

JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
P.O. BOX 507
DULCE, NEW MEXICO 87528

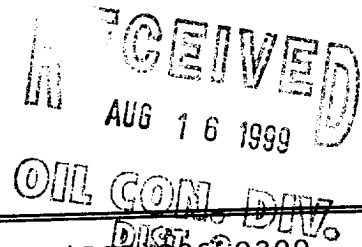
87537

SUBMIT 1 COPY TO

NATURAL RESOURCE DEPT

AND OIL & GAS ADMINISTRATION

PIT REMEDIATION AND CLOSURE REPORT



Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 366-9200
Address: 200 Amoco Court, Farmington, NM 87401
Facility or Well Name: JICARILLA CONTRACT 146-13R
Location: Unit or Qtr/Qtr Sec J Sec 9 T 25N R 5W County RIO ARriba
Pit Type: Separator Dehydrator Other BLOW
Land Type: RANGE

Pit Location: Pit dimensions: length 38, width 50, depth 15
(Attach diagram) Reference: wellhead X, other
Footage from reference: 483'
Direction from reference: 28 Degrees East of North
X West of South X

| | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------|----------|
| Depth To Groundwater: (Vertical distance from contaminants to seasonal high water elevation of groundwater) | Less than 50 feet | (20 points) | <u>0</u> |
| | 50 feet to 99 feet | (10 points) | |
| | Greater than 100 feet | (0 points) | |
| Distance to an Ephemeral Stream (Downgradient dry wash greater than ten feet in width) | Less than 100 feet | (10 points) | <u>0</u> |
| | Greater than 100 feet | (0 points) | |
| Distance to Nearest Lake, Playa, or Watering Pond (Downgradient lakes, playas and livestock or wildlife watering ponds) | Less than 100 feet | (10 points) | <u>0</u> |
| | Greater than 100 feet | (0 points) | |
| Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or: less than 1000 feet from all other water sources) | Yes | (20 points) | <u>0</u> |
| | No | (0 points) | |
| Distance To SurfaceWater: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches) | Less than 100 feet | (20 points) | <u>0</u> |
| | 100 feet to 1000 feet | (10 points) | |
| | Greater than 1000 feet | (0 points) | |

RANKING SCORE (TOTAL POINTS): 0

RJ 537 Blow PIT

Date Remediation Started: _____

Date Completed: _____

3/4/98

Remediation Method:
(Check all appropriate sections)

Excavation

☒

Landfarmed

☒

Other _____

Approx. cubic yards

700

Insitu Bioremediation _____

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

9'

Sample date

3/2/98

Sample time

1105

Sample Results

Soil: Benzene

(ppm)

Water: Benzene

(ppb)

Total BTEX

(ppm)

Toluene

(ppb)

Field Headspace

(ppm)

0.0

Ethylbenzene

(ppb)

TPH

(ppm)

16.9

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

3/4/98

PRINTED NAME

Buddy D. Shaw

SIGNATURE

Buddy D. Shaw

AND TITLE

Environmental Coordinator

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES _____ NO _____ (REASON) _____

SIGNED: _____

DATE: _____

| CLIENT: <u>AMOCO</u> | BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199 | LOCATION NO: <u>8JS37</u> C.D.C. NO: <u>5733</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------|---------------------------|----------|------------|-----------|----------|---------|-----------|--------|-----|---------|-----|--|--|--|--|--|--|--|--|--|--|-----------|----------|------|--------|-------------|------|--------|--|--|--|--|--|--|--|--|--|--|--|
| FIELD REPORT: CLOSURE VERIFICATION | | PAGE No: <u>1</u> of <u>1</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOCATION: NAME: <u>PER CONTR. 146</u> WELL #: <u>13R</u> PIT: <u>BLW</u> QUAD/UNIT: <u>J</u> SEC: <u>9</u> TWP: <u>25N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u> QTR/FOOTAGE: <u>NW14</u> <u>SE14</u> CONTRACTOR: <u>P & S</u> | | DATE STARTED: <u>3/2/98</u> DATE FINISHED: _____ ENVIRONMENTAL SPECIALIST: <u>NV</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EXCAVATION APPROX. <u>38</u> FT. x <u>50</u> FT. x <u>15</u> FT. DEEP. CUBIC YARDAGE: <u>700</u> DISPOSAL FACILITY: <u>ON-SITE</u> REMEDIATION METHOD: <u>LANDFARMED</u> LAND USE: <u>RANGE</u> LEASE: <u>JIC 146</u> FORMATION: <u>DK</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY <u>483</u> FT. <u>528W</u> FROM WELLHEAD. DEPTH TO GROUNDWATER: <u>2100'</u> NEAREST WATER SOURCE: <u>21000'</u> NEAREST SURFACE WATER: <u>21000'</u> NMOC D RANKING SCORE: <u>0</u> NMOC D TPH CLOSURE STD: <u>5000</u> PPM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOIL AND EXCAVATION DESCRIPTION: <div style="float: right; border: 1px solid black; padding: 5px; width: 200px;"> CHECK ONE: <input checked="" type="checkbox"/> PIT ABANDONED <input type="checkbox"/> STEEL TANK INSTALLED <input type="checkbox"/> FIBERGLASS TANK INSTALLED </div> <p style="margin-top: 20px;"> MOSTLY DR. YELL. BROWN SAND TO SILTY SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT STRAINING OR HC ODOR OBSERVED W/IN EXCAVATION, NO APPARENT HC ODOR OBSERVED IN ANY OF THE OVM SAMPLES. BOTTOM - BEDROCK, SHALE/SANDSTONE, VERY HARD, DUSKY RED IN COLOR. </p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> BEDROCK BOTTOM </div> <div style="text-align: center;"> SCALE 0 FT </div> | <div style="text-align: center;">FIELD 418.1 CALCULATIONS</div> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>TIME</th> <th>SAMPLE I.D.</th> <th>LAB No:</th> <th>WEIGHT (g)</th> <th>mL. FREON</th> <th>DILUTION</th> <th>READING</th> <th>CALC. ppm</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | | TIME | SAMPLE I.D. | LAB No: | WEIGHT (g) | mL. FREON | DILUTION | READING | CALC. ppm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TIME | SAMPLE I.D. | LAB No: | WEIGHT (g) | mL. FREON | DILUTION | READING | CALC. ppm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <div style="text-align: center;">PIT PERIMETER</div> | <div style="text-align: center;">OVM RESULTS</div> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>SAMPLE ID</th> <th>FIELD HEADSPACE PID (ppm)</th> </tr> </thead> <tbody> <tr><td>1 @ 9'</td><td>0.0</td></tr> <tr><td>2 @ 9'</td><td>0.0</td></tr> <tr><td>3 @ 8'</td><td>0.0</td></tr> <tr><td>4 @ 9'</td><td>0.0</td></tr> <tr><td>5 @ 15'</td><td>0.0</td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table> <div style="text-align: center; margin-top: 10px;"> LAB SAMPLES <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>SAMPLE ID</th> <th>ANALYSIS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>4 @ 9'</td> <td>TPH (418.1)</td> <td>1105</td> </tr> <tr> <td colspan="3" style="text-align: center; font-size: 1.5em;">PASSED</td> </tr> </tbody> </table> </div> | | SAMPLE ID | FIELD HEADSPACE PID (ppm) | 1 @ 9' | 0.0 | 2 @ 9' | 0.0 | 3 @ 8' | 0.0 | 4 @ 9' | 0.0 | 5 @ 15' | 0.0 | | | | | | | | | | | SAMPLE ID | ANALYSIS | TIME | 4 @ 9' | TPH (418.1) | 1105 | PASSED | | | | | | | | | | | |
| SAMPLE ID | FIELD HEADSPACE PID (ppm) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 @ 9' | 0.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 @ 9' | 0.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 @ 8' | 0.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 @ 9' | 0.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 @ 15' | 0.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| SAMPLE ID | ANALYSIS | TIME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 @ 9' | TPH (418.1) | 1105 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PASSED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <div style="text-align: center;">PIT PROFILE</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TRAVEL NOTES: CALLOUT: _____ ONSITE: <u>3/2/98</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: Blagg / AMOCO
Sample ID: 4 @ 9'
Laboratory Number: C963
Chain of Custody No: 5733
Sample Matrix: Soil
Preservative: Cool
Condition: Cool and Intact

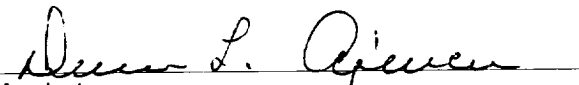
Project #: 04034-10
Date Reported: 03-03-98
Date Sampled: 03-02-98
Date Received: 03-03-98
Date Extracted: 03-03-98
Date Analyzed: 03-03-98
Analysis Needed: TPH-418.1

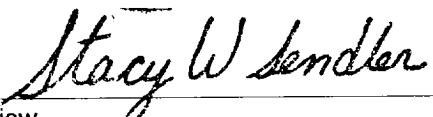
| Parameter | Concentration (mg/kg) | Det. Limit (mg/kg) |
|------------------------------|--------------------------|--------------------------|
| Total Petroleum Hydrocarbons | 16.9 | 5.0 |

ND = Parameter not detected at the stated detection limit.

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

Comments: Jicarilla Contract 146-13R Blow Pit.


Analyst


Review

CHAIN OF CUSTODY RECORD

| | | | | | | | | | | | |
|--------------------------------------------------|---------------|-------------|----------------------------------------------|---------------------|----------------------------------------------|-----------------------|--|--|--|--|---------------------|
| Client/Project Name BRGS/Amoco | | | Project Location Blow P11 | | | ANALYSIS/PARAMETERS | | | | | |
| Sampler: (Signature) <i>Alfon VLG</i> | | | Chain of Custody Tape No. 04034-10 | | | | | | | | |
| Sample No./ Identification | Sample Date | Sample Time | Lab Number | Sample Matrix | No. of Containers | Remarks | | | | | |
| ④ 291 | 3/2/98 | 1105 | 2963 | SOIL | 1 | | | | | | |
| | | | | | | RESERV. - COOL | | | | | |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |
| Relinquished by: (Signature) <i>Alfon VLG</i> | | | Date 3/3/98 | Time 0728 | Received by: (Signature) <i>Alfon VLG</i> | Date 3.3.98 | | | | | Time 0728 |
| Relinquished by: (Signature) | | | | | Received by: (Signature) | | | | | | |
| Relinquished by: (Signature) | | | | | Received by: (Signature) | | | | | | |

ENVIROTECH INC.

5796 U.S. Highway 64-3014

Farmington, New Mexico 87401

(505) 632-0615

**JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
P.O. BOX 507
DULCE, NEW MEXICO 87528**

85537

SUBMIT 1 COPY TO

NATURAL RESOURCE DEPT
AND OIL & GAS ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operator: <u>AMOCO PRODUCTION COMPANY</u> Telephone: <u>(505) 326-9200</u> | |
| Address: <u>200 Amoco Court, Farmington, NM 87401</u> | |
| Facility or Well Name: <u>JICARILLA CONTRACT 146 132</u> | |
| Location: Unit or Qtr/Qtr Sec <u>5</u> Sec <u>9</u> T25N R5W County <u>PIEDMONT</u> | |
| Land Type: <u>RANGE</u> | |
| Date Remediation Started: <u>3 2 98</u> Date Completed: <u>5/4/99</u> | |
| Remediation Method: Landfarmed <input checked="" type="checkbox"/> Approx. cubic yards <u>700</u> | |
| Composted <input type="checkbox"/> | |
| Other <input type="checkbox"/> | |
| Depth To Groundwater: (pts.) <u>0</u> | Final Closure Sampling: Sampling Date: <u>5.3.99</u> Time: <u>0950</u> Sample Results: Field Headspace (ppm) <u>0.0</u> TPH (ppm) <u>ND</u> Method <u>TPH (6015)</u> Other <input type="checkbox"/> |
| Distance to an Ephemeral Stream (pts.) <u>0</u> | |
| Distance to Nearest Lake, Playa, or Watering Pond (pts.) <u>0</u> | |
| Wellhead Protection Area: (pts.) <u>0</u> | |
| Distance To Surface Water: (pts.) <u>0</u> | |
| RANKING SCORE (TOTAL POINTS): <u>0</u> | |
| I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF | |
| DATE <u>5/4/99</u> | PRINTED NAME <u>Buddy D. Shaw</u> |
| SIGNATURE <u>Buddy D. Shaw</u> | AND TITLE <u>Environmental Coordinator</u> |
| AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE. | |
| APPROVED: YES <input type="checkbox"/> NO <input type="checkbox"/> (REASON) _____ | |
| SIGNED: _____ DATE: _____ | |

| | | |
|----------------------|--------------------------------------------------------------------------------|-----------------------------------------------------|
| CLIENT: <u>Amoco</u> | BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199 | LOCATION NO: <u>85537</u> C.O.C. NO: <u>6904</u> |
|----------------------|--------------------------------------------------------------------------------|-----------------------------------------------------|

FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

| | | |
|--------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------|
| LOCATION: NAME: <u>JICARILLA CONTRACT 144 WELL #13R</u> | PITS: <u>BLOW</u> | DATE STARTED: <u>5.3.99</u> |
| QUAD/UNIT: <u>J</u> SEC: <u>9</u> TWP: <u>25N</u> RNG: <u>5W</u> PM: <u>NM</u> CNTY: <u>RA</u> ST: <u>NM</u> | | DATE FINISHED: _____ |
| STR/FOOTAGE: <u>NW/4 SE/4</u> | CONTRACTOR: <u>P+S</u> | ENVIRONMENTAL SPECIALIST: <u>REP</u> |

SOIL REMEDIATION:

REMEDICATION SYSTEM: LANDFARM

APPROX. CUBIC YARDAGE: 700

LAND USE: RANGE

LIFT DEPTH (ft): 2.5-3

FIELD NOTES & REMARKS:

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

NMDCI BANKING SCORE: 0 NMDCI TPH CLOSURE STD: 5000 PPM

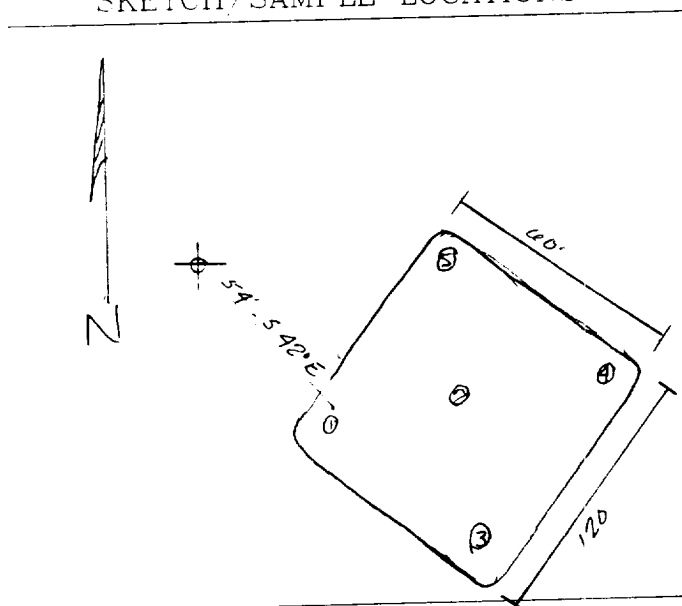
DK. YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM
NO APPARENT STAINING, NO HC ODOR DETECTED. SAMPLING DEPTHS
RANGE FROM 6"-18". COLLECTED A SPT COMPOSITE SAMPLE FOR
LAB ANALYSIS

CLOSED

FIELD 418.1 CALCULATIONS

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



OVM RESULTS

LAB SAMPLES

| SAMPLE ID | FIELD HEADSPACE PID (ppm) | SAMPLE ID | ANALYSIS | TIME | RESULTS |
|-----------|---------------------------|-----------|------------|------|---------|
| LF-1 | 0.0 | LF-1 | TPH (B015) | 0950 | ND |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

SCALE

0 FT

TRAVEL NOTES

CALLOUT: NA

ONSITE: 5.3.99

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

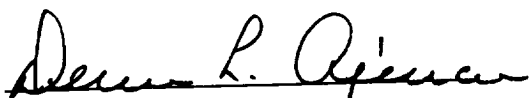
| | | | |
|----------------------|-----------------|---------------------|----------|
| Client: | Blagg / AMOCO | Project #: | 403410 |
| Sample ID: | LF - 1 | Date Reported: | 05-04-99 |
| Laboratory Number: | F118 | Date Sampled: | 05-03-99 |
| Chain of Custody No: | 6904 | Date Received: | 05-04-99 |
| Sample Matrix: | Soil | Date Extracted: | 05-04-99 |
| Preservative: | Cool | Date Analyzed: | 05-04-99 |
| Condition: | Cool and Intact | Analysis Requested: | 8015 TPH |

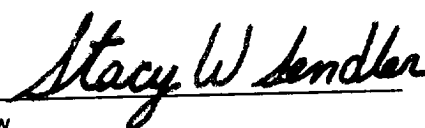
| Parameter | Concentration (mg/Kg) | Det. Limit (mg/Kg) |
|------------------------------|--------------------------|--------------------------|
| Gasoline Range (C5 - C10) | ND | 0.2 |
| Diesel Range (C10 - C28) | ND | 0.1 |
| Total Petroleum Hydrocarbons | ND | 0.2 |

ND - Parameter not detected at the stated detection limit.

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

Comments: Jicarilla Contract 146 - 13R Landfarm. 5 Pt. Composite.


Analyst


Review

6904

ENVIROTECH INC.