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 BP America Production Company Telephone: (505)326-9200 e-mail address.
Address 200 Energy Ct, Farmington, NM 87401
Facility or well name GCU # 239 API #: 30045 11740 U/L or Qtr/Qtr H Sec 24 T 28 N R 13 W
County San Juan Latitude Longitude NAD 1927 ☐ 1983 ☒
Surface Owner Federal ☐ State ☐ Private ☒ Indian ☐

| Pit | Below-grade tank |
|---|---|
| Type Drilling ☐ Production ☒ Disposal ☐<br>Workover ☐ Emergency ☐<br>Lined ☐ Unlined ☒<br>Liner type Synthetic ☐ Thickness ____mil Clay ☐<br>Pit Volume ____bbl | Volume: ____bbl Type of fluid:<br>Construction material:<br>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<br>50 feet or more, but less than 100 feet<br>100 feet or more | (20 points)<br>(10 points)<br>( 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<br>No | (20 points)<br>( 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<br>200 feet or more, but less than 1000 feet<br>1000 feet or more | (20 points)<br>(10 points)<br>( 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 your 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

RCVD JUN13'07
OIL CONS. DIV.
DIST. 3

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
Printed Name/Title Deputy Oil & Gas Inspector, District #3 Signature Date: AUG 10 2007

CLIENT: AMOCO

BLAGG ENGINEERING, INC.
P.O BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

LOCATION NO 80836
COC NO 8267

# FIELD REPORT: CLOSURE VERIFICATION

PAGE No 1 of 1

LOCATION: NAME GCU WELL # 239 PIT SEP.
QUAD/UNIT H SEC 24 TWP 28N RNG 13W PM NM CNTY SJ ST NM
QTR/FOOTAGE: 1860'N | 1120'E SENE CONTRACTOR P&S

DATE STARTED 2/7/01
DATE FINISHED
ENVIRONMENTAL SPECIALIST NV

EXCAVATION APPROX. 17 FT x 25 FT. x 6 FT DEEP CUBIC YARDAGE 80
DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD LANDFARMED
LAND USE. RANGE LEASE SF 077966 FORMATION FT

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 185 FT. N18W FROM WELLHEAD
DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER >1000'
NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM

CHECK ONE
✓ PIT ABANDONED
___ STEEL TANK INSTALLED
___ FIBERGLASS TANK INSTALLED

OVM CALIB. READ 51.8 ppm
TIME: 1215 am/pm 2/6/01

SOIL AND EXCAVATION DESCRIPTION:

SIDEWALLS - TOP HALF MOSTLY GRAYISH TO DK. YELL. ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT DISCOLORATION OBSERVED OR HC ODOR DETECTED WITHIN EXCAVATION OR OVM SAMPLES, BOTTOM HALF CONSISTED OF BEDROCK WITH SAME COLOR, FRIABLE TO HARD, NO EVIDENCE OF DISCOLORATION.

BOTTOM - BEDROCK (SANDSTONE) DK. YELL. ORANGE WITH SMALL ISOLATED PATCHES OF MED. TO DK. GRAY DISCOLORATION, OVM SAMPLE CONSISTED OF MOSTLY DISCOLORED ROCK WITH STRONG HC ODOR.

BEDROCK BOTTOM 55

CLOSED

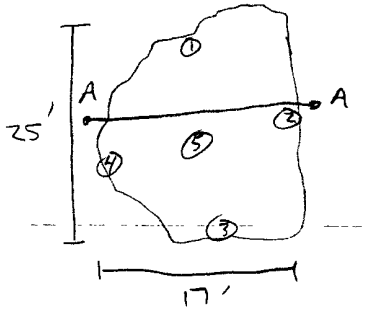
WELL PLUGGED & ABANDONED

FIELD 418.1 CALCULATIONS

| TIME | SAMPLE I.D. | LAB No: | WEIGHT (g) | mL FREON | DILUTION | READING | CALC ppm |
|---|---|---|---|---|---|---|---|
| 1430 | | | | | | | |
| | | | | | | | |
| | | | | | | | |

SCALE 0 FT

## PIT PERIMETER




## OVM RESULTS

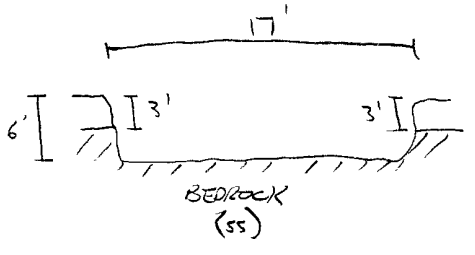
| SAMPLE ID | FIELD HEADSPACE PID (ppm) |
|---|---|
| 1 @ 3' | 1.8 |
| 2 @ 3' | 2.4 |
| 3 @ 3' | 2.2 |
| 4 @ 3' | 0.0 |
| 5 @ 6' | 263 |

LAB SAMPLES

| SAMPLE ID | ANALYSIS | TIME |
|---|---|---|
| (5) @ 6' | TPH & BTEX | 1430 |

BOTH PASSED

## PIT PROFILE




TRAVEL NOTES. CALLOUT: 2/6/01 - AFTER. ONSITE: 2/7/01 - AFTER.

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

| | | | |
|---|---|---|---|
| Client: | Blagg / BP | Project #: | 04034-010 |
| Sample ID: | 5 @ 6' | Date Reported: | 02-08-01 |
| Laboratory Number: | 19182 | Date Sampled: | 02-07-01 |
| Chain of Custody No: | 8267 | Date Received: | 02-08-01 |
| Sample Matrix: | Soil | Date Extracted: | 02-08-01 |
| Preservative: | Cool | Date Analyzed: | 02-08-01 |
| Condition: | Cool and Intact | Analysis Requested: | 8015 TPH |

| Parameter | Concentration (mg/Kg) | Det. Limit (mg/Kg) |
|---|---|---|
| **Gasoline Range (C5 - C10)** | **73.1** | **0.2** |
| **Diesel Range (C10 - C28)** | **187** | **0.1** |
| **Total Petroleum Hydrocarbons** | **260** | **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: **GCU #239 Separator Pit.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8021
## AROMATIC VOLATILE ORGANICS

| | | | |
|---|---|---|---|
| Client: | Blagg / BP | Project #: | 04034-010 |
| Sample ID: | 5 @ 6' | Date Reported: | 02-08-01 |
| Laboratory Number: | 19182 | Date Sampled: | 02-07-01 |
| Chain of Custody: | 8267 | Date Received: | 02-08-01 |
| Sample Matrix: | Soil | Date Analyzed: | 02-08-01 |
| Preservative: | Cool | Date Extracted: | 02-08-01 |
| Condition: | Cool & Intact | Analysis Requested: | BTEX |

| Parameter | Concentration (ug/Kg) | Det. Limit (ug/Kg) |
|---|---|---|
| **Benzene** | **ND** | **1.8** |
| **Toluene** | **110** | **1.7** |
| **Ethylbenzene** | **71.9** | **1.5** |
| **p,m-Xylene** | **597** | **2.2** |
| **o-Xylene** | **186** | **1.0** |
| **Total BTEX** | **965** | |

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:** **GCU #239 Separator Pit.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

CLIENT: BP

# BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

LOCATION NO: 80836
C.O.C. NO: HALL

## FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: GCU WELL #: 239 PITS:
QUAD/UNIT: H SEC: 24 TWP: 28N RNG: 13W PM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: SE/NE CONTRACTOR:

DATE STARTED 4/24/07
DATE FINISHED
ENVIRONMENTAL SPECIALIST: NV

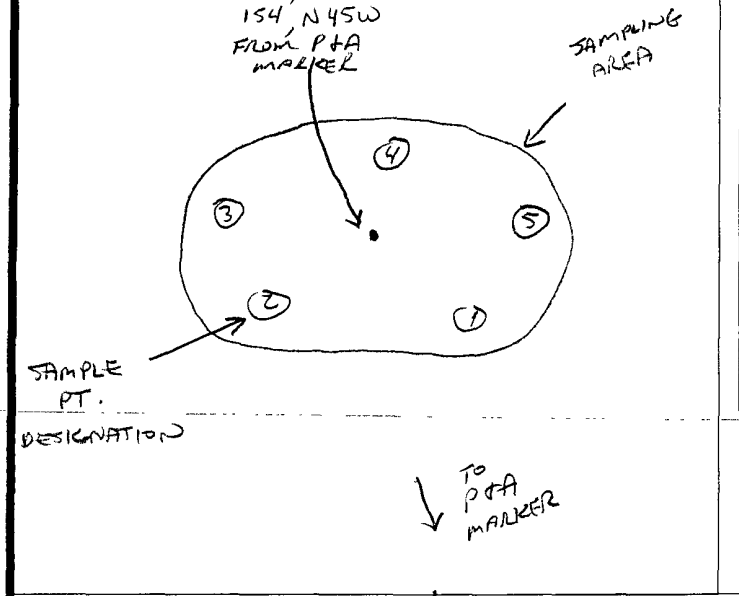
SOIL REMEDIATION:
REMEDIATION SYSTEM: LANDFARM
LAND USE: RANGE - BLANCO PROPERTY
APPROX. CUBIC YARDAGE: 105
LIFT DEPTH (ft): N/A

FIELD NOTES & REMARKS:
DEPTH TO GROUNDWATER: >100' NEAREST SURFACE WATER: >1,000'
NEAREST WATER SOURCE: >1,000' NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5,000 PPM

SOIL TYPE: SAND / (SILTY SAND) / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER
SOIL COLOR: MOSTLY DUSKY 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: NO ACTUAL LANDFARM OBSERVED ON-SITE.

CLOSED

### SKETCH/SAMPLE LOCATIONS




OVM CALIB. READ. = 52.2 ppm
OVM CALIB GAS = 100 ppm RF = 0.52
TIME 11:50 am/pm DATE: 4/24/07

OVM RESULTS

| SAMPLE ID | FIELD HEADSPACE (ppm) |
|---|---|
| LF-1 | 0.0 |
| | |
| | |
| | |
| | |
| | |

LAB SAMPLES

| SAMPLE ID | ANALYSIS | TIME | RESULTS (ppm) |
|---|---|---|---|
| LF-1 | TPH (8015B) | 1230 | ND |
| " | CHLOR. | " | 1.1 |
| | | | |
| | | | |
| | | | |
| | | | |

P.C. - 2/7/01

SCALE
0 FT

TRAVEL NOTES. CALLOUT: N/A ONSITE: 11/15/01, 4/24/07

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *04-May-07*

| | | | |
|---|---|---|---|
| **CLIENT:** | Blagg Engineering | **Client Sample ID:** | LF-1 Landfarm |
| **Lab Order:** | 0704376 | **Collection Date:** | 4/24/2007 12:30:00 PM |
| **Project:** | GCU #239 | **Date Received:** | 4/25/2007 |
| **Lab ID:** | 0704376-01 | **Matrix:** | SOIL |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE ORGANICS** | | | | | | Analyst: **SCC** |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 4/27/2007 12:19 38 PM |
| Surr. DNOP | 96.1 | 61 7-135 | | %REC | 1 | 4/27/2007 12:19:38 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 4/27/2007 4:59:34 AM |
| Surr: BFB | 112 | 84-138 | | %REC | 1 | 4/27/2007 4:59:34 AM |
| **EPA METHOD 9056A: ANIONS** | | | | | | Analyst: **TES** |
| Chloride | 1.1 | 0.30 | | mg/Kg | 1 | 4/29/2007 5.15:17 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | MCL | Maximum Contaminant Level |
| ND | Not Detected at the Reporting Limit | RL | Reporting Limit |
| S | Spike recovery outside accepted recovery limits | | |

B0836

District I
P.O Box 1980, Hobbs, NM
District II
[redacted]er DD, Artesia, NM
District III
1000 Rio Brazo Rd., Aztec, NM

# 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: BP AMOCO Telephone: (505) 326-9200

Address: 200 AMOCO COURT, FARMINGTON, NM 87401

Facility or Well Name: GCU # 239

Location: Unit or Qtr/Qtr Sec H Sec 24 T 28N R 13W County San Juan

Pit Type: Separator ___ Dehydrator ___ Other Blow

Land Type: BLM ✓, State ___, Fee ___, Other ___

**Pit Location:** (Attach diagram)

Pit dimensions: length 27', width 25', depth 2'

Reference: wellhead X, other ___

Footage from reference: 207'

Direction from reference: 70 Degrees ___ East North ✓ of ✓ West South ___

| | | | |
|---|---|---|---|
| **Depth To Groundwater:** (Vertical distance from contaminants to seasonal high water elevation of groundwater) | Less than 50 feet<br>50 feet to 99 feet<br>Greater than 100 feet | (20 points)<br>(10 points)<br>( 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<br>No | (20 points)<br>( 0 points) | 0 |
| **Distance To Surface Water:** (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches) | Less than 100 feet<br>100 feet to 1000 feet<br>Greater than 1000 feet | (20 points)<br>(10 points)<br>( 0 points) | 0 |

**RANKING SCORE (TOTAL POINTS):** 0

80836 BLOW PIT

Date Remediation Started: _____ Date Completed: 2/8/01

Remediation Method: (Check all appropriate sections) Excavation ✓ Approx. cubic yards 25

Landfarmed ✓ Insitu Bioremediation _____

Other _____

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

General Description of Remedial Action: Excavation. MOSTLY BEDROCK.

Groundwater Encountered: No ✓ Yes ____ Depth _____

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

Sample location see Attached Documents

Sample depth 1' (PIT BOTTOM)

Sample date 2/7/01 Sample time 1400

Sample Results

Soil: Benzene (ppm) 0.0180 Water: Benzene (ppb) _____

Total BTEX (ppm) 2.930 Toluene (ppb) _____

Field Headspace (ppm) 287 Ethylbenzene (ppb) _____

TPH (ppm) 886 Total Xylenes (ppb) _____

Groundwater 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 2/8/01 PRINTED NAME Jeffrey C. Blagg

SIGNATURE Jeffrey C. Blagg AND TITLE President P. E. # 11607

revised: 03/12/01 bei1200.wpd

B0836

District I
P.O Box 1980, Hobbs, NM
District II
[redacted] DD, Artesia, NM
District III
1000 Rio Brazo Rd., Aztec, NM

# 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: BP AMOCO Telephone: (505) 326-9200

Address: 200 AMOCO COURT, FARMINGTON, NM 87401

Facility or Well Name: GCU # 239

Location: Unit or Qtr/Qtr Sec H Sec 24 T 28N R 13W County San Juan

Pit Type: Separator ✓ Dehydrator ___ Other ___

Land Type: BLM ✓, State ___, Fee ___, Other ___

**Pit Location:** (Attach diagram)

Pit dimensions: length 17', width 25', depth 6'

Reference: wellhead X, other ___

Footage from reference: 185'

Direction from reference: 18 Degrees ___ East North ✓ of ✓ West South ___

| | | | |
|---|---|---|---|
| **Depth To Groundwater:** (Vertical distance from contaminants to seasonal high water elevation of groundwater) | Less than 50 feet<br>50 feet to 99 feet<br>Greater than 100 feet | (20 points)<br>(10 points)<br>( 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<br>No | (20 points)<br>( 0 points) | 0 |
| **Distance To Surface Water:** (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches) | Less than 100 feet<br>100 feet to 1000 feet<br>Greater than 1000 feet | (20 points)<br>(10 points)<br>( 0 points) | 0 |

RANKING SCORE (TOTAL POINTS): 0

B0836 SEP. PIT

Date Remediation Started: _____ Date Completed: 2/8/01

Remediation Method: (check all appropriate sections) Excavation ✓ Approx. cubic yards 80

Landfarmed ✓ Insitu Bioremediation _____

Other _____

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

General Description of Remedial Action: Excavation. BEDROCK BOTTOM.

Groundwater Encountered: No ✓ Yes ____ Depth _____

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

Sample location see Attached Documents

Sample depth 6' (PIT BOTTOM)

Sample date 2/7/01 Sample time 1430

Sample Results

Soil: Benzene (ppm) ND Water: Benzene (ppb) _____

Total BTEX (ppm) 0.965 Toluene (ppb) _____

Field Headspace (ppm) 263 Ethylbenzene (ppb) _____

TPH (ppm) 260 Total Xylenes (ppb) _____

Groundwater 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 2/8/01 PRINTED NAME Jeffrey C. Blagg

SIGNATURE Jeffrey C. Blagg AND TITLE President P. E. # 11607

# CHAIN OF CUSTODY RECORD

0826

| Client / Project Name | Project Location | ANALYSIS / PARAMETERS |
|---|---|---|
| BLAGG / BP | GCU # 239 | |
| Sampler: NJV | Client No. 04034-010 | |

| Sample No./ Identification | Sample Date | Sample Time | Lab Number | Sample Matrix | No. of Containers | TPH (8015) | BTEX (8021) | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ① @ 1' | 2/7/01 | 1400 | 19181 | SOIL | 1 | ✓ | ✓ | | | | | BLOW PIT |
| | | | | | | | | | | | | |
| ⑤ @ 6' | 2/7/01 | 1430 | 19182 | SOIL | 1 | ✓ | ✓ | | | | | SEPARATOR PIT |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| Relinquished by: (Signature) | Date | Time | Received by: (Signature) | Date | Time |
|---|---|---|---|---|---|
| Nelson Velez | 2/8/01 | 0823 | Glenn L. Spencer | 2-8-01 | 823 |
| Relinquished by: (Signature) | | | Received by: (Signature) | | |
| Relinquished by: (Signature) | | | Received by: (Signature) | | |


ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615


| Sample Receipt | Y | N | N/A |
|---|---|---|---|
| Received Intact | ✓ | | |
| Cool - Ice/Blue Ice | ✓ | | |

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

## Quality Assurance Report

| | | | |
|---|---|---|---|
| Client: | QA/QC | Project #: | N/A |
| Sample ID: | 02-08-TPH QA/QC | Date Reported: | 02-08-01 |
| Laboratory Number: | 19180 | Date Sampled: | N/A |
| Sample Matrix: | Methylene Chloride | Date Received: | N/A |
| Preservative: | N/A | Date Analyzed: | 02-08-01 |
| Condition: | N/A | Analysis Requested: | TPH |

| | I-Cal Date | I-Cal RF: | C-Cal RF: | % Difference | Accept. Range |
|---|---|---|---|---|---|
| **Gasoline Range C5 - C10** | 12-20-00 | 2.7271E-002 | 2.7243E-002 | **0.10%** | **0 - 15%** |
| **Diesel Range C10 - C28** | 12-20-00 | 2.4288E-002 | 2.4240E-002 | **0.20%** | **0 - 15%** |

| **Blank Conc. (mg/L - mg/Kg)** | Concentration | Detection Limit |
|---|---|---|
| **Gasoline Range C5 - C10** | **ND** | **0.2** |
| **Diesel Range C10 - C28** | **ND** | **0.1** |
| **Total Petroleum Hydrocarbons** | **ND** | **0.2** |

| **Duplicate Conc. (mg/Kg)** | Sample | Duplicate | % Difference | Accept. Range |
|---|---|---|---|---|
| **Gasoline Range C5 - C10** | **953** | **949** | **0.4%** | **0 - 30%** |
| **Diesel Range C10 - C28** | **59.0** | **58.8** | **0.3%** | **0 - 30%** |

| **Spike Conc. (mg/Kg)** | Sample | Spike Added | Spike Result | % Recovery | Accept. Range |
|---|---|---|---|---|---|
| **Gasoline Range C5 - C10** | **953** | **250** | **1,200** | **100%** | **75 - 125%** |
| **Diesel Range C10 - C28** | **59.0** | **250** | **308** | **100%** | **75 - 125%** |

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: **QA/QC for samples 19180 - 19182.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8021
## AROMATIC VOLATILE ORGANICS

| | | | |
|---|---|---|---|
| Client | N/A | Project #: | N/A |
| Sample ID | 02-08-BTEX QA/QC | Date Reported: | 02-08-01 |
| Laboratory Number: | 19180 | Date Sampled: | N/A |
| Sample Matrix: | Soil | Date Received: | N/A |
| Preservative: | N/A | Date Analyzed: | 02-08-01 |
| Condition: | N/A | Analysis: | BTEX |

| Calibration and Detection Limits (ug/L) | I-Cal RF: | C-Cal RF: | %Diff. Accept. Range 0 - 15% | Blank Conc | Detect. Limit |
|---|---|---|---|---|---|
| Benzene | 3 8333E-002 | 3 8425E-002 | 0.2% | ND | 0.2 |
| Toluene | 3 7664E-002 | 3.7732E-002 | 0.2% | ND | 0.2 |
| Ethylbenzene | 5 9685E-002 | 5.9810E-002 | 0.2% | ND | 0.2 |
| p,m-Xylene | 5 4964E-002 | 5.5102E-002 | 0.3% | ND | 0.2 |
| o-Xylene | 4 7339E-002 | 4 7420E-002 | 0.2% | ND | 0.1 |

| Duplicate Conc. (ug/Kg) | Sample | Duplicate | %Diff. | Accept Range | Detect. Limit |
|---|---|---|---|---|---|
| Benzene | 349 | 338 | 2.9% | 0 - 30% | 1.8 |
| Toluene | 1,450 | 1,400 | 3.4% | 0 - 30% | 1.7 |
| Ethylbenzene | 464 | 448 | 3.3% | 0 - 30% | 1.5 |
| p,m-Xylene | 1,590 | 1,540 | 3.1% | 0 - 30% | 2.2 |
| o-Xylene | 634 | 617 | 2.7% | 0 - 30% | 1.0 |

| Spike Conc. (ug/Kg) | Sample | Amount Spiked | Spiked Sample | % Recovery | Accept Range |
|---|---|---|---|---|---|
| Benzene | 349 | 50.0 | 391 | 98% | 39 - 150 |
| Toluene | 1,450 | 50.0 | 1,480 | 99% | 46 - 148 |
| Ethylbenzene | 464 | 50.0 | 508 | 99% | 32 - 160 |
| p,m-Xylene | 1,590 | 100 | 1,670 | 99% | 46 - 148 |
| o-Xylene | 634 | 50.0 | 677 | 99% | 46 - 148 |

ND - Parameter not detected at the stated detection limit.

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996

**Comments:** **QA/QC for samples 19180 - 19182.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

# CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____


**HALL ENVIRONMENTAL ANALYSIS LABORATORY**
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www.hallenvironmental.com


Client: BLAGG ENGR. / BP AMERICA
Address: P.O. BOX 87, BLFD., NM 87413
Phone #: 632-1199
Fax #:

Project Name: GCU # 239
Project #:
Project Manager: NV
Sampler: NV
Sample Temperature: 1°

## ANALYSIS REQUEST

| Date | Time | Matrix | Sample I.D. No. | Number/Volume | Preservative: $HgCl_2$ | Preservative: $HNO_3$ | Preservative: 6.0 pH | HEAL No. |
|---|---|---|---|---|---|---|---|---|
| 4/24/07 | 1230 | SOIL | LF-1 LANDFARM | 1-4oz. | | | ✓ | 0704376 1 |

| BTEX + MTBE + TMB's (8021B) | BTEX + MTBE + TPH (Gasoline Only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | EDC (Method 8021) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions (F, Cl, $NO_3$, $NO_2$, $PO_4$, $SO_4$) | 8081 Pesticides / PCB's (8082) | 8260B (VOA) | 8270 (Semi-VOA) | CHLORIDE | | | | Air Bubbles or Headspace (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | | | | | | | | | | ✓ | | | | |

| Date: | Time: | Relinquished By: (Signature) | Received By: (Signature) | |
|---|---|---|---|---|
| 4/24/07 | 1345 | Gideon Uy | Tonya Sh | 4/25/07 1337 |
| Date: | Time: | Relinquished By: (Signature) | Received By: (Signature) | |

Remarks: GAS & DIESEL RANGES ONLY ON TPH ANALYSIS.
5 PT. COMPOSITE SAMPLE

# QA/QC SUMMARY REPORT

**Client:** Blagg Engineering
**Project:** GCU #239
**Work Order:** 0704376

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **Method: SW9056A** | | | | | | | | | |
| **Sample ID: 0704376-01AMSD** | | *MSD* | | | Batch ID: **12825** | | Analysis Date: 4/29/2007 6:42:18 PM | | |
| Chloride | 12.05 | mg/Kg | 0.30 | 72.8 | 80 | 120 | 13.1 | 20 | S |
| **Sample ID: MB-12825** | | *MBLK* | | | Batch ID: **12825** | | Analysis Date: 4/29/2007 2:03:46 PM | | |
| Chloride | ND | mg/Kg | 0.30 | | | | | | |
| **Sample ID: LCS-12825** | | *LCS* | | | Batch ID: **12825** | | Analysis Date: 4/29/2007 2:21:10 PM | | |
| Chloride | 14.52 | mg/Kg | 0.30 | 96.8 | 90 | 110 | | | |
| **Sample ID: 0704376-01AMS** | | *MS* | | | Batch ID: **12825** | | Analysis Date: 4/29/2007 6:24:54 PM | | |
| Chloride | 13.74 | mg/Kg | 0.30 | 84.1 | 80 | 120 | | | |
| **Method: SW8015** | | | | | | | | | |
| **Sample ID: MB-12814** | | *MBLK* | | | Batch ID: **12814** | | Analysis Date: 4/27/2007 9:29:02 AM | | |
| Diesel Range Organics (DRO) | ND | mg/Kg | 10 | | | | | | |
| **Sample ID: LCS-12814** | | *LCS* | | | Batch ID: **12814** | | Analysis Date: 4/27/2007 9:52:16 AM | | |
| Diesel Range Organics (DRO) | 40.47 | mg/Kg | 10 | 80.9 | 64.6 | 116 | | | |
| **Sample ID: LCSD-12814** | | *LCSD* | | | Batch ID: **12814** | | Analysis Date: 4/27/2007 10:36:20 AM | | |
| Diesel Range Organics (DRO) | 39.63 | mg/Kg | 10 | 79.3 | 64.6 | 116 | 2.08 | 17.4 | |
| **Method: SW8015** | | | | | | | | | |
| **Sample ID: MB-12807** | | *MBLK* | | | Batch ID: **12807** | | Analysis Date: 4/27/2007 12:29:07 AM | | |
| Gasoline Range Organics (GRO) | ND | mg/Kg | 5.0 | | | | | | |
| **Sample ID: LCS-12807** | | *LCS* | | | Batch ID: **12807** | | Analysis Date: 4/27/2007 12:59:14 AM | | |
| Gasoline Range Organics (GRO) | 24.94 | mg/Kg | 5.0 | 85.0 | 69.5 | 120 | | | |
| **Sample ID: LCSD-12807** | | *LCSD* | | | Batch ID: **12807** | | Analysis Date: 4/27/2007 1:29:17 AM | | |
| Gasoline Range Organics (GRO) | 24.86 | mg/Kg | 5.0 | 84.7 | 69.5 | 120 | 0.321 | 11.6 | |

**Qualifiers:**

- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 4/25/2007

Work Order Number 0704376 | Received by TLS

Checklist completed by (Signature) Amya Sh Date APR 25,07

Matrix | Carrier name UPS

| | | | | |
|---|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ | |
| Custody seals intact on shipping container/cooler? | Yes ☑ | No ☐ | Not Present ☐ | Not Shipped ☐ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | N/A ☑ | |
| Chain of custody present? | Yes ☑ | No ☐ | | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | | |
| Sample containers intact? | Yes ☑ | No ☐ | | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | | |
| All samples received within holding time? | Yes ☑ | No ☐ | | |
| Water - VOA vials have zero headspace? No VOA vials submitted ☑ | | Yes ☐ | No ☐ | |
| Water - Preservation labels on bottle and cap match? | Yes ☐ | No ☐ | N/A ☑ | |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | N/A ☑ | |
| Container/Temp Blank temperature? | 1° | *4° C ± 2 Acceptable* If given sufficient time to cool. | | |

COMMENTS.

Client contacted | Date contacted: | Person contacted

Contacted by: | Regarding

Comments:

Corrective Action