

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**

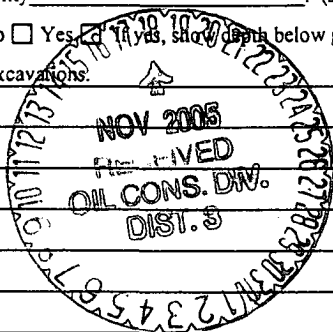
Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐

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

Operator: <u>BP America Production Company</u> Telephone: <u>(505)326-9200</u> e-mail address: _____		
Address: <u>200 Energy Ct, Farmington, NM 87401</u>		
Facility or well name: <u>Ludwick A#1E</u> API #: <u>3004525467</u> U/L or Qtr/Qtr <u>D</u> Sec <u>19</u> T <u>30N</u> R <u>10W</u>		
County: <u>San Juan</u> Latitude _____ Longitude _____ NAD: 1927 <input type="checkbox"/> 1983 <input type="checkbox"/>		
Surface Owner: Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Indian <input type="checkbox"/>		
<b>Pit</b> Type: Drilling <input type="checkbox"/> Production <input checked="" type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input type="checkbox"/> Thickness _____ mil Clay <input type="checkbox"/> Pit Volume _____ bbl	<b>Below-grade tank</b> Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> 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	(20 points)
	50 feet or more, but less than 100 feet	(10 points)
	100 feet or more	(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	(20 points)
	No	(0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet	(20 points)
	200 feet or more, but less than 1000 feet	(10 points)
	1000 feet or more	(0 points)
Ranking Score (Total Points)		

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:
See Attached Documentation



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: 11/01/2005

Printed Name/Title Jeffrey C. Blagg, Agent

Signature Jeffrey C. Blagg

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:

CRUTY OIL & GAS INSPECTOR, DIST. 5

Printed Name/Title \_\_\_\_\_

Signature Wendy Kant

Date: NOV 18 2005

District I

O. Box 1980, Hobbs, NM

District II

.O. Drawer DD, Arteria, NM 88211

Act III

2000 Brazos Rd, Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department

## OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO  
APPROPRIATE  
DISTRICT OFFICE  
AND 1 COPY TO  
SANTA FE OFFICE

# PIT REMEDIATION AND CLOSURE REPORT

**Operator:** Amoco Production Company **Telephone:** (505) - 326-9200

**Address:** 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: LUDWIG A #1E  
Well Name \_\_\_\_\_

Location: Unit or Qtr/Qtr Sec D Sec 19 T30N R10W County SAN JUAN

Pit Type: Separator Dehydrator ☒ Other ☐

Land Type: BLM ☒, State ☐, Fee ☐, Other ☐

Pit Location: Pit dimensions: length 21', width 20', depth 4'  
(attach diagram)

Reference: wellhead X, other \_\_\_\_\_

Footage from reference: 120'

Direction from reference: 11 Degrees ✓ East North ✓  
of  
West South

**Depth To Ground Water:**

(Vertical distance from  
contaminants to seasonal  
high water elevation of  
ground water)

**Less than 50 feet      (20 points)**

50 feet to 99 feet (10 points)

Greater than 100 feet (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 (20 points)

No (0 points)

Distance To Surface Water:

Horizontal distance to perennial  
rivers, ponds, rivers, streams, creeks,  
irrigation canals and ditches)

Less than 200 feet (20 points)

200 feet to 1000 feet (10 points)

Greater than 1000 feet (0 points)

**RANKING SCORE (TOTAL POINTS):**

Date Remediation Started: \_\_\_\_\_ Date Completed: 7/5/00Remediation Method: Excavation ☒ Approx. cubic yards 50  
(check all appropriate sections) Landfarmed ☒ Insitu Bioremediation \_\_\_\_\_  
Other \_\_\_\_\_Remediation Location: Onsite ☒ Offsite \_\_\_\_\_  
(ie. landfarmed onsite, name and location of offsite facility) \_\_\_\_\_General Description Of Remedial Action: \_\_\_\_\_  
Excavation . BEDROCK BOTTOM .Ground Water Encountered: No ☒ Yes \_\_\_\_\_ Depth \_\_\_\_\_Final Pit: Sample location see Attached Documents  
Closure Sampling: \_\_\_\_\_  
(if multiple samples, attach sample results and diagram of sample locations and depths) Sample depth 2' (NORTH SIDEWALK)  
Sample date 7/2/00 Sample time 0915

## Sample Results

Benzene(ppm) NDTotal BTEX(ppm) 0.475Field headspace(ppm) 232TPH 3.8 ppmGround Water Sample: Yes \_\_\_\_\_ No ☒ (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 7/5/00

SIGNATURE

Buddy D. ShawPRINTED NAME  
AND TITLEBuddy D. Shaw  
Environmental Coordinator

3004525467

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>80760</u> C.D.C. NO: <u>6590</u>																																								
FIELD REPORT: CLOSURE VERIFICATION		PAGE No: <u>1</u> of <u>1</u>																																								
LOCATION: NAME: <u>LUDWICK</u> A WELL #: <u>1E</u> PIT: <u>ABAN. DEHY</u>		DATE STARTED: <u>7/2/00</u>																																								
QUAD/UNIT: <u>SEC: 19 TWP: 30N RNG: 10W PM: NM CNTY: SJ ST: NM</u>		DATE FINISHED: _____																																								
QTR/FOOTAGE: <u>1050'N/796'W</u> <u>NW1/4</u> CONTRACTOR: <u>PLINT</u>		ENVIRONMENTAL SPECIALIST: <u>NV</u>																																								
EXCAVATION APPROX. <u>21</u> FT. x <u>20</u> FT. x <u>4</u> FT. DEEP. CUBIC YARDAGE: <u>50</u>																																										
DISPOSAL FACILITY: <u>ON-SITE</u> REMEDIATION METHOD: <u>LANDFARM</u>																																										
LAND USE: <u>RANGE</u> LEASE: <u>SF-078194</u> FORMATION: <u>OK/MV</u>																																										
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY <u>120</u> FT. <u>N11E</u> FROM WELLHEAD.																																										
DEPTH TO GROUNDWATER: <u>7100'</u> NEAREST WATER SOURCE: <u>71000'</u> NEAREST SURFACE WATER: <u>71000'</u>																																										
NMDCD RANKING SCORE: <u>0</u> NMDCD TPH CLOSURE STD: <u>5000</u> PPM		CHECK ONE:																																								
SOIL AND EXCAVATION DESCRIPTION:		<input checked="" type="checkbox"/> PIT ABANDONED																																								
DVM CALIB. READ. <u>53.8</u> ppm		<input type="checkbox"/> STEEL TANK INSTALLED																																								
TIME: <u>3:30</u> am/pm <u>6/29/00</u>		<input type="checkbox"/> FIBERGLASS TANK INSTALLED																																								
<p>SIDEWALLS - MOSTLY DR. YELL. BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM TO DENSE, THIN BAND OF BLACK DISCOLORATION OBSERVED APPROX. 1 1/2'-2' BELOW GRADE, STRONG HC ODOR DETECTED IN NORTH SIDEWALL OVM SAMPLE ONLY.</p> <p>BOTTOM - BEDROCK (SANDSTONE), MOSTLY LT. GRAY IN COLOR, HARD, HC ODOR DETECTED IN OVM SAMPLE.</p>																																										
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p><u>BEDROCK BOTTOM</u></p> <p>75</p> <p>SCALE</p> <p>0 FT</p> </div> <div style="width: 30%; text-align: center;"> <p><u>CLOSED</u></p> </div> <div style="width: 30%;"> <p>FIELD 418.1 CALCULATIONS</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>TIME</th> <th>SAMPLE I.D.</th> <th>LAB No:</th> <th>WEIGHT (g)</th> <th>mL. FREON</th> <th>DILUTION</th> <th>READING</th> <th>CALC. ppm</th> </tr> </thead> <tbody> <tr> <td>0915</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> </div> </div>			TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm	0915																															
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TRAVEL NOTES: CALLOUT: <u>6/30/00 - MORN.</u> ONSITE: <u>7/2/00 - MORN.</u>																																										

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

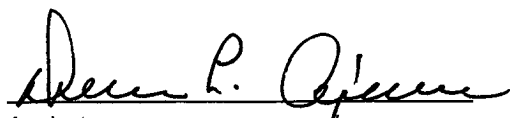
Client:	Blagg / BP Amoco	Project #:	403410
Sample ID:	1 @ 2'	Date Reported:	07-05-00
Laboratory Number:	H644	Date Sampled:	07-02-00
Chain of Custody No:	6590	Date Received:	07-03-00
Sample Matrix:	Soil	Date Extracted:	07-03-00
Preservative:	Cool	Date Analyzed:	07-05-00
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	2.2	0.2
Diesel Range (C10 - C28)	1.6	0.1
Total Petroleum Hydrocarbons	3.8	0.1

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Ludwick A #1E Abandoned Dehydrator Pit.**

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / BP Amoco	Project #:	403410
Sample ID:	1 @ 2'	Date Reported:	07-05-00
Laboratory Number:	H644	Date Sampled:	07-02-00
Chain of Custody:	6590	Date Received:	07-03-00
Sample Matrix:	Soil	Date Analyzed:	07-05-00
Preservative:	Cool	Date Extracted:	07-03-00
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	1.8
Toluene	39.1	1.7
Ethylbenzene	12.8	1.5
p,m-Xylene	332	2.2
o-Xylene	91.0	1.0
Total BTEX	475	

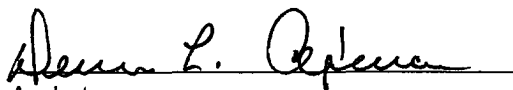
ND - Parameter not detected at the stated detection limit.

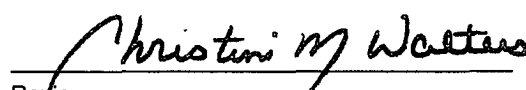
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	100 %
	Bromofluorobenzene	100 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Ludwick A #1E Abandoned Dehydrator Pit.

  
Allison L. Opleman  
Analyst

  
Christina M. Walters  
Review

CLIENT: <u>BP</u>	<b>BLAGG ENGINEERING, INC.</b> P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>80760</u> C.O.C. NO: <u>9705</u>
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## FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: <u>LUDWICK A</u> WELL #: <u>1E</u> PITS: <u>DEHY</u> QUAD/UNIT: <u>0</u> SEC: <u>19</u> TWP: <u>30N</u> RNG: <u>10W</u> PM: <u>nm</u> CNTY: <u>ST</u> ST: <u>Nm</u> DTR/FOOTAGE: <u>nw/nw</u> CONTRACTOR: <u>FLINT</u>	DATE STARTED: <u>12/26/01</u> DATE FINISHED: _____ ENVIRONMENTAL SPECIALIST: <u>NV</u>
--	--

### SOIL REMEDIATION:

REMEDICATION SYSTEM: <u>LANDFARM</u>	APPROX. CUBIC YARDAGE: <u>50</u>
LAND USE: <u>RANGE - BLM</u>	LIFT DEPTH (ft): <u>0.5</u>

### FIELD NOTES & REMARKS:

 NMOC D RANKING SCORE: 0 NMOC D TPH CLOSURE STD: 5000 ppm

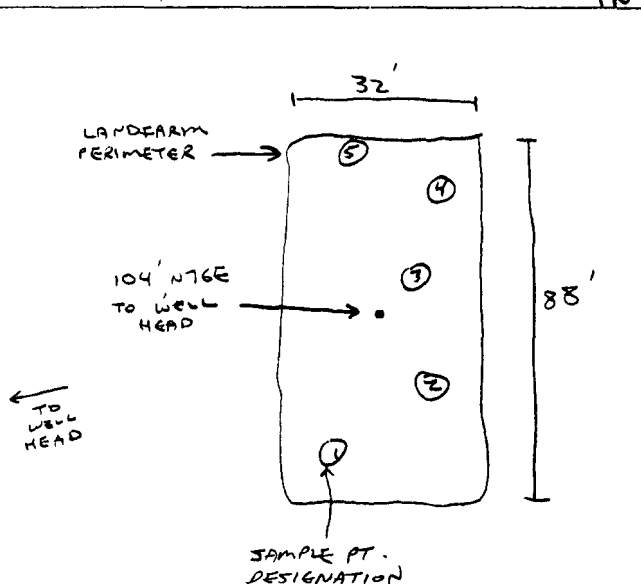
 DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'

SOIL TYPE: (SAND) / SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER \_\_\_\_\_  
 SOIL COLOR: PALE TO MED. YELL. BROWN  
 COHESION (ALL OTHERS): (NON COHESIVE) / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE  
 CONSISTENCY (NON COHESIVE SOILS): (LOOSE) / (FIRM) / DENSE / VERY DENSE  
 PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC  
 DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD  
 MOISTURE: (DRY) / (SLIGHTLY MOIST) / MOIST / WET / SATURATED / SUPER SATURATED  
 DISCOLORATION/STAINING OBSERVED: YES / (NO) EXPLANATION - \_\_\_\_\_  
 HC ODOR DETECTED: YES / (NO) EXPLANATION - \_\_\_\_\_  
 SAMPLING DEPTHS (LANDFARMS): 4-6 (INCHES)  
 SAMPLE TYPE: GRAB / (COMPOSITE) - # OF PTS. 5  
 ADDITIONAL COMMENTS: \_\_\_\_\_

### FIELD 418.1 CALCULATIONS

SAMP. TIME	SAMPLE I.D.	LAB No.	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

### SKETCH/SAMPLE LOCATIONS



OVM CALIB. READ. 51.2 ppm  
 OVM CALIB. GAS = 100 ppm; RF = 0.52  
 TIME: 12:30 am/pm DATE: 12/20/01

### OVM RESULTS

### LAB SAMPLES

SAMPLE ID	FIELD HEADSPACE PID (ppm)	SAMPLE ID	ANALYSIS	TIME	RESULTS
LF-1	0.0	LF-1	TPH (80158)	1200	ND

P.C. 7/20/00

### SCALE

0 FT

 TRAVEL NOTES: CALLOUT: N/A ONSITE: 12/26/01

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

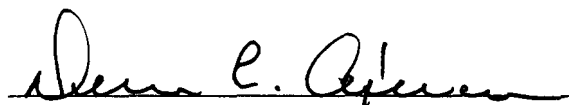
Client:	Blagg / BP	Project #:	94034-010
Sample ID:	LF - 1	Date Reported:	12-27-01
Laboratory Number:	21743	Date Sampled:	12-26-01
Chain of Custody No:	9705	Date Received:	12-26-01
Sample Matrix:	Soil	Date Extracted:	12-27-01
Preservative:	Cool	Date Analyzed:	12-27-01
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

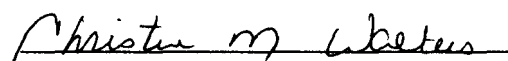
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Ludwick A #1E Landfarm 5 Pt. Composite.**

  
Analyst

  
Review