

3R - 89

**GENERAL  
CORRESPONDENCE**

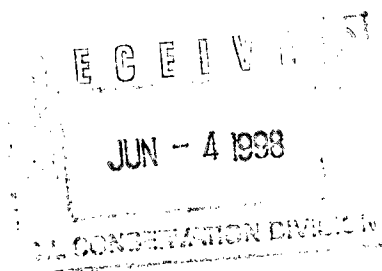
**YEAR(S):**

1998

***BLAGG ENGINEERING, INC.***

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

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



June 2, 1998

Mr. William C. Olson  
Hydrologist/Environmental Bureau  
NM Oil Conservation Division  
2040 S. Pacheco  
Santa Fe, NM 87505

Re: Conoco Inc.  
Mobil Federal No. 1  
NW/4 SE/4 (J) Sec 36 - T24N - R1W  
Rio Arriba County, New Mexico  
Request for Closure

Dear Mr. Olson:

On behalf of Conoco Inc., Blagg Engineering, Inc. (BEI) conducted environmental sampling following site remediation of a blow pit at the Mobil Federal No. 1, (J) Sec 36 - T24N - R1W, Rio Arriba County, New Mexico. This pit was remediated by excavation and on-site landfarming following P x A of the subject well. The results of the environmental testing indicate there is no residual contamination remaining at the pit or in the on-site landfarm in excess of NMOCD closure standards for this location. Attached, please find a BLM Sundry Notice, pit Field Report Closure Verification, Landfarm Closure Verification, NMOCD Pit Remediation and Closure Report and attached laboratory data reports. BEI respectfully requests approval for closure of the pit and landfarm at the Mobil Federal No. 1.

Respectfully submitted,  
***Blagg Engineering, Inc.***

Jeffrey C. Blagg, President  
NMPE 11607

Attachments: BLM Sundry, Pit Remediation & Closure Report, Field Reports, lab data reports

cc: Ms. Pat Hester, BLM - Albuquerque (2)  
Ms. Shirley Ebert, Conoco - Farmington  
Mr. Denny Foust, NMOCD - Aztec

File: mobfed1.xmt

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

5. Lease Designation and Serial No.  
NM 28669

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Mobil Fed No 1

9. API Well No.

30-039-08170

10. Field and Pool, or Exploratory Area

Regina Gallup

11. County or Parish, State

Rio Arriba, NM

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals

**SUBMIT IN TRIPLICATE**

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Conoco Inc.,

3. Address and Telephone No.

3315 Bloomfield Hwy, Farmington, NM, 87401, 327-9557

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

1980FSL x 1980FEL, 36-T24N-R1W (J), NMPM

**12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

**TYPE OF SUBMISSION**

☐ Notice of Intent  
☒ Subsequent Report  
☐ Final Abandonment Notice

**TYPE OF ACTION**

☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☒ Other Pit Closure

☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Earthen pit and landfarm closure.  
Please see attached documentation.

14. I hereby certify that the foregoing is true and correct

Signed

*Jeffrey C. Gagg*

Title

Agent

Date

June 2, 1998

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

**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**OIL CONSERVATION DIVISION**P.O. Box 2088  
Santa Fe, New Mexico 87504-2088SUBMIT 1 COPY TO  
APPROPRIATE  
DISTRICT OFFICE  
AND 1 COPY TO  
SANTA FE OFFICE**PIT REMEDIATION AND CLOSURE REPORT**Operator: CONOCO INC. Telephone: (505) 327-9557Address: 3315 BLOOMFIELD HIGHWAY, FARMINGTON, NM 8740Facility Or: MOBIL FEDERAL NO. 1  
Well NameLocation: Unit or Qtr/Qtr Sec J Sec 36 T 24 N R 1 W County RIO ARribaPit Type: Separator    Dehydrator    Other BLOWLand Type: BLM X, State   , Fee   , Other   Pit Location: Pit dimensions: length 57, width 45, depth 19  
(Attach diagram)Reference: wellhead X, other   Footage from reference: 85'Direction from reference: S 77° Degrees    East North     
of  
X 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) 10**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) 0**Distance To Surface Water:**(Horizontal distance to perennial  
lakes, 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) 0RANKING SCORE (TOTAL POINTS): 10

Date Remediation Started: 10/20/97 Date Completed: 4/22/98

Remediation Method: Excavation ☒ Approx. cubic yards \_\_\_\_\_  
(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 - BACKFILLED WITH CLEAN FILL.

Contaminated Soil placed into landfarm on site.

LANDFARM Tested clean 4/22/98

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 13'

Sample date 10/27/97 Sample time 1015

Sample Results

Benzene(ppm) ND

Total BTEX(ppm) 1.2

Field headspace(ppm) -

TPH 24.5

Additionally, P.T @ 17', center, sampled 10/24/97, TPH = 100 ppm

Ground 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 JUNE 2, 1998

SIGNATURE

Jeffrey C. Blagg

PRINTED NAME  
AND TITLE

JEFFREY C. BLAGG  
AGENT

CLIENT: CONOCOBLAGG ENGINEERING, INC.  
P.O. BOX 87, BLOOMFIELD, NM 87413  
(505) 632-1199LOCATION NO: CAS05

C.D.C. NO: \_\_\_\_\_

## FIELD REPORT: CLOSURE VERIFICATION

PAGE No: 1 of 1LOCATION: NAME: MOBILE FEDERAL WELL #: 1 PIT: BLOWDATE STARTED: 10/20/97QUAD/UNIT: J SEC: 36 TWP: 24N RNG: 1W PM: NM CNTY: RA ST: NM

DATE FINISHED: \_\_\_\_\_

QTR/FOOTAGE: NW/4 SE/4CONTRACTOR: J. VALDEZENVIRONMENTAL  
SPECIALIST: NVEXCAVATION APPROX. 57 FT. x 45 FT. x 19 FT. DEEP. CUBIC YARDAGE: 1,800DISPOSAL FACILITY: SCHMITZ REMEDIATION METHOD: LANDFARMEDLAND USE: RANGE LEASE: NM-28669 FORMATION: \_\_\_\_\_FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 85 FT. 577W FROM WELLHEAD.DEPTH TO GROUNDWATER: <100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'NMCD RANKING SCORE: 10 NMCD TPH CLOSURE STD: 1000 PPM

CHECK ONE:

☒ PIT ABANDONED☐ STEEL TANK INSTALLED

## SOIL AND EXCAVATION DESCRIPTION:

B.G.S. = BELOW GROUND  
SURFACE

NORTH &amp; EAST SIDEWALLS - SAND (0-7' B.G.S.), SILTY SAND (7-10' B.G.S.) CLAY (10-16' B.G.S.), SILTY SAND LT. GRAY TO OLIVE GRAY IN COLOR, STRONG HC ODOR, CONTAMINATION LIMITED TO 7-10' B.G.S. INTERVAL.

SOUTH SIDEWALL - BLACK SILTY SAND TO CLAY (10-16' B.G.S.), STRONG HC ODOR, WILL EXCAVATE BASED ON ODOR &amp; VISUAL.

WEST SIDEWALL - SAND (0-7' B.G.S.), SILTY SAND (7-10' B.G.S. NO ODOR), CLAY (10-16' B.G.S. NO ODOR).

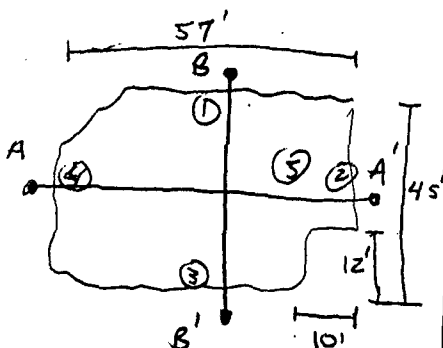
PIT BOTTOM - SILTY SAND, DK. YELL. BROWN, NO ODOR. FIELD 418.1 CALCULATIONS

SCALE

0 FT

| TIME | SAMPLE I.D. | LAB No:  | WEIGHT (g) | mL. FREON | DILUTION | READING | CALC. ppm |
|------|-------------|----------|------------|-----------|----------|---------|-----------|
| 0945 | ⑤ @ 17'     | TPH-1921 | 5          | 20        | 1:1      | 25      | 100       |
|      |             |          |            |           |          |         |           |
|      |             |          |            |           |          |         |           |

## PIT PERIMETER

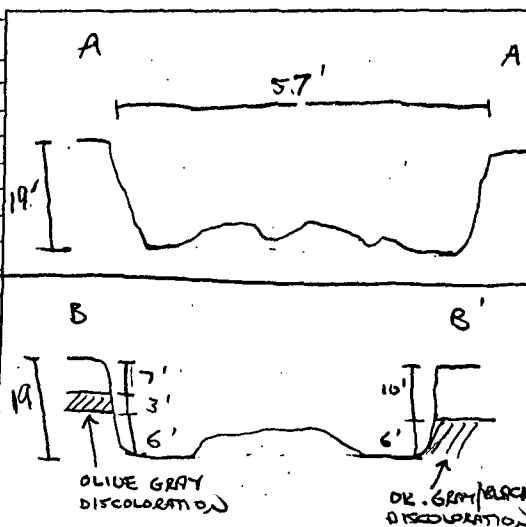
OVM  
RESULTS

| SAMPLE ID | FIELD HEADSPACE FID (ppm) |
|-----------|---------------------------|
| 1 @ 13'   | 0.0                       |
| 2 @ 11'   | 0.0                       |
| 3 @ 11'   | 31.9                      |
| 4 @ 11'   | 33.0                      |
| 5 @ 17'   | 67.6                      |

## LAB SAMPLES

| SAMPLE ID | ANALYSIS | TIME |
|-----------|----------|------|
|           |          |      |
|           |          |      |
|           |          |      |
|           |          |      |

## PIT PROFILE



TRAVEL NOTES:

CALLOUT: \_\_\_\_\_

ONSITE: 10/20/97, 10/24/97,

**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:            | Conoco             | Project #:     |          |
| Sample ID:         | 5 @ 17'            | Date Analyzed: | 10-24-97 |
| Project Location:  | Mobile Federal # 1 | Date Reported: | 10-24-97 |
| Laboratory Number: | TPH-1922           | Sample Matrix: | Soil     |

| Parameter                                   | Result, mg/kg | Detection<br>Limit, mg/kg |
|---------------------------------------------|---------------|---------------------------|
| Total Recoverable<br>Petroleum Hydrocarbons | 100           | 20                        |

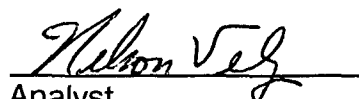
ND = Not Detectable at stated detection limits.

| QA/QC: | QA/QC Sample<br>TPH mg/kg | Duplicate<br>TPH mg/kg | %<br>*Diff. |
|--------|---------------------------|------------------------|-------------|
|        | 608                       | 568                    | 6.80        |

\*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 - CA505

  
Analyst

  
Review

**BLAGG ENGINEERING, INC.**

P.O. Box 87, Bloomfield, New Mexico 87413  
Phone: (505)632-1199 Fax: (505)632-3903

**Field TPH-Worksheet**

\*\*\*\*\*

Max Characters:

Client:

Sample ID:

Project Location:

Laboratory Number:

Conoco

5 @ 17'

Mobile Federal # 1

TPH-1922

Project #:

Date Analyzed:

Date Reported:

Sample Matrix:

10-24-97

10-24-97

Soil

Sample Weight:

5.00 grams

Volume Freon:

20.00 mL

Dilution Factor:

1 (unitless)

TPH Reading:

25 mg/kg

TPH Result:

100.0 mg/kg

Reported TPH Result:

100 mg/kg

Actual Detection Limit:

20.0 mg/kg

Reported Detection Limit:

20 mg/kg

QA/QC:

Original  
TPH mg/kg

Duplicate  
TPH mg/kg

%  
Diff.

-----  
608

-----  
568

-----  
6.80

Comments:

\*\*\*\*\*Max Characters\*\*\*\*\*

Comments:

Blow Pit - CA505

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

|                    |                |                     |          |
|--------------------|----------------|---------------------|----------|
| Client:            | Blagg / CONOCO | Project #:          | 04034-10 |
| Sample ID:         | S. Wall @ 13'  | Date Reported:      | 10-28-97 |
| Laboratory Number: | C371           | Date Sampled:       | 10-27-97 |
| Chain of Custody:  | 5546           | Date Received:      | 10-27-97 |
| Sample Matrix:     | Soil           | Date Analyzed:      | 10-28-97 |
| Preservative:      | Cool           | Date Extracted:     | 10-27-97 |
| Condition:         | Cool & Intact  | Analysis Requested: | BTEX     |

| Parameter    | Concentration<br>(ug/Kg) | Det.<br>Limit<br>(ug/Kg) |
|--------------|--------------------------|--------------------------|
| Benzene      | ND                       | 8.8                      |
| Toluene      | 260                      | 8.4                      |
| Ethylbenzene | 166                      | 7.6                      |
| p,m-Xylene   | 564                      | 10.8                     |
| o-Xylene     | 231                      | 5.2                      |
| Total BTEX   | 1,221                    |                          |

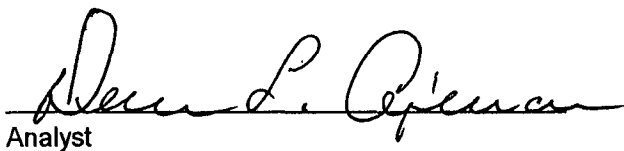
ND - Parameter not detected at the stated detection limit.

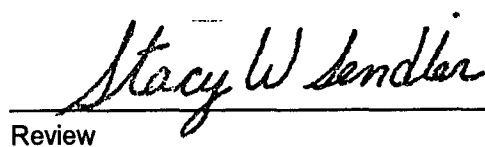
| Surrogate Recoveries: | Parameter          | Percent Recovery |
|-----------------------|--------------------|------------------|
|                       | Trifluorotoluene   | 98 %             |
|                       | Bromofluorobenzene | 98 %             |

References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1994.

Comments: Mobil Federal #1.

  
Analyst

  
Review

EPA METHOD 8015 Modified  
Nonhalogenated Volatile Organics  
Total Petroleum Hydrocarbons

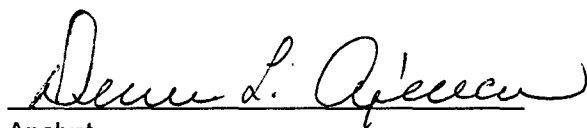
|                      |                 |                     |          |
|----------------------|-----------------|---------------------|----------|
| Client:              | Blagg / CONOCO  | Project #:          | 04034-10 |
| Sample ID:           | S . Wall @ 13'  | Date Reported:      | 10-28-97 |
| Laboratory Number:   | C371            | Date Sampled:       | 10-27-97 |
| Chain of Custody No: | 5546            | Date Received:      | 10-27-97 |
| Sample Matrix:       | Soil            | Date Extracted:     | 10-27-97 |
| Preservative:        | Cool            | Date Analyzed:      | 10-28-97 |
| Condition:           | Cool and Intact | Analysis Requested: | 8015 TPH |

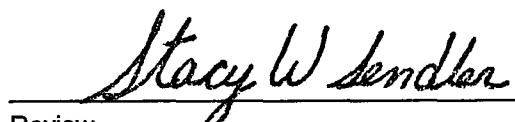
| Parameter                    | Concentration<br>(mg/Kg) | Det.<br>Limit<br>(mg/Kg) |
|------------------------------|--------------------------|--------------------------|
| Gasoline Range (C5 - C10)    | 1.3                      | 0.2                      |
| Diesel Range (C10 - C28)     | 23.2                     | 0.1                      |
| Total Petroleum Hydrocarbons | 24.5                     | 0.2                      |

ND - Parameter not detected at the stated detection limit.

References: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Comments: Mobil Federal #1.

  
Analyst

  
Review

**QUALITY ASSURANCE / QUALITY CONTROL  
DOCUMENTATION**

|                    |                  |                     |          |
|--------------------|------------------|---------------------|----------|
| Client:            | N/A              | Project #:          | N/A      |
| Sample ID:         | Laboratory Blank | Date Reported:      | 10-28-97 |
| Laboratory Number: | 10-28-BTEX.BLANK | Date Sampled:       | N/A      |
| Sample Matrix:     | Soil             | Date Received:      | N/A      |
| Preservative:      | N/A              | Date Analyzed:      | 10-28-97 |
| Condition:         | N/A              | Analysis Requested: | BTEX     |

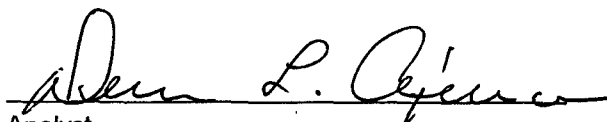
| Parameter    | Concentration<br>(ug/L) | Det.<br>Limit<br>(ug/L) |
|--------------|-------------------------|-------------------------|
| Benzene      | ND                      | 0.2                     |
| Toluene      | ND                      | 0.2                     |
| Ethylbenzene | ND                      | 0.2                     |
| p,m-Xylene   | ND                      | 0.2                     |
| o-Xylene     | ND                      | 0.1                     |

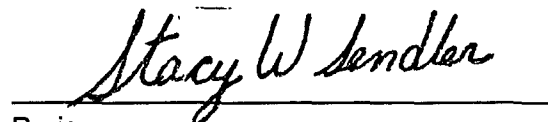
ND - Parameter not detected at the stated detection limit.

| Surrogate Recoveries: | Parameter          | Percent Recovery |
|-----------------------|--------------------|------------------|
|                       | Trifluorotoluene   | 96 %             |
|                       | Bromofluorobenzene | 97 %             |

References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.  
USEPA, Sept. 1994.

Comments: QA/QC for sample C371.

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

|                    |                  |                     |          |
|--------------------|------------------|---------------------|----------|
| Client:            | QA/QC            | Project #:          | N/A      |
| Sample ID:         | Matrix Duplicate | Date Reported:      | 10-28-97 |
| Laboratory Number: | C371             | Date Sampled:       | N/A      |
| Sample Matrix:     | Soil             | Date Received:      | N/A      |
| Preservative:      | Cool             | Date Analyzed:      | 10-28-97 |
| Condition:         | Cool and Intact  | Analysis Requested: | BTEX     |

| Parameter    | Sample Result<br>(ug/Kg) | Duplicate Result<br>(ug/Kg) | Det. Limit<br>(ug/Kg) | Percent Difference |
|--------------|--------------------------|-----------------------------|-----------------------|--------------------|
| Benzene      | ND                       | ND                          | 8.8                   | 0.0%               |
| Toluene      | 260                      | 258                         | 8.4                   | 1.0%               |
| Ethylbenzene | 166                      | 164                         | 7.6                   | 1.0%               |
| p,m-Xylene   | 564                      | 559                         | 10.8                  | 0.8%               |
| o-Xylene     | 231                      | 229                         | 5.2                   | 1.0%               |

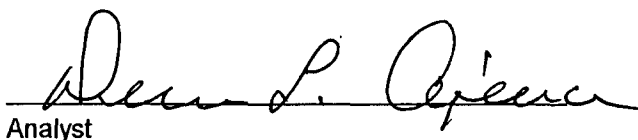
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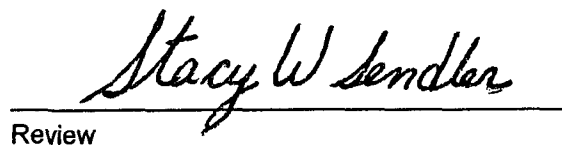
| QA/QC Acceptance Criteria: | Parameter      | Maximum Difference |
|----------------------------|----------------|--------------------|
|                            | 8020 Compounds | 30 %               |

References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1994.

Comments: QA/QC for sample C371.

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

|                    |                 |                 |          |
|--------------------|-----------------|-----------------|----------|
| Client:            | QA/QC           | Project #:      | N/A      |
| Sample ID:         | Matrix Spike    | Date Reported:  | 10-28-97 |
| Laboratory Number: | C371            | Date Sampled:   | N/A      |
| Sample Matrix:     | Soil            | Date Received:  | N/A      |
| Preservative:      | Cool            | Date Extracted: | 10-27-97 |
| Condition:         | Cool and Intact | Date Analyzed:  | 10-28-97 |

| Parameter    | Sample Result<br>(ug/Kg) | Spike Added<br>(ug/Kg) | Spiked Sample Result<br>(ug/Kg) | Det. Limit<br>(ug/Kg) | Percent Recovery | SW-846<br>% Rec. Accept. Range |
|--------------|--------------------------|------------------------|---------------------------------|-----------------------|------------------|--------------------------------|
| Benzene      | ND                       | 50.0                   | 49.3                            | 8.8                   | 99%              | 39-150                         |
| Toluene      | 260                      | 50.0                   | 309                             | 8.4                   | 100%             | 46-148                         |
| Ethylbenzene | 166                      | 50.0                   | 215                             | 7.6                   | 99%              | 32-160                         |
| p,m-Xylene   | 564                      | 100                    | 662                             | 10.8                  | 100%             | 46-148                         |
| o-Xylene     | 231                      | 50.0                   | 280                             | 5.2                   | 100%             | 46-148                         |

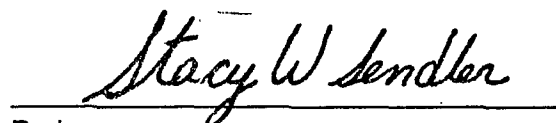
ND - Parameter not detected at the stated detection limit.

References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1994.

Comments: QA/QC for sample C371.

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

### Quality Assurance Report

|                    |                    |                     |          |
|--------------------|--------------------|---------------------|----------|
| Client:            | QA/QC              | Project #:          | N/A      |
| Sample ID:         | Laboratory Blank   | Date Reported:      | 10-28-97 |
| Laboratory Number: | 10-28-TPH.BLANK    | Date Sampled:       | N/A      |
| Sample Matrix:     | Methylene Chloride | Date Received:      | N/A      |
| Preservative:      | N/A                | Date Analyzed:      | 10-28-97 |
| Condition:         | N/A                | Analysis Requested: | TPH      |

| Parameter                    | Concentration<br>(mg/L) | Det.<br>Limit<br>(mg/L) |
|------------------------------|-------------------------|-------------------------|
| 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 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Comments: QA/QC for samples C366 - C371.

  
Analyst

  
Review

# 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:         | Matrix Duplicate | Date Reported:      | 10-28-97 |
| Laboratory Number: | C366             | Date Sampled:       | N/A      |
| Sample Matrix:     | Soil             | Date Received:      | N/A      |
| Preservative:      | Cool             | Date Analyzed:      | 10-28-97 |
| Condition:         | Cool and Intact  | Analysis Requested: | TPH      |

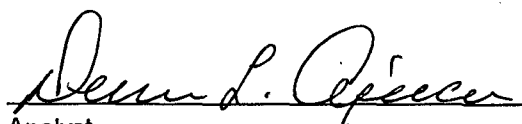
| Parameter                    | Sample Result (mg/Kg) | Duplicate Result (mg/Kg) | Percent Difference |
|------------------------------|-----------------------|--------------------------|--------------------|
| Gasoline Range (C5 - C10)    | ND                    | ND                       | 0.0%               |
| Diesel Range (C10 - C28)     | ND                    | ND                       | 0.0%               |
| Total Petroleum Hydrocarbons | ND                    | ND                       | 0.0%               |

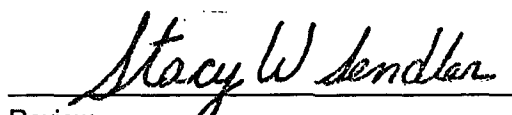
ND - Parameter not detected at the stated detection limit.

| QA/QC Acceptance Criteria: | Parameter              | Max Difference |
|----------------------------|------------------------|----------------|
|                            | Petroleum Hydrocarbons | 30%            |

References: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Comments: QA/QC for samples C366 - C371.

  
Analyst

  
Review

EPA METHOD 8015 Modified  
Nonhalogenated Volatile Hydrocarbons  
Total Petroleum Hydrocarbons  
Quality Assurance Report

|                     |              |                |          |
|---------------------|--------------|----------------|----------|
| Client:             | QA/QC        | Project #:     | N/A      |
| Sample ID:          | Matrix Spike | Date Reported: | 10-28-97 |
| Laboratory Number:  | C366         | Date Sampled:  | N/A      |
| Sample Matrix:      | Soil         | Date Received: | N/A      |
| Analysis Requested: | TPH          | Date Analyzed: | 10-28-97 |
| Condition:          | N/A          |                |          |

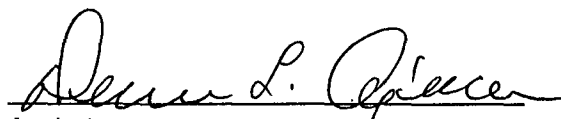
| Parameter                    | Sample Result (mg/kg) | Spike Added (mg/kg) | Spiked Sample Result (mg/kg) | Det. Limit (mg/kg) | Percent Recovery |
|------------------------------|-----------------------|---------------------|------------------------------|--------------------|------------------|
| Gasoline Range (C5 - C10)    | ND                    | 250                 | 249                          | 0.2                | 100%             |
| Diesel Range (C10 - C28)     | ND                    | 250                 | 248                          | 0.1                | 99%              |
| Total Petroleum Hydrocarbons | ND                    | 500                 | 497                          | 0.2                | 99%              |

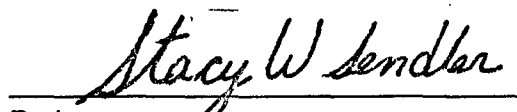
ND - Parameter not detected at the stated detection limit.

| QA/QC Acceptance Criteria: | Parameter              | Acceptance Range |
|----------------------------|------------------------|------------------|
|                            | Petroleum Hydrocarbons | 75 - 125%        |

References: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Comments: QA/QC for samples C366 - C371.

  
Analyst

  
Review

[illegible]

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

# FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

|                                                                                                               |                                      |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------|
| LOCATION: NAME: <u>MOBIL FED</u> WELL #: <u>1</u> PITS: <u>1</u>                                              | DATE STARTED: <u>4-22-98</u>         |
| QUAD/UNIT: <u>J</u> SEC: <u>36</u> TWP: <u>24N</u> RNG: <u>1W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u> | DATE FINISHED: _____                 |
| QTR/FDDTAGE: <u>NW/4</u> <u>SE/4</u> CONTRACTOR: <u>J. VALDEZ</u>                                             | ENVIRONMENTAL SPECIALIST: <u>JCB</u> |

## SOIL REMEDIATION:

REMEDICATION SYSTEM: LANDFARM APPROX. CUBIC YARDAGE: 2,000 ±  
 LAND USE: RANGE LIFT DEPTH (ft): 18"

## FIELD NOTES & REMARKS:

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

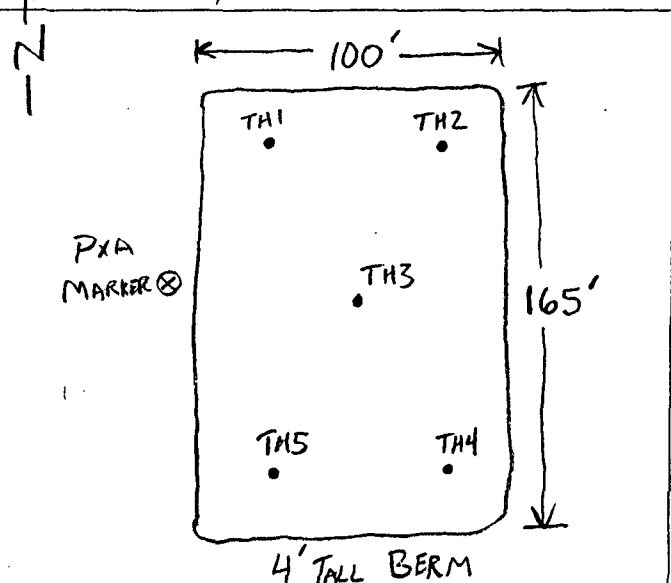
NMDCD RANKING SCORE: 10 NMDCD TPH CLOSURE STD: 1,000 PPM

Dug 5 ea Testholes with shovel from 0"-18". Collected soil SAMPLE FROM Each hole @ depth of 6"-18".

## FIELD 418.1 CALCULATIONS

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

## SKETCH/SAMPLE LOCATIONS



## OVM RESULTS

| SAMPLE ID | FIELD HEADSPACE PID (ppm) |
|-----------|---------------------------|
| TH1       | 294                       |
| TH2       | 560                       |
| TH3       | 204                       |
| TH4       | 479                       |
| TH5       | 444                       |

## LAB SAMPLES

| SAMPLE ID  | ANALYSIS     | TIME | RESULTS |
|------------|--------------|------|---------|
| 5 pt. Comp | 8015<br>8020 | 1210 |         |
|            |              |      |         |
|            |              |      |         |
|            |              |      |         |
|            |              |      |         |

## SCALE



## TRAVEL NOTES:

CALLOUT: 7:00 AM 4/22/98 ONSITE: 11:00 AM 4/22/98

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

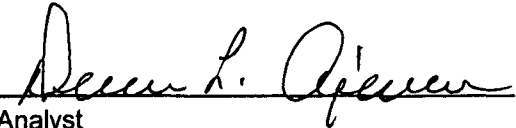
|                      |                          |                     |          |
|----------------------|--------------------------|---------------------|----------|
| Client:              | Blagg / Conoco           | Project #:          | 04034-10 |
| Sample ID:           | Landfarm 5 pt. Composite | Date Reported:      | 04-24-98 |
| Laboratory Number:   | D143                     | Date Sampled:       | 04-22-98 |
| Chain of Custody No: | 5871                     | Date Received:      | 04-22-98 |
| Sample Matrix:       | Soil                     | Date Extracted:     | 04-23-98 |
| Preservative:        | Cool                     | Date Analyzed:      | 04-23-98 |
| Condition:           | Cool and Intact          | Analysis Requested: | 8015 TPH |

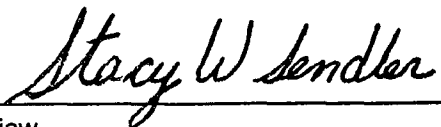
| Parameter                    | Concentration<br>(mg/Kg) | Det.<br>Limit<br>(mg/Kg) |
|------------------------------|--------------------------|--------------------------|
| Gasoline Range (C5 - C10)    | 25.6                     | 0.2                      |
| Diesel Range (C10 - C28)     | 260                      | 0.1                      |
| Total Petroleum Hydrocarbons | 286                      | 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: **Mobile Fed # 1.**

  
Analyst

  
Review

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

**Quality Assurance Report**

|                    |                    |                     |          |
|--------------------|--------------------|---------------------|----------|
| Client:            | QA/QC              | Project #:          | N/A      |
| Sample ID:         | 04-23-TPH QA/QC    | Date Reported:      | 04-24-98 |
| Laboratory Number: | D130               | Date Sampled:       | N/A      |
| Sample Matrix:     | Methylene Chloride | Date Received:      | N/A      |
| Preservative:      | N/A                | Date Analyzed:      | 04-23-98 |
| Condition:         | N/A                | Analysis Requested: | TPH      |

| Calibration             | I-Cal Date | I-Cal RF:  | C-Cal RF:  | % Difference | Accept. Range |
|-------------------------|------------|------------|------------|--------------|---------------|
| Gasoline Range C5 - C10 | 03-27-98   | 5.6544E-04 | 5.4810E-04 | 3.07%        | 0 - 15%       |
| Diesel Range C10 - C28  | 03-27-98   | 5.4387E-04 | 5.2739E-04 | 3.03%        | 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             |

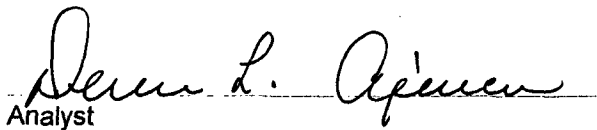
| Duplicate Conc. (mg/Kg) | Sample | Duplicate | % Difference | Accept. Range |
|-------------------------|--------|-----------|--------------|---------------|
| Gasoline Range C5 - C10 | 0.5    | 0.5       | 0.0%         | 0 - 30%       |
| Diesel Range C10 - C28  | 22.8   | 22.6      | 0.7%         | 0 - 30%       |

| Spike Conc. (mg/Kg)     | Sample | Spike Added | Spike Result | % Recovery | Accept. Range |
|-------------------------|--------|-------------|--------------|------------|---------------|
| Gasoline Range C5 - C10 | 0.5    | 250         | 250          | 100%       | 75 - 125%     |
| Diesel Range C10 - C28  | 22.8   | 250         | 272          | 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 D130 - D135 and D143 - D144.

  
Analyst

  
Review

## EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

|                    |                          |                     |          |
|--------------------|--------------------------|---------------------|----------|
| Client:            | Blagg / Conoco           | Project #:          | 04034-10 |
| Sample ID:         | Landfarm 5 pt. Composite | Date Reported:      | 04-23-98 |
| Laboratory Number: | D143                     | Date Sampled:       | 04-22-98 |
| Chain of Custody:  | 5871                     | Date Received:      | 04-22-98 |
| Sample Matrix:     | Soil                     | Date Analyzed:      | 04-23-98 |
| Preservative:      | Cool                     | Date Extracted:     | 04-23-98 |
| Condition:         | Cool & Intact            | Analysis Requested: | BTEX     |

| Parameter         | Concentration<br>(ug/Kg) | Det.<br>Limit<br>(ug/Kg) |
|-------------------|--------------------------|--------------------------|
| Benzene           | 32.6                     | 17.5                     |
| Toluene           | 462                      | 16.7                     |
| Ethylbenzene      | 3,170                    | 15.2                     |
| p,m-Xylene        | 10,910                   | 21.6                     |
| o-Xylene          | 4,370                    | 10.4                     |
| <b>Total BTEX</b> | <b>18,940</b>            |                          |

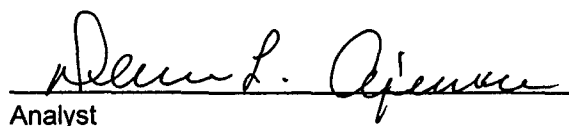
ND - Parameter not detected at the stated detection limit.

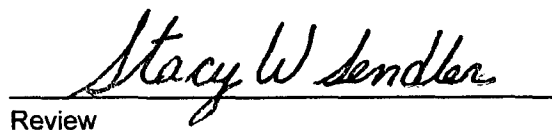
| Surrogate Recoveries: | Parameter          | Percent Recovery |
|-----------------------|--------------------|------------------|
|                       | Trifluorotoluene   | 97 %             |
|                       | Bromofluorobenzene | 97 %             |

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: Mobile Fed #1.

  
Analyst

  
Review

**EPA METHOD 8021  
AROMATIC VOLATILE ORGANICS  
QUALITY ASSURANCE REPORT**

|                    |                  |                |          |
|--------------------|------------------|----------------|----------|
| Client:            | N/A              | Project #:     | N/A      |
| Sample ID:         | 04-23-BTEX QA/QC | Date Reported: | 04-23-98 |
| Laboratory Number: | D143             | Date Sampled:  | N/A      |
| Sample Matrix:     | Soil             | Date Received: | N/A      |
| Preservative:      | N/A              | Date Analyzed: | 04-23-98 |
| Condition:         | N/A              | Analysis:      | BTEX     |

| Calibration and<br>Detection Limits (ug/L) | I-Cal RF:  | C-Cal RF:<br>Accept. Range 0 - 15% | %Diff. | Blank<br>Conc | Detect.<br>Limit |
|--------------------------------------------|------------|------------------------------------|--------|---------------|------------------|
| Benzene                                    | 4.8757E-05 | 5.0842E-05                         | 4.3%   | ND            | 0.2              |
| Toluene                                    | 5.4539E-05 | 5.6517E-05                         | 3.6%   | ND            | 0.2              |
| Ethylbenzene                               | 6.1355E-05 | 6.3779E-05                         | 4.0%   | ND            | 0.2              |
| p,m-Xylene                                 | 4.9248E-05 | 5.0771E-05                         | 3.1%   | ND            | 0.2              |
| o-Xylene                                   | 5.8524E-05 | 6.0899E-05                         | 4.1%   | ND            | 0.1              |

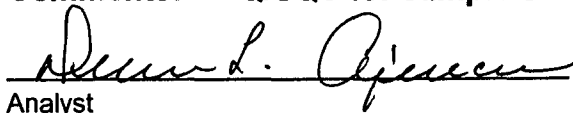
| Duplicate Conc. (ug/Kg) | Sample | Duplicate | %Diff. | Accept Range | Detect. Limit |
|-------------------------|--------|-----------|--------|--------------|---------------|
| Benzene                 | 32.6   | 30.0      | 8.0%   | 0 - 30%      | 17.5          |
| Toluene                 | 462    | 446       | 3.5%   | 0 - 30%      | 16.7          |
| Ethylbenzene            | 3,170  | 3,060     | 3.5%   | 0 - 30%      | 15.2          |
| p,m-Xylene              | 10,910 | 10,550    | 3.3%   | 0 - 30%      | 21.6          |
| o-Xylene                | 4,370  | 4,250     | 2.7%   | 0 - 30%      | 10.4          |

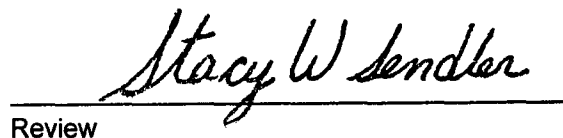
| Spike Conc. (ug/Kg) | Sample | Amount Spiked | Spiked Sample | % Recovery | Accept Range |
|---------------------|--------|---------------|---------------|------------|--------------|
| Benzene             | 32.6   | 50.0          | 82            | 99%        | 39 - 150     |
| Toluene             | 462    | 50.0          | 512           | 100%       | 46 - 148     |
| Ethylbenzene        | 3,170  | 50.0          | 3,220         | 100%       | 32 - 160     |
| p,m-Xylene          | 10,910 | 100.0         | 11,010        | 100%       | 46 - 148     |
| o-Xylene            | 4,370  | 50.0          | 4,420         | 100%       | 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 sample D143.

  
Analyst

  
Review

## CHAIN OF CUSTODY RECORD

| Client/Project Name                       |                 | Project Location                      |                                               | ANALYSIS/PARAMETERS |                   |          |           |  |  |  |  |  |  | Remarks |  |
|-------------------------------------------|-----------------|---------------------------------------|-----------------------------------------------|---------------------|-------------------|----------|-----------|--|--|--|--|--|--|---------|--|
| BAGG/CONOCO                               |                 | MOBILE FED #1                         |                                               |                     |                   |          |           |  |  |  |  |  |  |         |  |
| Sampler: (Signature)<br>J.C. Bagg         |                 | Chain of Custody Tape No.<br>04034-10 |                                               |                     |                   |          |           |  |  |  |  |  |  |         |  |
| Sample No./ Identification                | Sample Date     | Sample Time                           | Lab Number                                    | Sample Matrix       | No. of Containers | 8015 TPL | 8020 BTEX |  |  |  |  |  |  |         |  |
| LANDFARM<br>5 pt. composite               | 4-22-98         | 1210                                  | D143                                          | SOIL                | 1                 | X        | X         |  |  |  |  |  |  |         |  |
|                                           |                 |                                       |                                               |                     |                   |          |           |  |  |  |  |  |  |         |  |
|                                           |                 |                                       |                                               |                     |                   |          |           |  |  |  |  |  |  |         |  |
|                                           |                 |                                       |                                               |                     |                   |          |           |  |  |  |  |  |  |         |  |
|                                           |                 |                                       |                                               |                     |                   |          |           |  |  |  |  |  |  |         |  |
|                                           |                 |                                       |                                               |                     |                   |          |           |  |  |  |  |  |  |         |  |
|                                           |                 |                                       |                                               |                     |                   |          |           |  |  |  |  |  |  |         |  |
|                                           |                 |                                       |                                               |                     |                   |          |           |  |  |  |  |  |  |         |  |
|                                           |                 |                                       |                                               |                     |                   |          |           |  |  |  |  |  |  |         |  |
|                                           |                 |                                       |                                               |                     |                   |          |           |  |  |  |  |  |  |         |  |
|                                           |                 |                                       |                                               |                     |                   |          |           |  |  |  |  |  |  |         |  |
|                                           |                 |                                       |                                               |                     |                   |          |           |  |  |  |  |  |  |         |  |
| Relinquished by: (Signature)<br>J.C. Bagg | Date<br>4-22-98 | Time<br>1425                          | Received by: (Signature)<br>Dennis L. O'Brien | Date<br>4-22-98     | Time<br>1425      |          |           |  |  |  |  |  |  |         |  |
| Relinquished by: (Signature)              |                 |                                       | Received by: (Signature)                      |                     |                   |          |           |  |  |  |  |  |  |         |  |
| Relinquished by: (Signature)              |                 |                                       | Received by: (Signature)                      |                     |                   |          |           |  |  |  |  |  |  |         |  |

ENVIROTECH INC.

 5796 U.S. Highway 64-3014  
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 (505) 632-0615