | 8/13/98 | 8/14/98 | 1 |
| 05 | 980561 | NON-AQ | 8/7/98 | 8/13/98 | 8/14/98 | 1 |

| PARAMETER | DET. LIMIT | UNITS | 04 | 05 |
|----------------------------|------------|-------|-------|-------|
| FUEL HYDROCARBONS, C6-C10 | 10 | MG/KG | < 10 | < 10 |
| FUEL HYDROCARBONS, C10-C22 | 5.0 | MG/KG | < 5.0 | < 5.0 |
| FUEL HYDROCARBONS, C22-C36 | 5.0 | MG/KG | < 5.0 | < 5.0 |

CALCULATED SUM:

SURROGATE:
O-TERPHENYL (%) 91 91
SURROGATE LIMITS (66 - 151)

CHEMIST NOTES:
N/A

BTEX SOIL SAMPLE WORKSHEET

| | | | | | |
|----------------------|---|--------|-------------------------|---|---------|
| File | : | 980560 | Date Printed | : | 8/12/98 |
| Soil Mass (g) | : | 5.11 | Multiplier (L/g) | : | 0.00098 |
| Extraction vol. (mL) | : | 10 | CAL FACTOR (Analytical) | : | 200 |
| Shot Volume (uL) | : | 50 | CAL FACTOR (Report) | : | 0.19569 |

| | DILUTION FACTOR: | 1 | Det. Limit |
|----------------------------|------------------------|---------|------------|
| Benzene (ug/L) : <0.5 | Benzene (mg/Kg): | #VALUE! | 0.489 |
| Toluene (ug/L) : <0.5 | Toluene (mg/Kg): | #VALUE! | 0.489 |
| Ethylbenzene (ug/L) : <0.5 | Ethylbenzene (mg/Kg): | #VALUE! | 0.489 |
| p & m-xylene (ug/L) : <1.0 | p & m-xylene (mg/Kg): | #VALUE! | 0.978 |
| o-xylene (ug/L) : <0.5 | o-xylene (mg/Kg): | #VALUE! | 0.489 |
| | Total xylenes (mg/Kg): | #VALUE! | 1.468 |
| | Total BTEX (mg/Kg): | #VALUE! | |