

LOCATION: LOPOCO LUCERNE D-1E (M-21-28N-11W) R1  
PIT TYPE: DHP

EXEMPT  
WASTES:

Yes ☒ No ☐

DATE FLOW TO PIT STOPPED: FALL - 1992

ACREAGE  
TYPE:

☐ FEDERAL

☐ JICARILLA

☐ NAVAHO

DEPUTY OIL & GAS INSPECTOR

☐ STATE ☒ FEE

JUN 19 1995

SITE ASSESSMENT

Ranking Score

1) Groundwater Depth: > 100'

Basis: LOCATED UPGRADIENT FROM RIVER BASIN / KUTZ CANYON 0

2) Wellhead Protection Area:

Distance To

Water: > 1000' Private Domestic Water Sources: > 200'

Basis: NO FRESH WTR EXTRACTION CLOSE BY 0

3) Distance To Surface Body of Water: > 1000'

Basis: NO SURFACE WTR IN VICINITY 0

Total Score: 0

Soil Characteristic

☐ Highly Contaminated/Saturated

☒ Unsaturated Contaminated

RANKING CRITERIA

| Distance to Groundwater | Wellhead Protection Area                                                    | Distance to Surface Water Body |
|-------------------------|-----------------------------------------------------------------------------|--------------------------------|
|                         | <1000' from water source<br>or < 200' from private<br>domestic water source |                                |
| Score                   | Score                                                                       | Rank                           |
| <50 ft 20               | yes 20                                                                      | <200' horiz 20                 |
| <50 - 99 10             | no 0                                                                        | 200 - 1000' horiz 10           |
| >100 ft 0               |                                                                             | >1000' horiz 0                 |

GUIDELINE REMEDIATION LEVELS

| Total Ranking Score |     |       |       |
|---------------------|-----|-------|-------|
|                     | >19 | 10-19 | 0-9   |
| Benzene (ppm)       | 10  | 10    | 10    |
| BTEX (ppm)          | 50  | 50    | 50    |
| Field Headspace     |     |       |       |
| Method for BTEX     | 100 | 100   | 100   |
| TPH (ppm) **        | 100 | 1,000 | 5,000 |

\*\* Concentration above background

DEFINITION OF CONTAMINATION

Date: \_\_\_\_\_

Depth Excavated: NO RECORD

Full Excavation: ☐ Maximum Extent Practicable

ALL SAMPLE RESULTS ARE SHOWN ON "SAMPLE RESULTS NOTES" FORM

Groundwater Encountered: Yes ☐ No ☒

If yes, approximate depth: \_\_\_\_\_

Groundwater Sampling? ☐ Yes ☐ No

Where was gw sample taken? \_\_\_\_\_

Attach GW Sample Results

NOTES:

10/10

# REMEDIAL PROFILE

Soil Treated Onsite



Date Remediation Started: 1-30-92

☒ In Situ Bio

☐ w/vapor venting

☐ Landfarmed

☐ Composted

| Date:   | Description              | Amount/Rate | Date:   | Description                       | Amount/Rate |
|---------|--------------------------|-------------|---------|-----------------------------------|-------------|
| 4-30-92 | TURNED SOIL W/ BACKHOE   |             | 6-19-92 | TURNED SOIL W/ BACKHOE            |             |
|         | FERTILOME 28-4-4         | 8 #         |         | FERTILOME 28-4-4                  | 8 #         |
|         | LOCAL RAINW HEADY 5/9/92 |             |         | H <sub>2</sub> O ADDED 6/8-8/5/92 | ?           |
|         | Bulking Agent            |             |         |                                   |             |
|         | Organic Material         |             |         |                                   |             |

| Date:    | Description            | Amount/Rate | Date:   | Description           | Amount/Rate |
|----------|------------------------|-------------|---------|-----------------------|-------------|
| 10-15-92 | TURNED SOIL W/ BACKHOE |             | 4-23-93 | TURNED PIT W/ BACKHOE |             |
|          | FERTILOME 28-4-4       | 5 #         |         | FERTILOME 28-4-4      | 8 #         |
|          | Moisture               |             |         |                       |             |
|          | Bulking Agent          |             |         |                       |             |
|          | Organic Material       |             |         |                       |             |

ALL SAMPLE RESULTS ARE SHOWN ON "SAMPLING RESULTS NOTES" FORM

## SOIL TREATED/HANDLED OFFSITE

### TO SITE (ATTACH MANIFEST)

Where Treated:

Type of Land (Fed/Nav/Jic/State/Fee):

Quantity Moved:

Quantity Disposed At Envirotech:

### FROM SITE (ATTACH MANIFEST)

To This Location From:

Type of Land (Fed/Nav/Jic/State/Fee):

Quantity Moved:

## FINAL CLOSURE

BTEX: 7 ppm (From Headspace Analysis)

TPH: 1120 ppm (From Lab Results)

Revegetated:

yes

☐

no

☐

Active Well or Facility Pad:

yes

☐

no

☐

NOTES: 4-30-92 - PIT WAS EXCAVATED & TREATED BUT NO RECORD OF DEPTH EXCAVATED. TREATMENT WAS CONTINUED AS LISTED IN REMEDIATION PROFILE. LAB ANALYSIS 5-19-93 INDICATED SOIL TPH STILL HIGH BUT BTEX IS BELOW REQUIREMENTS. 10-16-93 - MIXED CLEAN SOIL FROM LOCATION USED TO DILUTE TPH FERTILIZED PIT. 10-6-94 - TURNED PIT. 1-5-95 PULLED TPH: OUA

REMEDIATION PROFILESoil Treated Onsite ☐Date Remediation Started 4-30-92☒ In Situ Bio☐ w/vapor venting☐ Landfarmed☐ Composted

| Date: <u>10-16-93</u> | Description                | Amount/Rate | Date: | Description | Amount/Rate |
|-----------------------|----------------------------|-------------|-------|-------------|-------------|
| Tilled                | MIXED CLEAN SOIL TO DILUTE |             |       |             |             |
| Nutrients             | FERTILOME 25-4-4           | 13          |       |             |             |
| Moisture              |                            |             |       |             |             |
| Bulking Agent         |                            |             |       |             |             |
| Organic Material      |                            |             |       |             |             |

| Date: <u>10-6-94</u> | Description | Amount/Rate | Date: | Description | Amount/Rate |
|----------------------|-------------|-------------|-------|-------------|-------------|
| Tilled               | TURNED PIT  |             |       |             |             |
| Nutrients            |             |             |       |             |             |
| Moisture             |             |             |       |             |             |
| Bulking Agent        |             |             |       |             |             |
| Organic Material     |             |             |       |             |             |

ALL SAMPLE RESULTS ARE SHOWN ON "SAMPLING RESULTS NOTES" FORM

SOIL TREATED/HANDLED OFFSITE

## TO SITE(ATTACH MANIFEST)

Where Treated:

Type of Land (Fed/Nav/Jic/State/Fee):

Quantity Moved:

Quantity Disposed At Envirotech:

## FROM SITE (ATTACH MANIFEST)

To This Location From:

Type of Land (Fed/Nav/Jic/State/Fee):

Quantity Moved:

FINAL CLOSURE

BTEX: \_\_\_\_\_ ppm (From Headspace Analysis)

TPH: \_\_\_\_\_ ppm (From Lab Results)

Revegetated:

yes ☐no ☐

Active Well or Facility Pad:

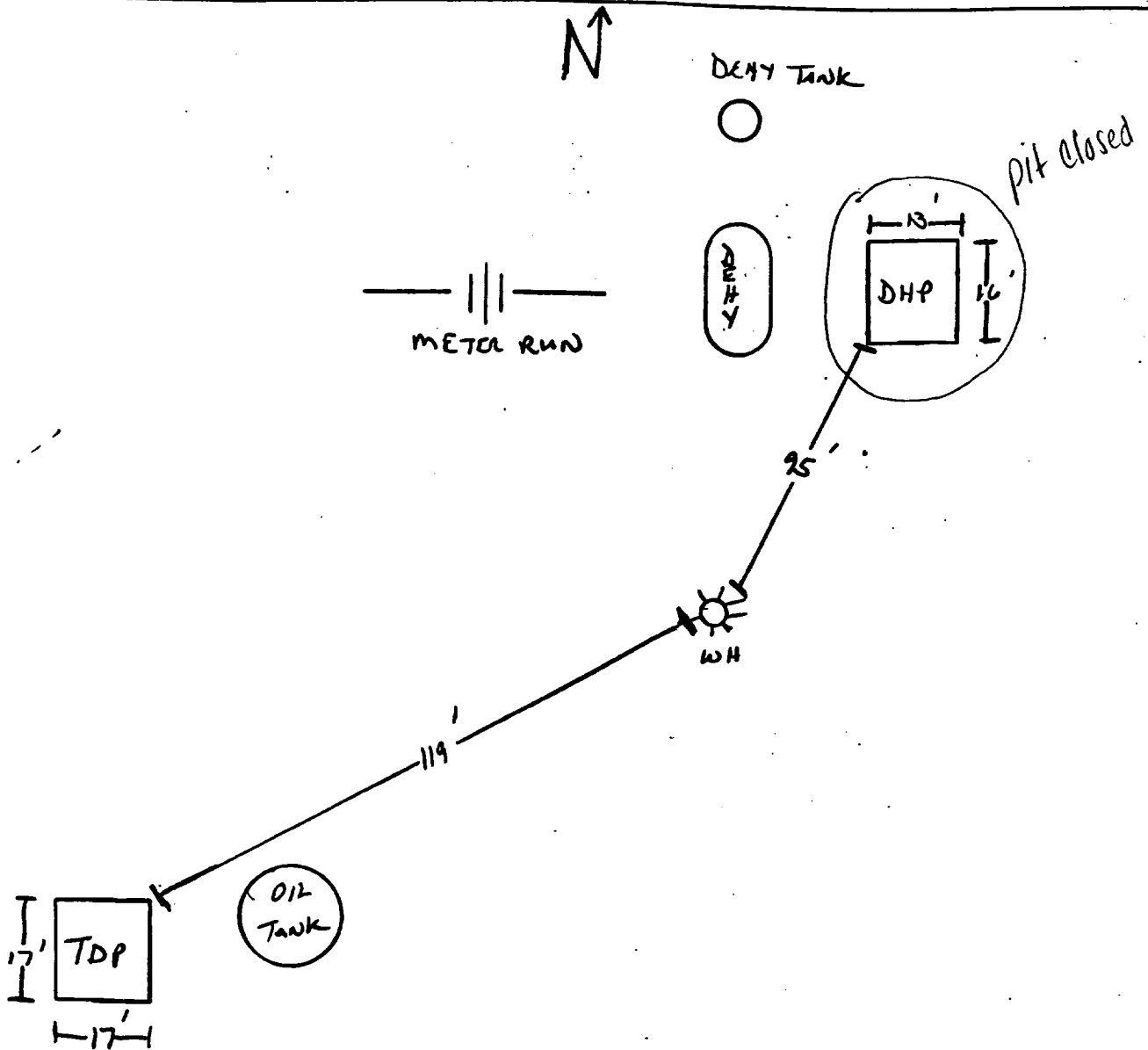
yes ☐no ☐NOTES: 1-4-95 - PULLED SAMPLE FOR DVA & TPH ANALYSIS,LEVELS BELOW REQUIREMENTS. PIT IS CLOSED.

3066

PIT LOCATION AND COMPOSITE SAMPLE PROFILE MAP

WELL LOCATION: LUCERNE D-1E S 21 T 28N R 11W UNIT M

DATE STARTED: 4-30-92 DATE COMPLETED: 1-4-95



- o SOIL SAMPLE LOCATION
- Δ BACKGROUND SAMPLE LOCATION

4/26/95

# PIT CLOSURE DOCUMENTATION - SAMPLING RESULTS NOTES

LOCATION OF PIT: LUCERNE D-1E TYPE OF PIT: DHP

| DESCRIPTION OF SAMPLE                             | SAMPLE<br>EVENT # | SAMPLE<br>EVENT # | SAMPLE<br>EVENT #                                         | SAMPLE<br>EVENT # | SAMPLE<br>EVENT #                           | SAMPLE<br>EVENT #                   | SAMPLE<br>EVENT # |
|---------------------------------------------------|-------------------|-------------------|-----------------------------------------------------------|-------------------|---------------------------------------------|-------------------------------------|-------------------|
| DATE OF SAMPLE                                    | 4-30-92           | 6-18-92           | 10-15-92                                                  | 5-19-93           | 9-30-93                                     | 1-4-95                              |                   |
| LOCATION OF SAMPLE                                | DHP               | DHP               | DHP                                                       | DHP               | DHP                                         | DHP                                 |                   |
| TYPE OF SAMPLE:<br>(GRAB/COMPOSITE)               | COMPOSITE         | COMPOSITE         | COMPOSITE                                                 | COMPOSITE         | COMPOSITE                                   | COMPOSITE                           |                   |
| DEPTH OF SAMPLE(S)                                | -                 | -                 | -                                                         | 3                 | 3-5                                         | 0-5                                 |                   |
| TEMPERATURE OF SAMPLE                             | -                 | -                 | -                                                         |                   | 76°                                         | 65°                                 |                   |
| FIELD METHOD RESULTS (PPMS)                       |                   |                   |                                                           |                   |                                             |                                     |                   |
| TPH VAPORS (EQUIV UNITS)                          | -                 | 150 (TLV)         | 300 (TLV)                                                 | 192 (PD)          | 156                                         | 15                                  |                   |
| BENZENE RESPONSE FACTOR                           | -                 | -                 | -                                                         | .47               | .47                                         | .47                                 |                   |
| ADJUSTED FOR BENZENE<br>EQUIV UNITS               | -                 | -                 | -                                                         | .90               | .73                                         | .7                                  |                   |
| LAB RESULTS IN PPM:<br>METHOD (418.1 OR MOD 8015) | 418.8             | 418.8             | 418.8                                                     | 418.8             | 418.1                                       | 418.1                               |                   |
| TPH                                               | 8480              | 18,200            | 23,400                                                    | 10,400            | 6580                                        | 1120                                |                   |
| NOTES                                             |                   |                   | TPH HIGH<br>POSSIBLY DUE<br>TO HIGH MOIS-<br>TURE CONTENT |                   | PULLED SOIL<br>TPH - ANALYSIS<br>STILL HIGH | PULLED<br>SAMPLE<br>FOR TPH<br>ANAL |                   |

TOTAL PETROLEUM HYDROCARBONS  
EPA METHOD 418.1Conoco Inc.

Project: Soil TPH  
Matrix: Soil  
Condition: Intact/Cool

Date Reported: 01/13/95  
Date Sampled: 01/04/95  
Date Received: 01/04/95  
Date Extracted: 01/12/95  
Date Analyzed: 01/12/95

| Sample ID              | Lab ID | Result<br>(mg/kg) | Detection<br>Limit |
|------------------------|--------|-------------------|--------------------|
| #12 Lucerne D-1E (DHP) | 2473   | 1,120             | 20                 |

ND - Analyte not detected at stated detection level.

## References:

**Method 418.1:** Petroleum Hydrocarbons, Total Recoverable, USEPA Chemical Analysis of Water and Waste, 1978.

**Method 3550:** Ultrasonic Extraction of Non-Volatile and Semi-Volatile Organic Compounds from Solids, USEPA SW-846, Rev. 1, July 1992.

Analyst:

*Anna Schauer*

Reviewed:

*Danner*