

District I  
P.O. Box 1980, Hobbs, NM  
District II  
P.O. Drawer DD, Artesia, NM 88211  
District III  
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department

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

## OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

# PIT REMEDIATION AND CLOSURE REPORT



Operator: Amoco Production Company Telephone: (505) - 326-9200  
Address: 200 Amoco Court, Farmington, New Mexico 87401  
Facility Or: ANNIE L. ELLIOTT B # 3  
Well Name  
Location: Unit or Qtr/Qtr Sec D Sec 10 T 29N R 9W County SAN JUAN  
Pit Type: Separator    Dehydrator    Other BLOW  
Land Type: BLM X, State   , Fee   , Other   

Pit Location: Pit dimensions: length 40', width 20', depth 3'  
(Attach diagram) Reference: wellhead X, other     
Footage from reference: 80  
Direction from reference: 30 Degrees    East North     
of  
X West South X

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) 0  
high water elevation of ground water)

Wellhead Protection Area: Yes (20 points)  
(Less than 200 feet from a private No (0 points) 0  
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) 0  
irrigation canals and ditches)

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: \_\_\_\_\_ Date Completed: 11-10-94Remediation Method: Excavation X Approx. cubic yards 75  
(Check all appropriate sections) Landfarmed X Insitu Bioremediation \_\_\_\_\_

Other \_\_\_\_\_

Remediation Location: Onsite X Offsite \_\_\_\_\_  
(ie. landfarmed onsite, name and location of offsite facility)

General Description Of Remedial Action: \_\_\_\_\_

Excavation

nmod letter correspondence 11-26-96Ground Water Encountered: No X Yes \_\_\_\_\_ Depth \_\_\_\_\_Final Pit: Sample location see Attached DocumentsClosure Sampling:  
(if multiple samples, attach sample results and diagram of sample locations and depths)Sample depth 3'Sample date 11-10-94 Sample time \_\_\_\_\_

## Sample Results

Benzene(ppm) 0.0056Total BTEX(ppm) 0.315Field headspace(ppm) 220TPH 46 ppmGround 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 11/14/94

SIGNATURE

Buddy D. ShawPRINTED NAME  
AND TITLEBuddy D. Shaw  
ENVIRONMENTAL COORDINATOR

RESULTS TO BOB McLOY 11-14-94 PEO

|                      |                                                                                |                                                     |
|----------------------|--------------------------------------------------------------------------------|-----------------------------------------------------|
| CLIENT: <u>Amoco</u> | BLAGG ENGINEERING, INC.<br>P.O. BOX 87, BLOOMFIELD, NM 87413<br>(505) 632-1199 | LOCATION NO: <u>80153</u><br>C.O.C. NO: <u>2256</u> |
|----------------------|--------------------------------------------------------------------------------|-----------------------------------------------------|

## FIELD REPORT: PIT CLOSURE VERIFICATION

|                                                                                                               |                                        |
|---------------------------------------------------------------------------------------------------------------|----------------------------------------|
| LOCATION: NAME: <u>ANNIE L. ELLIOTT</u> <u>B</u> WELL #: <u>3</u> PIT: <u>SLOW</u>                            | DATE STARTED: <u>11-10-94</u>          |
| QUAD/UNIT: <u>D</u> SEC: <u>10</u> TWP: <u>29N</u> RNG: <u>9W</u> BM: <u>NM</u> CNTY: <u>SJ</u> ST: <u>NM</u> | DATE FINISHED: _____                   |
| QTR/FOOTAGE: <u>NW/NW</u> CONTRACTOR: <u>PAUL + SONS</u>                                                      | ENVIRONMENTAL SPECIALIST: <u>R E G</u> |

EXCAVATION APPROX. 20 FT. x 40 FT. x 3 FT. DEEP. CUBIC YARDS: 75  
DISPOSAL FACILITY: ON SITE REMEDIATION METHOD: LANDFARM  
LAND USE: RANGE LEASE: SF-078132 FORMATION: \_\_\_\_\_

|                                       |                                                                     |                                         |  |
|---------------------------------------|---------------------------------------------------------------------|-----------------------------------------|--|
| FIELD NOTES & REMARKS:                | PIT LOCATED APPROXIMATELY <u>80</u> FEET <u>S30°W</u> FROM WELLHEAD |                                         |  |
| DEPTH TO GROUNDWATER: <u>&gt;100'</u> | NEAREST WATER SOURCE: <u>&gt;1000'</u>                              | NEAREST SURFACE WATER: <u>&gt;1000'</u> |  |
| NMOC D RANKING SCORE: <u>0</u>        | NMOC D TPH CLOSURE STD: <u>5000 PPM</u>                             |                                         |  |

SOIL AND EXCAVATION DESCRIPTION: PIT DISPOSITION: ABANDONED

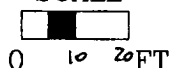
PIT EXCAVATED TO SANDSTONE BEDROCK BOTTOM @ 3'.  
SIDE WALLS BROWN, MOIST → DRY ORGANIC SILT. - NO OOR/STAIN.  
LIGHT STAIN VISIBLE ON SANDSTONE BOTTOM.

FIELD 418.1 CALCULATIONS

| SAMPLE I.D. | LAB No: | WEIGHT (g) | mL. FREON | DILUTION | READING | CALC. ppm |
|-------------|---------|------------|-----------|----------|---------|-----------|
| ES@ 3'      | 1264    | 10.0       | 20.0      | —        | 23      | 46        |
|             |         |            |           |          |         |           |
|             |         |            |           |          |         |           |

CLOSE PIT

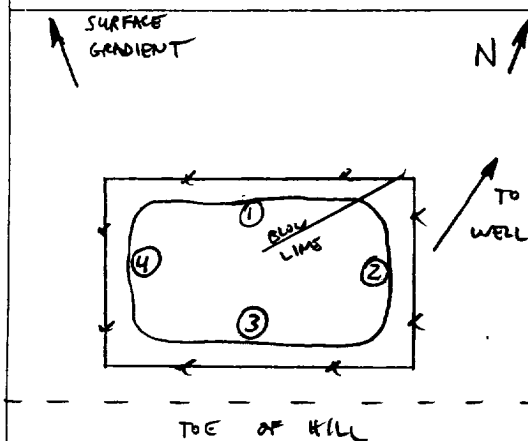
SCALE



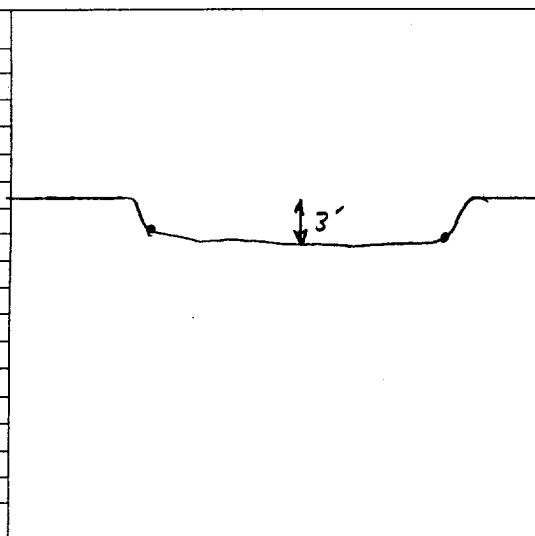
PIT PERIMETER

## OVM RESULTS

PIT PROFILE



| SAMPLE<br>ID | FIELD HEADSPACE<br>PID (ppm) |
|--------------|------------------------------|
| 1 NS @ 3'    | 5                            |
| 2 ES @ 3'    | 270                          |
| 3 SS @ 3'    | 5                            |
| 4 WS @ 3'    | 4                            |
| 5            |                              |
|              |                              |
|              |                              |
|              |                              |
|              |                              |
|              |                              |
|              |                              |
| LAB          | SAMPLES                      |
| ES @ 3'      | STEX<br>(PASSO)              |
|              |                              |
|              |                              |



TRAVEL NOTES: CALLOUT: 11-10-94 ONSITE: 1145 11-10-94

**BLAGG ENGINEERING, INC.**

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

**FIELD MODIFIED EPA METHOD 418.1  
TOTAL PETROLEUM HYDROCARBONS**

Client: Amoco  
Sample ID: E Side @ 3'  
Project Location: Annie L. Elliott B 3  
Laboratory Number: TPH-1264

Project #:  
Date Analyzed: 11-10-94  
Date Reported: 11-10-94  
Sample Matrix: Soil

| Parameter<br>-----                          | Result, mg/kg<br>----- | Detection<br>Limit, mg/kg<br>----- |
|---------------------------------------------|------------------------|------------------------------------|
| Total Recoverable<br>Petroleum Hydrocarbons | <b>46</b>              | <b>10</b>                          |

ND = Not Detectable at stated detection limits.

|        |                                    |                                 |                      |
|--------|------------------------------------|---------------------------------|----------------------|
| QA/QC: | QA/QC Sample<br>TPH mg/kg<br>----- | Duplicate<br>TPH mg/kg<br>----- | %<br>*Diff.<br>----- |
|        | 3,720                              | 3,680                           | 1                    |

\*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total  
Recoverable, Chemical Analysis of Water and Waste,  
USEPA Storet No.4551, 1978

Comments: Blow Pit - B0153

R. E. O'Neil  
Analyst

William Vely  
Review

OFF: (505) 325-8786



LAB: (505) 325-5667

**AROMATIC VOLATILE ORGANICS**

Attn: *R. E. O'Neill*  
Company: *Blagg Engineering*  
Address: *P.O. Box 87*  
City, State: *Bloomfield, NM 87413*

Date: *11/11/94*  
Lab ID: *2256*  
Sample ID: *3939*  
Job No. *2-1000*

Project Name: *Annie L. Elliott B 3*  
Project Location: *E. Side @ 3' - Blow Pit*  
Sampled by: *REO* Date: *11/10/94*  
Analyzed by: *DLA* Date: *11/11/94*  
Sample Matrix: *Soil*

Time: *12:10*

**Aromatic Volatile Organics**

| <i>Component</i>    | <i>Measured<br/>Concentration ug/kg</i> | <i>Detection Limit<br/>Concentration ug/kg</i> |
|---------------------|-----------------------------------------|------------------------------------------------|
| <i>Benzene</i>      | <i>5.6</i>                              | <i>0.2</i>                                     |
| <i>Toluene</i>      | <i>28.1</i>                             | <i>0.2</i>                                     |
| <i>Ethylbenzene</i> | <i>13.4</i>                             | <i>0.2</i>                                     |
| <i>m,p-Xylene</i>   | <i>203.1</i>                            | <i>0.2</i>                                     |
| <i>o-Xylene</i>     | <i>64.8</i>                             | <i>0.2</i>                                     |
|                     | <i>TOTAL 315.1 ug/kg</i>                |                                                |

*ND - Not Detectable*

**Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography**

Approved by:  
Date:

*Bill Verhulst*  
*11/11/94*

**P. O. BOX 2606 • FARMINGTON, NM 87499**

— TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT —

## CHAIN OF CUSTODY RECORD

657 W. Maple • P. O. Box 2606 • Farmington NM 87499  
LAB: (505) 325-5667 • FAX: (505) 325-6256

657 W. Maple • P. O. Box 2606 • Farmington NM 87499  
LAB: (505) 325-5667 • FAX: (505) 325-6256

657 W. Maple • P. O. Box 2606 • Farmington NM 87499  
LAB: (505) 325-5667 • FAX: (505) 325-6256

[illegible]

| Distribution: | White – On Site | Yellow – LAB | Pink – Sampler | Goldenrod – Client |
|---------------|-----------------|--------------|----------------|--------------------|
|---------------|-----------------|--------------|----------------|--------------------|

|                   |                                                                                       |                                                     |
|-------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------|
| CLIENT: <u>BP</u> | <b>BLAGG ENGINEERING, INC.</b><br>P.O. BOX 87, BLOOMFIELD, NM 87413<br>(505) 632-1199 | LOCATION NO: <u>80153</u><br>C.O.C. NO: <u>9273</u> |
|-------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------|

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

|                                                                                                                                                                                                                                              |                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| LOCATION: NAME: <u>ELLIOTT AL 8</u> WELL #: <u>3</u> PITS: <u>BLWD</u><br>QUAD/UNIT: <u>D</u> SEC: <u>10</u> TWP: <u>29N</u> RNG: <u>9W</u> PM: <u>NM</u> CNTY: <u>SJ</u> ST: <u>NM</u><br>GTR/FOOTAGE: <u>NW/1/4</u> CONTRACTOR: <u>P+S</u> | DATE STARTED: <u>7/12/01</u><br>DATE FINISHED: _____<br>ENVIRONMENTAL SPECIALIST: <u>NV</u> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|

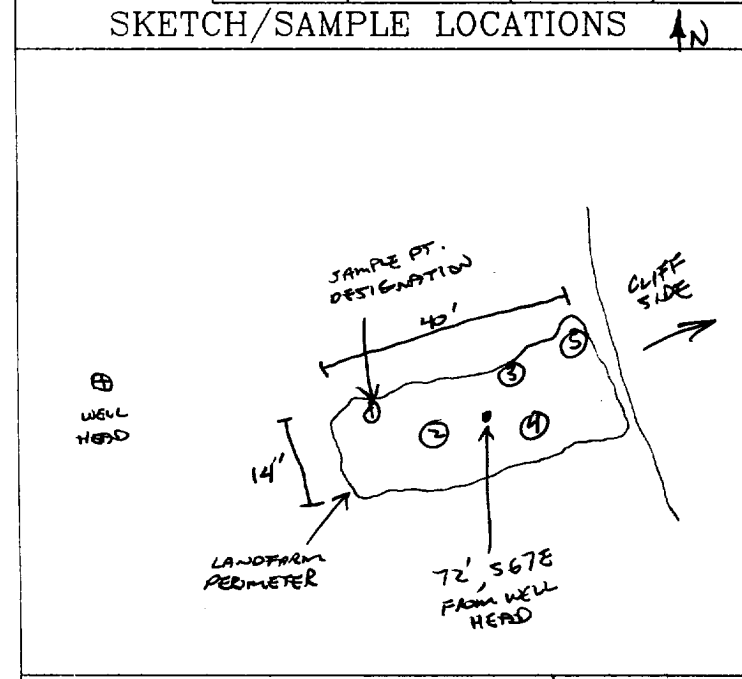
|                                                                                                        |                                                                 |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| SOIL REMEDIATION: _____<br>REMEDIATION SYSTEM: <u>LANDFARM</u><br>LAND USE: <u>RANGE-BLM SF-078132</u> | APPROX. CUBIC YARDAGE: <u>75</u><br>LIFT DEPTH (ft): <u>2.5</u> |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|

|                        |                                                                                                                                                                                         |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FIELD NOTES & REMARKS: | NMCD RANKING SCORE: <u>0</u> NMCD TPH CLOSURE STD: <u>5000</u> PPM<br>DEPTH TO GROUNDWATER: <u>2100'</u> NEAREST WATER SOURCE: <u>&gt;1000'</u> NEAREST SURFACE WATER: <u>&gt;1000'</u> |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

SOIL TYPE: SAND / SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER SHALE FRAGMENTS  
 SOIL COLOR: OLIVE GRAY  
 PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC  
 COHESION (ALL OTHERS): NON COHESIVE / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE  
 DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD  
 CONSISTENCY (NON COHESIVE SOILS): LOOSE / FIRM / DENSE / VERY DENSE  
 DISCOLORATION/STAINING OBSERVED: YES / NO EXPLANATION: \_\_\_\_\_  
 HC ODOR DETECTED: YES / NO EXPLANATION: \_\_\_\_\_  
 SAMPLING DEPTHS (LANDFARMS): 12-24 (INCHES)  
 SAMPLE TYPE: GRAB / COMPOSITE - # OF PTS. 5  
 ADDITIONAL COMMENTS: DRY TO SLIGHTLY MOIST

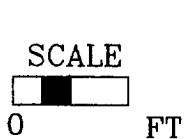
CLOSED

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



|                                               |
|-----------------------------------------------|
| OVM CALIB. READ. <u>52.8</u> ppm              |
| OVM CALIB. GAS = 100 ppm; RF = 0.52           |
| TIME: <u>12:12</u> am/pm DATE: <u>7/11/01</u> |

| OVM RESULTS |                           | LAB SAMPLES |               |      |         |
|-------------|---------------------------|-------------|---------------|------|---------|
| SAMPLE ID   | FIELD HEADSPACE PID (ppm) | SAMPLE ID   | ANALYSIS      | TIME | RESULTS |
| LF-1        | 0.4                       | LF-1        | TPH<br>(8015) | 0900 | ND      |
|             |                           |             |               |      |         |
|             |                           |             |               |      |         |
|             |                           |             |               |      |         |
|             |                           |             |               |      |         |
|             |                           |             |               |      |         |



P.C. - 11/10/94

|                                   |                        |
|-----------------------------------|------------------------|
| TRAVEL NOTES: CALLOUT: <u>N/A</u> | ONSITE: <u>7/12/01</u> |
|-----------------------------------|------------------------|

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

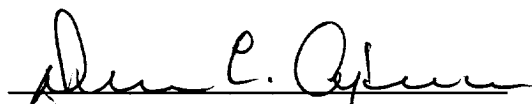
|                      |                 |                     |           |
|----------------------|-----------------|---------------------|-----------|
| Client:              | Blagg / BP      | Project #:          | 94034-010 |
| Sample ID:           | LF - 1          | Date Reported:      | 07-13-01  |
| Laboratory Number:   | 20333           | Date Sampled:       | 07-12-01  |
| Chain of Custody No: | 9273            | Date Received:      | 07-12-01  |
| Sample Matrix:       | Soil            | Date Extracted:     | 07-13-01  |
| Preservative:        | Cool            | Date Analyzed:      | 07-13-01  |
| Condition:           | Cool and Intact | Analysis Requested: | 8015 TPH  |

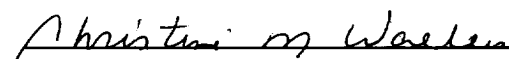
| Parameter                    | Concentration<br>(mg/Kg) | Det.<br>Limit<br>(mg/Kg) |
|------------------------------|--------------------------|--------------------------|
| Gasoline Range (C5 - C10)    | ND                       | 0.2                      |
| Diesel Range (C10 - C28)     | ND                       | 0.1                      |
| Total Petroleum Hydrocarbons | ND                       | 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: Elliott, AL B #3 Landfarm 5 Pt. Composite.

  
Analyst

  
Review

# CHAIN OF CUSTODY RECORD

09273

| Client / Project Name<br><b>BLAGG/BP</b>                                                                                                                      |             |             |            | Project Location<br><b>LANDFARMS</b> |                   | ANALYSIS / PARAMETERS                            |  |  |  |  |  |  |                                                   |   |   |     |   |  |  |   |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|------------|--------------------------------------|-------------------|--------------------------------------------------|--|--|--|--|--|--|---------------------------------------------------|---|---|-----|---|--|--|---|--|--|
| Sampler:<br><b>NTV</b>                                                                                                                                        |             |             |            | Client No.<br><b>94034-010</b>       |                   |                                                  |  |  |  |  |  |  |                                                   |   |   |     |   |  |  |   |  |  |
| Sample No./ Identification                                                                                                                                    | Sample Date | Sample Time | Lab Number | Sample Matrix                        | No. of Containers | TPH (80+5)                                       |  |  |  |  |  |  | Remarks                                           |   |   |     |   |  |  |   |  |  |
| LF-1                                                                                                                                                          | 7/12/01     | 0700        | 20331      | SOIL                                 | 1                 | ✓                                                |  |  |  |  |  |  | ALL SAMPLES<br>PRESERVED COOL<br>ELLIOTT, AL C #4 |   |   |     |   |  |  |   |  |  |
| LF-1                                                                                                                                                          | 7/12/01     | 0800        | 20332      | SOIL                                 | 1                 | ✓                                                |  |  |  |  |  |  | ELLIOTT, AL C #2                                  |   |   |     |   |  |  |   |  |  |
| LF-1                                                                                                                                                          | 7/12/01     | 0900        | 20333      | SOIL                                 | 1                 | ✓                                                |  |  |  |  |  |  | ELLIOTT, AL B #3                                  |   |   |     |   |  |  |   |  |  |
| LF-1                                                                                                                                                          | 7/12/01     | 1230        | 20334      | SOIL                                 | 1                 | ✓                                                |  |  |  |  |  |  | ELLIOTT GC G #1                                   |   |   |     |   |  |  |   |  |  |
|                                                                                                                                                               |             |             |            |                                      |                   |                                                  |  |  |  |  |  |  | ALL SAMPLES                                       |   |   |     |   |  |  |   |  |  |
|                                                                                                                                                               |             |             |            |                                      |                   |                                                  |  |  |  |  |  |  | 5 PT. COMPOSITE                                   |   |   |     |   |  |  |   |  |  |
| Relinquished by: (Signature)<br><i>John Val</i>                                                                                                               |             |             |            | Date                                 | Time              | Received by: (Signature)<br><i>John P. Cy...</i> |  |  |  |  |  |  |                                                   |   |   |     |   |  |  |   |  |  |
| Relinquished by: (Signature)                                                                                                                                  |             |             |            |                                      |                   | Received by: (Signature)                         |  |  |  |  |  |  |                                                   |   |   |     |   |  |  |   |  |  |
| Relinquished by: (Signature)                                                                                                                                  |             |             |            |                                      |                   | Received by: (Signature)                         |  |  |  |  |  |  |                                                   |   |   |     |   |  |  |   |  |  |
| <b>ENVIROTECH INC.</b><br>5796 U.S. Highway 64<br>Farmington, New Mexico 87401<br>(505) 632-0615                                                              |             |             |            |                                      |                   |                                                  |  |  |  |  |  |  |                                                   |   |   |     |   |  |  |   |  |  |
| Sample Receipt                                                                                                                                                |             |             |            |                                      |                   |                                                  |  |  |  |  |  |  |                                                   |   |   |     |   |  |  |   |  |  |
| <table border="1"> <tr> <td>Y</td> <td>N</td> <td>N/A</td> </tr> <tr> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>✓</td> <td></td> <td></td> </tr> </table> |             |             |            |                                      |                   |                                                  |  |  |  |  |  |  |                                                   | Y | N | N/A | ✓ |  |  | ✓ |  |  |
| Y                                                                                                                                                             | N           | N/A         |            |                                      |                   |                                                  |  |  |  |  |  |  |                                                   |   |   |     |   |  |  |   |  |  |
| ✓                                                                                                                                                             |             |             |            |                                      |                   |                                                  |  |  |  |  |  |  |                                                   |   |   |     |   |  |  |   |  |  |
| ✓                                                                                                                                                             |             |             |            |                                      |                   |                                                  |  |  |  |  |  |  |                                                   |   |   |     |   |  |  |   |  |  |