NM - 55

# GENERAL CORRESPONDENCE

YEAR(S):
1996 - 1995

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

January 24, 1996

**CERTIFIED MAIL**
**RETURN RECEIPT NO. Z-765-962-576**

Ms. Catherine S. Block
Environmental Protection Company
805 S. Carlton
Farmington, New Mexico 87401

Re: Jicarilla Landfarms Permit Application Review
Rio Arriba County, New Mexico

Dear Ms. Block:

The New Mexico Oil Conservation Division (OCD) has received a copy of Environmental Protection Company's (EPC) application, that was sent to the Jicarilla Apache Tribe for permitting, to permit and operate a commercial landfarm located within the Jicarilla Tribal Boundaries. The proposed locations (2-7 acre sites and 1-5 acre site) are within the NE/4 NE/4 of Section 22, Township 25 North, Range 4 West, NMPM, Rio Arriba County, New Mexico. As requested by EPC and the Jicarilla Apache Tribe, the OCD has reviewed the application and on October 13, 1995, conducted a joint site visit with Mr. Kurt Sandoval of the Jicarilla Tribe.

The proposed landfarm meets or exceeds all conditions the OCD requires of permitted landfarms within the State of New Mexico.

It has been a pleasure working with EPC and the Jicarilla Apache Tribe in standardizing oilfield disposal operations in the State for the protection of surface water, ground water, public health and the environment.

If you have any questions, please do not hesitate to call me at (505) 827-7152.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

xc: OCD Aztec Office

Z 765 962 576

**Receipt for Certified Mail**

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

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| Sent to | |
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| P.O., State and ZIP Code | |
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| Special Delivery Fee | |
| Restricted Delivery Fee | |
| Return Receipt Showing to Whom & Date Delivered | |
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| TOTAL Postage & Fees | $ |
| Postmark or Date | |

PS Form **3800,** March 1993

Kurt Sandoval

505 759 3372

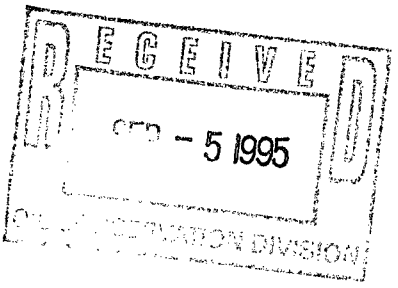
ext 392

Super Enviro Prot office

E P C
ENVIRONMENTAL PROTECTION COMPANY

1100372

August 22, 1994




Mr. Roger Anderson
Environmental Engineer
Oil Conservation Division
Santa Fe, New Mexico 87501

Dear Mr. Anderson,

I am writing to inform you that Environmental Protection Company (EPC) and Jicarilla Apache Environmental Enterprise (JAEE) are forming a partnership to operate commercial waste management sites on Jicarilla Tribal lands. EPC, a New Mexico Corporation, will hold a minority interest and be the managing entity in the partnership. The proposed locations (2 - 7 acre sites and 1 - 5 acre site) lie within the NE/4, NE/4, of Section 22, Township 25 North, Range 4 West; SW/4, NW/4, of Section 23, Township 25 North, Range 4 West; and SW/4, SE/4, of Section 14, Township 25 North, Range 4 West.

While I recognize that while the jurisdiction and permitting of the facility will be obtained through the Jicarilla Environmental Protection Office, I am requesting your department review the proposed operating procedures and related documents. These are the first facilities of their type to be operated on Jicarilla lands. Because of this, I would like your comments and acknowledgment that the facilities, using the proposed operating procedures, will be operated in a sound business manner and in general compliance with State of New Mexico Oil Conservation Division guidelines. With the concurrence of JAEE and Jicarilla EPO approval, EPC has no objection and would welcome an OCD inspection of the proposed sites.

Enclosed are copies of the operating procedures, site layouts, archeology survey, bill of lading, waste manifest, waste status certification and background soil analysis. The soil lithology, site survey and water well analysis are yet to be completed.

If I can provide you with additional information to assist in your review, please contact me or Frank McDonald, telephone (505)327-5570. Thank you in advance for your cooperation and assistance in this matter.

Sincerely,

Catherine S. Block

Catherine S. Block

805 South Carlton • Farmington, New Mexico 87401 • (505) 327-5570 • Fax: (505) 325-8680

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

August 29, 1995

COPY

Mr. Frank McDonald
Environmental Protection Company
805 South Carlton
Farmington, New Mexico 87401

Re: Soil Sampling and Subsurface Boring Results
Jicarilla Apache Soil Landfarms

Dear Mr. McDonald:

Blagg Engineering, Inc. is pleased to submit this letter report concerning limited sampling at the proposed Jicarilla Apache Soil Landfarms, located in Sections 14, 22 and 23, T25N, R4W, Rio Arriba County, New Mexico. Soil sampling and subsurface boring was conducted pursuant to the request of Environmental Protection Company.

Surface soil sampling was performed on July 19, 1995 and included limited sampling for background soil nutrients and total petroleum hydrocarbons (TPH) at Landfarms 1 and 2. An aggregate composite soil sample from 5 arbitrary locations was collected from each landfarm. The composite samples were thoroughly mixed, placed in appropriate sample containers, stored on ice and submitted to a qualified laboratory for analysis. Nutrient and TPH laboratory test results are attached. Note that TPH values were below laboratory detection levels for both samples.

Subsurface soil borings were advanced on August 28, 1995. An EarthProbe 200 auger drill rig was used to drill one soil boring each at Landfarm 1, Landfarm 2 and Landfarm 3 (see attached Site Maps). Auger cuttings were logged and described (see attached Boring Logs) by a geologist. No groundwater was encountered to a total depth of 40 feet below ground surface.

The Ojito Well, a windmill pumped water well located approximately 1/2 mile south of Landfarm 1, was sounded on August 28, 1995. The depth to water was recorded at 50.5 feet below the surface casing. Note that the ground surface elevation at this well is approximately 80 feet below the ground surface of Landfarm 1. Based on this, the groundwater at Landfarm 1 can be extrapolated to be approximately 130 feet below ground surface, assuming a flat water table. Both Landfarms 2 and 3 are at higher elevations than Landfarm 1 and groundwater can reasonably be expected to be at correspondingly deeper depths.

Closure and Limitations

The Scope of Services performed for this investigation was limited to surface and subsurface soil sampling and testing for total petroleum hydrocarbons, nutrient availability and lithology. Due to possible variations in contamination, nutrients and subsurface lithology, different results may be

found at locations not directly investigated by Blagg Engineering, Inc. This investigation did not pursue site historical use, the potential for contamination sources other than those directly sampled and tested, flood potential, or any other potential hazards. Blagg Engineering, Inc. recommends the use of qualified contractors experienced in detection of flood and other potential environmental hazards during any future site work.

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

Jeffrey C. Blagg, President
NMPE 11607

Attachments:

Site Map - Landfarms 1 & 2
Site Map - Landfarm 3
Boring Logs (3)
Laboratory Analytical Reports

# BLAGG ENGINEERING, Inc.

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


## BORE HOLE / LITHOLOGY REPORT

BORING No: BH - 1
PAGE No: 1

PROJECT: AUGER DRILLING / LITHOLOGY
CLIENT: JICARILLA APACHE ENVIRONMENTAL ENTERPRISE / EPC
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: EARTHPROBE 200
LEGAL LOCATION: SEC. 22 & 23, T25N, R4W, RIO ARRIBA, COUNTY, NM

LOCATION: LANDFARM #2
DATE START: 8-28-95
DATE FINISH: 8-28-95
OPERATOR: JCB
PREPARED BY: NJV

| DEPTH FEET | SAMPLE PT. | SOIL DESCRIPTION | LITHOLOGY INTERVAL | FIELD CLASSIFICATION AND REMARKS |
|---|---|---|---|---|
| | | | | GROUND SURFACE |
| 2–6 | | | 0 - 7 FT. | MODERATE TO DARK YELLOWISH BROWN SAND, NON-COHESIVE, DRY, FIRM. COARSE GRAINED, WELL SORTED. |
| 8–24 | | | 7 - 24 FT. | DARK YELLOWISH BROWN SILTY SAND, NON-COHESIVE, DRY, FIRM, FINE TO MEDIUM GRAINED, WELL SORTED. |
| 26–32 | | | 24 - 33 FT. | DARK YELLOWISH BROWN CLAY, NON-PLASTIC TO SLIGHTLY PLASTIC, SLIGHTLY MOIST, VERY STIFF TO HARD. |
| 34–50 | | | | TOTAL DEPTH: 33.0 FEET : AUGER REFUSAL |

DRAWING: JAT-LF2 | DATE: 8/29/95 | DWN BY: NJV

# BLAGG ENGINEERING, Inc.

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


## BORE HOLE / LITHOLOGY REPORT

BORING No: BH - 2
PAGE No: 1
LOCATION: LANDFARM #1
DATE START: 8-28-95
DATE FINISH: 8-28-95
OPERATOR: JCB
PREPARED BY: NJV

PROJECT: AUGER DRILLING / LITHOLOGY
CLIENT: JICARILLA APACHE ENVIRONMENTAL ENTERPRISE / EPC
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: EARTHPROBE 200
LEGAL LOCATION: SEC. 22 & 23, T25N, R4W, RIO ARRIBA, COUNTY, NM

| DEPTH FEET | SAMPLE PT. | SOIL DESCRIPTION | LITHOLOGY INTERVAL | FIELD CLASSIFICATION AND REMARKS |
|---|---|---|---|---|
| | | | | GROUND SURFACE |
| 0 - 24 | | | 0 - 24 FT. | MODERATE TO DARK YELLOWISH BROWN SAND TO SILTY SAND, NON-COHESIVE, DRY TO SLIGHTLY MOIST, FIRM, COARSE GRAINED, WELL SORTED. |
| 24 - 25.5 | | | 24 - 25.5 FT. | DARK YELLOWISH BROWN CLAY, SLIGHTLY PLASTIC TO PLASTIC, SLIGHTLY MOIST, STIFF TO VERY STIFF. |
| 25.5 - 32 | | | 25.5 - 32 FT. | DARK YELLOWISH BROWN SILTY SAND, NON-COHESIVE, SLIGHTLY MOIST, FIRM TO DENSE, MEDIUM GRAINED, WELL SORTED. |
| 32 - 33 | | | 32 - 33 FT. | CLAY, SAME DESCRIPTION AS 24 - 25.5 FT. INTERVAL EXCEPT VERY STIFF ONLY. |
| 33 - 40 | | | 33 - 40 FT. | DARK YELLOWISH BROWN SILTY SAND / SILTY CLAY, NON-COHESIVE, SLIGHTLY MOIST, FIRM TO DENSE, FINE TO MEDIUM GRAINED, WELL SORTED. |
| 40 | | | | TOTAL DEPTH: 40.0 FEET |

DRAWING: JAT-LF1 | DATE: 8/29/95 | DWN BY: NJV

# BLAGG ENGINEERING, Inc

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


## BORE HOLE / LITHOLOGY REPORT

BORING No: BH - 3
PAGE No: 1
LOCATION: LANDFARM #3
DATE START: 8-28-95
DATE FINISH: 8-28-95
OPERATOR: JCB
PREPARED BY: NJV

PROJECT: AUGER DRILLING / LITHOLOGY
CLIENT: JICARILLA APACHE ENVIRONMENTAL ENTERPRISE / EPC
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: EARTHPROBE 200
LEGAL LOCATION: SEC. 14, T25N, R4W, RIO ARRIBA, COUNTY, NM

| DEPTH FEET | SAMPLE FT. | SOIL DESCRIPTION | LITHOLOGY INTERVAL | FIELD CLASSIFICATION AND REMARKS |
|---|---|---|---|---|
| 0 | | | | GROUND SURFACE |
| 2 | | | | |
| 4 | | | | |
| 6 | | | | |
| 8 | | | 0 - 16 FT. | MODERATE TO DARK YELLOWISH BROWN SILTY SAND, NON-COHESIVE, DRY TO SLIGHTLY MOIST, FIRM TO DENSE, MEDIUM TO COARSE GRAINED, WELL SORTED |
| 10 | | | | |
| 12 | | | | |
| 14 | | | | |
| 16 | | | | DARK YELLOWISH BROWN CLAY, PLASTIC, SLIGHTLY MOIST, HARD AT 16 FT. |
| 18 | | | | TOTAL DEPTH: 16.0 FEET ; AUGER REFUSAL. |
| 20 | | | | |
| 22 | | | | |
| 24 | | | | |
| 26 | | | | |
| 28 | | | | |
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| 48 | | | | |
| 50 | | | | |

DRAWING: JAT-LF3 | DATE: 8/29/95 | DWN BY: NJV

ANALYTICA
ENVIRONMENTAL LABORATORY

July 31, 1995

Jeff Blagg
Blagg Engineering, Inc.
PO Box 87
Bloomfield, NM 87413

Dear Jeff:

Enclosed are the results for the analysis of soil samples, received on July 18, 1995. The samples were received intact and analyzed for Total Petroleum Hydrocarbons (TPH) and Nitrogen, Total Phosphorus, and Potassium (NPK), and pH, as per the chain of custody form.

TPH analysis was performed according to EPA Method 418.1 following the freon extraction of the samples (EPA Method 3550 - Sonication Extraction). The instrument used for the analysis was a BUCK TPH analyzer. Levels of TPH present in the samples are indicated on the report sheets.

The soil was extracted with an equal amount of water. Inorganic parameters (NPK and pH) were than determined for the extract according to the appropriate methodologies as outlined in Standard Methods for the Examination of Water and Wastewater, 18th ed., 1992.

Quality control reports appear at the end of the analytical package and can be identified by title. Should you have any questions regarding the reports or the analysis, feel free to call.

Sincerely,

Denise A. Bohemier
Lab Director

807 SOUTH CARLTON • FARMINGTON, NEW MEXICO 87401 • (505) 326-2395

ANALYTICA

# TOTAL PETROLEUM HYDROCARBONS

**EPA Method 418.1**

**Blagg Engineering, Inc.**

| | | | |
|---|---|---|---|
| Project ID: | Jicarilla Landfarm | Report Date: | 07/26/95 |
| Sample Matrix: | Soil | Date Sampled: | 07/19/95 |
| Preservative: | Cool | Date Received: | 07/19/95 |
| Condition: | Intact | Date Extracted: | 07/21/95 |
| | | Date Analyzed: | 07/21/95 |

| Sample ID | Lab ID | Concentration (mg/kg) | Detection Limit (mg/kg) |
|---|---|---|---|
| Jicarilla Landfarm #1 | 1209 | ND | 25.0 |
| Jicarilla Landfarm #2 | 1210 | ND | 24.9 |

ND- Analyte not detected at the stated detection limit.

**Reference:** Method 3550 - Sonication Extraction; Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, September, 1986; Method 418.1 - Petroleum Hydrocarbons, Total Recoverable; Chemical Analysis of Water and Waste, United States Environmental Protection Agency, 1978.

**Comments:**

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

# Quality Control Report
## TOTAL PETROLEUM HYDROCARBONS
### EPA Method 418.1

**Duplicate Analysis**

| | | | |
|---|---|---|---|
| Project ID: | Jicarilla Landfarm | Report Date: | 07/26/95 |
| Sample ID: | Jicarilla Landfarm #2 | Date Extracted: | 07/21/95 |
| Sample Matrix: | Soil | Date Analyzed: | 07/21/95 |

| Lab ID | Duplicate Conc. (mg/kg) | Sample Conc. (mg/kg) | Percent Difference | Acceptance Limit |
|---|---|---|---|---|
| 1210Dup | ND | ND | NA | < 22 |

ND - Analyte not detected at the stated detection limit.
NA - Not calculated.

**Reference:** Method 3550 - Sonication Extraction; Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, September, 1986; Method 418.1 - Petroleum Hydrocarbons, Total Recoverable; Chemical Analysis of Water and Waste, United States Environmental Protection Agency, 1978.

**Comments:**

M. Wilkins
Analyst

Review

ANALYTICA

# Quality Control Report
## TOTAL PETROLEUM HYDROCARBONS
### EPA Method 418.1

**Method Blank Analysis**

| | | | |
|---|---|---|---|
| Project ID: | Jicarilla Landfarm | Report Date: | 07/26/95 |
| Sample Matrix: | Soil | Date Extracted: | 07/21/95 |
| | | Date Analyzed: | 07/21/95 |

| Lab ID | Concentration (mg/kg) | Detection Limit (mg/kg) |
|---|---|---|
| MB34901 | ND | 5.00 |

ND- Analyte not detected at the stated detection limit.

**Reference:** Method 3550 - Sonication Extraction; Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, September, 1986; Method 418.1 - Petroleum Hydrocarbons, Total Recoverable; Chemical Analysis of Water and Waste, United States Environmental Protection Agency, 1978.

**Comments:**

M. Wilkins
Analyst

Review

ANALYTICA

# Quality Control Report
## TOTAL PETROLEUM HYDROCARBONS
### EPA Method 418.1

**Matrix Spike Analysis**

| | | | |
|---|---|---|---|
| Project ID: | Jicarilla Landfarm | Report Date: | 07/26/95 |
| Sample Matrix: | Soil | Date Extracted: | 07/21/95 |
| | | Date Analyzed: | 07/21/95 |

| Lab ID | Spiked Sample Conc. (mg/kg) | Unspiked Sample Conc. (mg/kg) | Spike Added (mg/kg) | Percent Recovery |
|---|---|---|---|---|
| MBSPK34901 | 46.2 | ND | 50.0 | 92% |

Acceptance Limits: 89 - 111%

ND- Analyte not detected at the stated detection limit.

**Reference:** Method 3550 - Sonication Extraction; Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, September, 1986; Method 418.1 - Petroleum Hydrocarbons, Total Recoverable; Chemical Analysis of Water and Waste, United States Environmental Protection Agency, 1978.

**Comments:**

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

# Quality Control Report
## TOTAL PETROLEUM HYDROCARBONS
### EPA Method 418.1

**Matrix Spike Duplicate Analysis**

| | | | |
|---|---|---|---|
| Project ID: | Jicarilla Landfarm | Report Date: | 07/26/95 |
| Sample Matrix: | Soil | Date Extracted: | 07/21/95 |
| | | Date Analyzed: | 07/21/95 |

| Lab ID | Spiked Duplicate Conc. (mg/kg) | Spiked Sample Conc. (mg/kg) | Percent Difference | Acceptance Limit |
|---|---|---|---|---|
| MBSPKDP34901 | 45.5 | 46.2 | 2% | < 8 |

ND- Analyte not detected at the stated detection limit.

**Reference:** Method 3550 - Sonication Extraction; Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, September, 1986; Method 418.1 - Petroleum Hydrocarbons, Total Recoverable; Chemical Analysis of Water and Waste, United States Environmental Protection Agency, 1978.

**Comments:**

M. Wilkins
Analyst

Review

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ENVIRONMENTAL LABORATORY

# TKN Analysis
## Blagg Engineering, Inc.

| | | | |
|---|---|---|---|
| Sample ID: | Jicarilla Landfarm #1 | Date Reported: | 07/31/95 |
| Laboratory ID: | 1209 | Date Sampled: | 07/17/95 |
| Sample Matrix: | Soil | Time Sampled: | 12:45 |
| Condition: | Intact | Date Received: | 07/18/95 |

| Parameter | | Analytical Result | Units |
|---|---|---|---|
| **General** | Lab pH | 8.1 | s.u. |
| **Nutrients** | Ammonia | 0.38 | mg/kg |
| | Nitrate - N | 0.37 | mg/kg |
| | Nitrite - N | 0.01 | mg/kg |
| | Total Phosphorus | 0.16 | mg/kg |
| **Cations** | Potassium | 0.21 | mg/kg |

**Reference** U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Review

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ENVIRONMENTAL LABORATORY

# TKN Analysis
## Blagg Engineering, Inc.

| | | | |
|---|---|---|---|
| Sample ID: | Jicarilla Landfarm #2 | Date Reported: | 07/31/95 |
| Laboratory ID: | 1210 | Date Sampled: | 07/17/95 |
| Sample Matrix: | Soil | Time Sampled: | 13:15 |
| Condition: | Intact | Date Received: | 07/18/95 |

| Parameter | | Analytical Result | Units |
|---|---|---|---|
| **General** | Lab pH | 8.3 | s.u. |
| **Nutrients** | Ammonia | 0.61 | mg/kg |
| | Nitrate - N | 1.36 | mg/kg |
| | Nitrite - N | 0.14 | mg/kg |
| | Total Phosphorus | 0.01 | mg/kg |
| **Cations** | Potassium | 0.16 | mg/kg |

**Reference** U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

# General Water Quality
## Quality Control Report

**Blagg Engineering, Inc.**

Report Date: 07/31/95

| Parameter | Analytical Result | Acceptance Range | Units |
|---|---|---|---|
| Laboratory pH | 6.0 | 5.90 - 6.09 | s.u. |
| Ammonia | 6.57 | 4.69 - 7.92 | mg/L |
| Nitrate | 12.3 | 11.4 - 12.8 | mg/L |
| Nitrite | NA | NA | |
| Total Phosphorus | 11.7 | 9.69 - 13.1 | mg/L |
| Potassium | 114 | 96.9 - 131 | mg/L |

**Reference:** U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

**Comments:**

Reviewed

Bill of Lading

**Jicarilla Landfarms L. L. P.**

Month Of:

805 S. Carlton, Farmington, NM 87401
(505) 327-5570

| MANIFEST | | COMPLETE DESCRIPTION OF SHIPMENT | | | TRANSPORTING COMPANY | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Date | Time In | Point of Origin | Material | Grid | Yds | Company | Truck # | Driver Signature | Time Out |
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" I certify the material hauled from the above location has not been added to or mixed with, and is the same material recieved from the above mentioned Generator, and that no additional materials have been added."

Print Name: Company: Signature:

Date:

MANIFEST

**Jicarilla Landfarms L.L.P.**

Landfarm No.: Date In:

Cell No.:

Generator: Contact:

Type of Material: Yards: Remediation Technique:

***Testing***

| Date | OVM(ppm) | TPH(ppm) | Total BTEX(ppm) | Benzene(ppm) | Tested By |
|---|---|---|---|---|---|
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***Work Performed***

| Date | Description of Work | Initials |
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COPY

# JICARILLA LANDFARMS, L.L.P. REMEDIATION FACILITIES

## I. TYPE OF OPERATION

The purpose of the facility is remediation of oilfield contaminated solids which are exempt from RCRA Sub-title C regulations.

## II. OPERATOR

The facility is to be a joint venture between the Jicarilla Apache Environmental Enterprise(JAEE) and Environmental Protection Company (EPC), a State of New Mexico corporation.

## III. LOCATION OF LANDFARM

The project sites are located on the Jicarilla Apache Tribal Reservation in New Mexico. Two, seven acre sites located within the SW/4, NW/4 of Section twenty-three (23), Township twenty-five (25) North, Range four (4) West, Rio Arriba County, New Mexico; and the NE/4, NE/4 of Section twenty-two (22) Township twenty-five (25) North, Range four (4) West, and one , five acre site located within SW/4, SE/4 of Section fourteen (14), Township twenty-five (25) North, Range four (4) West, N.M.P.M., Rio Arriba County, New Mexico, will be used for this project

## IV. EXPANSION REQUEST

Additional remediation sites may be requested as business requirements dictate. All additional sites will operate under the provisions of this permit application.

## V. LAND & OWNERSHIP

The land upon which the facility will be located is owned by the Jicarilla Apache Tribe, PO Box 507, Dulce, New Mexico 87528. There are no private residences within one-mile of the site.

## VI. FACILITY DESCRIPTION

1. Each facility will be fenced and bermed for the protection of wildlife and stock animals.

2. There are no pipelines crossing the facilities.

3. The central facility will have a portable office for the purpose of storing records relevant to the operations of the facility.

4. No chemicals will be stored on the facilities.

5. An above ground diesel fuel tank will be located on the central facility.

6. RCRA exempt contaminated soils are the only wastes accepted at these facilities.

## VII. FACILITY CONSTRUCTION/OPERATION & WASTE CLASSIFICATION

### A. **Facility Construction**

1. Location - Each facility shall not be located in any watercourse, lakebed, sink-hole, or other depression. Facilities located adjacent to any such watercourses or depression shall be located safely above the high-water level of such watercourse or depression. In addition, facilities located adjacent to any watercourses shall include a storm water runoff plan.

2. Fences & Signs - Each facility shall be fenced and have a sign at the entrance. The sign shall be legible from at least fifty (50) feet and contain the following information: a) name of the facility, b) location by section, township and range, and c) emergency phone number.

3. Facility Buffer Zone - No contaminated soils will be placed within one-hundred (100) feet of the boundary of the facility unless it can be demonstrated that a smaller buffer zone will not adversely impact the adjacent properties.

4. Pipeline Buffer Zone - No pipelines cross any of the propose facilities.

5. Facility Berming - The portion of the facility containing contaminated soils shall be bermed to prevent runoff and run-on. A berm should be constructed and maintained such that it is capable of containing precipitation from a one-hundred year flood for that specific region.

6. Treatment Zone Monitoring - Because a waste facility is designed to remediate contaminated soils and not transfer contaminants into the underlying native soil and/or groundwater, tests will be conducted to detect leaching of contaminates. If the native ground surface has a

minimum of three feet of uncemented material (i.e. soil) then a treatment zone monitoring program may be incorporated into the facility design, to ensure contaminants are not leaching into the native soil/groundwater. The following procedures should be used to monitor treatment zone not to exceed three (3) feet beneath the waste facility:

a. One (1) background soil sample should be taken from the center portion of the waste facility two (2) feet below the native ground surface prior to operation. The sample should be analyzed for total petroleum hydrocarbons (TPH), major cations/anions, volatile aromatic organics (BTEX), and heavy metals using approved EPA methods.

b. A treatment zone not to exceed three (3) feet beneath the land farm should be monitored. A minimum of one random soil sample should be taken from each individual cell, with no cell being larger than five (5) acres, six (6) months after the first contaminated soils are received in the cell and then quarterly thereafter. The sample should be taken at two to three (2-3) feet below the native ground surface.

c. The soil samples will be analyzed using approved EPA methods for TPH and BTEX quarterly, and more major cations/anions and heavy metals annually.

d. Upon obtaining each sample, the borehole will be filled with an impermeable material.

e. Analytical results from the treatment zone monitoring will be submitted to the Jicarilla Apache Environmental Protection Office for review.

B. Facility Operation - The following operating procedures will be utilized to insure the operation of a waste facility will not adversely impact ground water, surface water, public health or the environment.

1. Disposal shall only occur when an attendant is on duty. The facility shall be secured when no attendant is present.

2. Within 72 hours of receipt of contaminated soils, remediation will be commenced.

3. Soils with volatile contaminates will be remediated with tradtional landfarming. Landfarming entails spreading eight (8) to twelve (12) inch

in depth. Followed by tilling of soil as needed (approximately every 10-14 days) to enhance biodegradation of contaminants.

4. Soils with non-volatile contaminates will be remediated with bio-conversion methods. Remediation will consist of windrowing of said stained soils with soil enhancing nutrients, approximately twenty-five (25) feet wide by eight (8) feet high by fifty (50) feet in length, and may include application of naturall occurring hydrocarbon reducing bacteria. Windrows will be turned every 14 - 21 days with testing being done on an as needed basis until soils are within closure limits.

5. Exempt contaminated soils should be placed in the remediation facilities so that they are physically separate (i.e. bermed) .

6. Successive lifts of contaminated soils should not be spread until a measurement of Total Petroleum Hydrocarbons (TPH) in the previous lift is less than 100 parts per million (ppm), and the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and the benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations shall be maintained at the facility.

7. Moisture should be added as necessary to enhance bioremediation and to control blowing dust. There shall be no ponding, pooling or run-off of water allowed. Any ponding of precipitation should be removed within seventy-two (72) hours of discovery.

8. Enhanced bioremediaton through the application of microbes and/or fertilizers shall be used as necessary to bring contaminated soils into compliance with the stated action levels of TPH and BTEX.

9. No free liquids or soils with free liquids shall be accepted at the facility.

10. Comprehensive records of all material disposed of at the facility shall be maintained at the facility. The records for each load will include: 1) the generator, 2) the origin, 3) date received, 4) quantity, 5) Certification of exempt status or analysis for hazardous constituents if non-exempt, 6) transporter, and 7) exact cell location and any addition of microbes, moisture, fertilizers, etc.

C. Characterization & Tracking of Wastes - To ensure hazardous wastes are prohibited from entering the waste facilities, all three facilities shall operate under the following conditions:

1. The facilities shall be authorized to accept only:

a. Oilfield contaminated solids which are exempt from RCRA Subtitle C regulations. These wastes should be accompanied by a "Certification of Waste Status" from the generator.

2. At no time will any of the facilities accept wastes which are hazardous by either testing or listing.

3. All loads received at the facility will be accompanied by the following:

a. A "Certification of Waste Status" signed by the waste generator.

b. The analytical results of Hazardous Waste Characterization for non-exempt waste including corrosivity reactivity, ingitabity, and toxic constituents and a certification that no listed hazardous wastes are contained within the wastes. The samples for these analyses and results will be obtained from the wastes prior to removal from the generator's facility and without dilution in accordance with EPA SW-846 sampling procedures.

4. The transporter of all wastes to the facility will supply a certification that wastes delivered are those wastes received from the generator and that no additional materials have been added.

## VIII. SPILL/LEAK PREVENTION & REPORTING (CONTINGENCY PLANS)

A. In the event of a leak or spill the following procedure will be employed:

1. Stop the leak.

2. Notify EPO immediately by phone and include in monthly report if spill is greater than 100 gallons.

3. Include in monthly report if less than 100 gallons.

4. Clean up spill and incorporate the material along with any contaminated soil in active remediation facility soils.

5. Notify the EPO immediately when spill has been cleaned up (if over 100 gallons).

## IX. INSPECTION, MAINTENANCE & REPORTING

A. Soils collected from each generator will be kept and maintained separately. Records will be kept on the acceptance, remediation and removal of these soils. Housekeeping and routine inspections are part of the normal operating procedure during routine business operations. When operations are suspended due to inclement weather or other uncontrollable situations, the sites will be inspected no less than every 72 hours. This will insure berms, fencing and all other safety and all other protective barriers are intact and functioning. In case of any facility failure being detected, the EPO will be notified within 24 hours of the failure and the corrective action taken.. All above ground fuel storage tanks will have approved liners and bermed for spill protection.

B. The remediation facilities shall be maintained to keep soils from blowing and to minimize odors. Berms will be maintained to prevent erosion. Berms will be inspected after any rainfall or wind storms of consequence.

## X. CLOSURE PLAN

A. At the time of closure: 1) No new material will be accepted at the facility. Existing soils will be remediated to action levels of the proposed area according to the EPO standards that are in effect at the time of closure. 2) The area will then be recontoured and reseeded with EPO approved seed mixtures and allowed to return to its natural state; and 3) Closure shall be pursuant to all EPO requirements in effect at the time of closure.

B. EPC will notify the JAEE and the EPO of cessation of operations. Upon cessation of disposal operations for nine (9) consecutive months, EPC and JAEE will complete the cleanup of constructed facilities and restoration of the facility site according to the completed agreement within the following six (6) months, unless an extension of time is granted form the EPO.

## XI. SITE CHARACTERISTICS - FRESH WATER PROTECTION DEMONSTRATION

One stock well is located within a one (1) mile radius of two of the proposed facilities. Depth to ground water is being determined and samples will be drawn for background purposes as discussed in Section VII.

XII. PROOF OF NOTICE

This written notice of application to the Jicarilla Apache Tribe is proof of notice for the proposed facilities on Jicarilla Apache Lands. Mr. Kurt Sandoval is the current grazing rights lease holder of the proposed waste facility sites. Mr. Sandoval has been notified of our intent.

XIII. H2S CONTINGENCY PLAN

Not applicable. The remediation facility facilities are not designed to generate H2S.

XIV. ADDITIONAL INFORMATION

EPC has been approved by the Jicarilla Apache Tribal Council, Jicarilla Apache Minerals Committee and the Jicarilla Apache Environmental Protection Office to perform soil remediation on Jicarilla Apache lands including bioremediation on approved Amoco Production Company central sites. EPC has also maintained a remediation facility on Crouch Mesa in San Juan County for Amoco Production Company since 1992.

XV. CERTIFICATION

Jicarilla Apache Environmental Protection Office Certification is being requested for these proposed facilities.

JICARILLA APACHE ENVIRONMENTAL PROTECTION OFFICE

Supervisor_____
Date:_____

ENVIRONMENTAL PROTECTION COMPANY

BY:_____
Date:_____

E P C

ENVIRONMENTAL PROTECTION COMPANY

# CERTIFICATE OF WASTE STATUS
# EXEMPT OILFIELD WASTE

Originating
Site: (Include Name, Section, Township, Range, 1/4, etc.)

_____

_____

This material originated:

_____ In the State of New Mexico, Jicarilla Apache Reservation

_____From the State of _____. Letter from the Regulatory Agency having jurisdiction therefore is attached.

Source: _____

_____

_____

Destination: Jicarilla Landfarms, LLP
Landfarm No. _____
Legal:

I _____

representative for _____

do hereby certify that the waste describe above is material that is exempted from regulation by the Resource Conservation and Recovery Act (RCRA) and is considered non-hazardous oilfield waste. I further certify that to the best of my knowledge, no other material has been commingled with the exempt waste that would otherwise cause the waste to be classified as "hazardous" by RCRA or any other Federal, State or Local law, regulation or ordinance.

Signature _____

Title _____

Address _____

Date _____

805 South Carlton • Farmington, New Mexico 87401 • (505) 327-5570 • Fax: (505) 325-8680

Bill of Lading

**Jicarilla Landfarms L. L. P.**

Month Of:

805 S. Carlton, Farmington, NM 87401
(505) 327-5570

| MANIFEST | | COMPLETE DESCRIPTION OF SHIPMENT | | | TRANSPORTING COMPANY | | | | |
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" I certify the material hauled from the above location has not been added to or mixed with, and is the same material recieved from the above mentioned Generator, and that no additional materials have been added."

Print Name: Company: Signature:

Date:

**Jicarilla Landfarms L.L.P.**
P.O. Box
Dulce, NM 87528
(505) 759-3328 or (505) 327-5570

MANIFEST No.

Date In:

Remediation Site No. Cell No.

Generator: Contact:

Type of Material: Yards: Remediation Technique:

## *Testing*

| Date | OVM(ppm) | TPH(ppm) | Total BTEX(ppm) | Benzene(ppm) | Tested By |
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## *Work Performed*

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# *Velarde Energy Service*

AN ARCHAEOLOGICAL SURVEY OF
THREE LAND FARMS IN RIO ARRIBA
COUNTY, NEW MEXICO, CONDUCTED FOR
ENVIRONMENTAL PROTECTION COMPANY

CR-95-453

JICARILLA APACHE TRIBAL RESOLUTION
#83-581

AUGUST 17, 1995

# *Dulce, New Mexico*

# JICARILLA LAND FARM #3
# JICARILLA LAND FARM #1
# JICARILLA LAND FARM #2

A Cultural Resources Inventory Prepared by Gifford Velarde, CEO, Velarde Energy Services.

# ABSTRACT

This instrument details the findings of a Class III Pedestrian Survey of three land farms for Environmental Protection Company. Approximately 19.02 acres of land were surveyed for cultural resources. No significant cultural resources were encountered during archaeological survey. Archaeological clearance is recommended.

Archaeological clearance is recommended.

The survey was conducted by:

Velarde Energy Services
P. O. Box 919
Dulce, NM 87528
Phone: (505) 759-3396

The survey was conducted under:

Jicarilla Apache Tribal Resolution #83-581

The survey was conducted for:

Mr. Frank McDonald
Environmental Protection Company
805 South Carlton
Farmington, NM 87401

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## INTRODUCTION

On August 16, 1995, Gifford Velarde, archaeologist, from Velarde Energy Service, conducted a class III Pedestrian Survey of three land farms for Environmental Protection Company.

Mr. Frank McDonald requested the survey and was also present for the inspections.

The proposed projects are west of Highway 537 on the southern half of the Jicarilla Apache Reservation.

## METHODOLOGY

The proposed projects were surveyed by walking 4-5 meter linear transects. A records search is done prior to survey. If a buffer zone is necessary it is determined by lease agreement and payment of that additional area.

## RECORDS SEARCH

| | |
|---|---|
| LAN03944 | A lithic/ceramic scatter from the Anasazi period. |
| LAN020376 | An Anasazi hearth with lithic/ceramic found in association. |
| LAN026153 | Ceramics, lithics and groundstone all fashion by the Anasazi. |
| LAN026154 | Historic trash with wood chips. |
| LAN026155 | Anasazi period ceramics and lithics. |
| LAN050453 | Possible hearth with lithic and ceramics from the Anasazi. |

PROJECT LOCATIONS

Environmental Protection Company - JICARILLA LAND FARM #3

Land Jurisdiction: Jicarilla Apache Tribe

Legal Description: The proposed project is in the SE 1/4 of the SE 1/4 and the SW 1/4 of the SE 1/4 of Section 14, Township 25 North, Range 4 West, N.M.P.M., Rio Arriba County, New Mexico.

Elevation: 7000' - 7040'

UTM Coordinates: Zone 13; 301,100 mE; 4,029,720 mN (center)

Actual Project Area: 500' x 435'
TOTAL: 5.0 acres

Actual Survey Area: 500' x 435' + 50' x 20' (access)
TOTAL: 5.02 acres

Access: Access would be approximately 50 feet from the north.

Physiography & Environmental Setting:

The proposed project is situated in a small valley. The drainage from this area is towards the east. A clay loam is the foundation for mountain muhly, sage, juniper, Indian tea, prickly pear, gumweed, composite, bottle brush, and slender wheatgrass.

Cultural Resources:

No cultural resources were found during archaeological survey.

Recommendations:

Archaeological clearance is recommended.

Environmental Protection Company - JICARILLA LAND FARM #1

Land Jurisdiction: Jicarilla Apache Tribe

Legal Description: The proposed project is in the SW 1/4 of the NW 1/4 of Section 23 and the SE 1/4 of the NE 1/4 of Section 22, Township 25 North, Range 4 West N.M.P.M., Rio Arriba County, New Mexico.

Elevation: 7000' 7020'

UTM Coordinates: Zone 13; 300,035 mE; 4,029,035 mN (center)

Actual Project Area: Quadrilateral Shape
TOTAL: 7.0 acres

Actual Survey Area: Quadrilateral Shape
TOTAL: 7.0 acres

Access: No access required.

Physiography & Environmental Setting:

The proposed project is found in a valley. The valley drains towards the south. The soil consists of a clay loam. Sage, three-awn, Indian ricegrass, blue grama, and slender wheatgrass were all found on the proposed project.

Cultural Resources:

No cultural resources were found during archaeological survey.

Recommendations:

Archaeological clearance is recommended.

Environmental Protection Company - JICARILLA LAND FARM #2

Land Jurisdiction: Jicarilla Apache Tribe

Legal Description: The proposed project is in the NE 1/4 of the NE 1/4 and the SE 1/4 of the NE 1/4 of Section 22, Township 25 North, Range 4 West N.M.P.M., Rio Arriba County, New Mexico.

Elevation: 7040' - 7100'

UTM Coordinates: Zone 13; 299,820 mE; 4,029,195 mN (center)

Actual Project Area: Quadrilateral Shape
TOTAL: 7.0 acres

Actual Survey Area: Quadrilateral Shape
TOTAL: 7.0 acres

Access: No access required.

Physiography & Environmental Setting:

The proposed project is found at the end of an upper valley in a box canyon. Drainage from this area is south. A clay and sandy loam are found on the proposed project. This soil supports sage, Indian ricegrass, mustard, snakeweed, showy daisy, greasewood, rabbitbrush, prickly pear, cinque foil, and composite.

Cultural Resources:

A few tin cans (modern trash) were found during archaeological survey.

Recommendations:

Archaeological clearance is recommended.

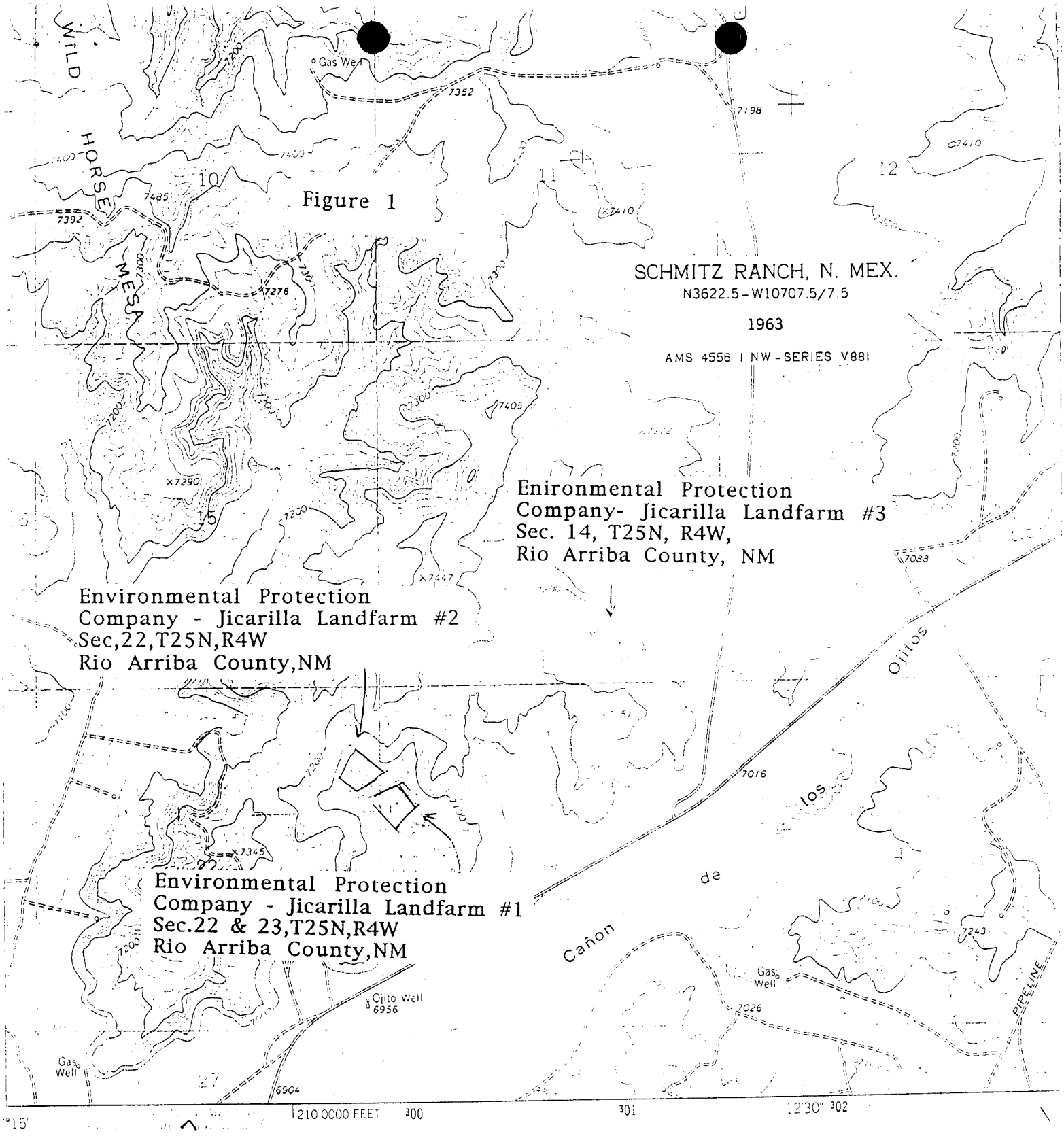
## SUMMARY

The archaeological clearance of three land farms for Environmental Protection Company, uncovered no significant cultural resources. Archaeological clearance is recommended for the proposed projects. Final clearance is the perogative of the Bureau of Indian Affairs Archaeologist.

## BIBLIOGRAPHY

Museum of New Mexico

1986 Archaeological Records Management System. Laboratory of Anthropology, Santa Fe. New Mexico.




Mapped, edited, and published by the Geological Survey

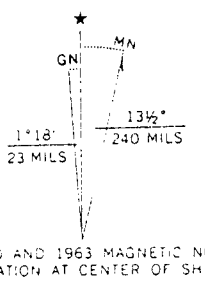
Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1958 and 1962. Field checked 1963

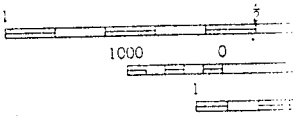
Polyconic projection. 1927 North American datum
10,000-foot grid based on New Mexico coordinate system, central zone
1000-meter Universal Transverse Mercator grid ticks,
zone 13, shown in blue

Where omitted, land lines have not been established

Entire area is within the San Juan Basin Gas Field




UTM GRID AND 1963 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET




THIS MAP
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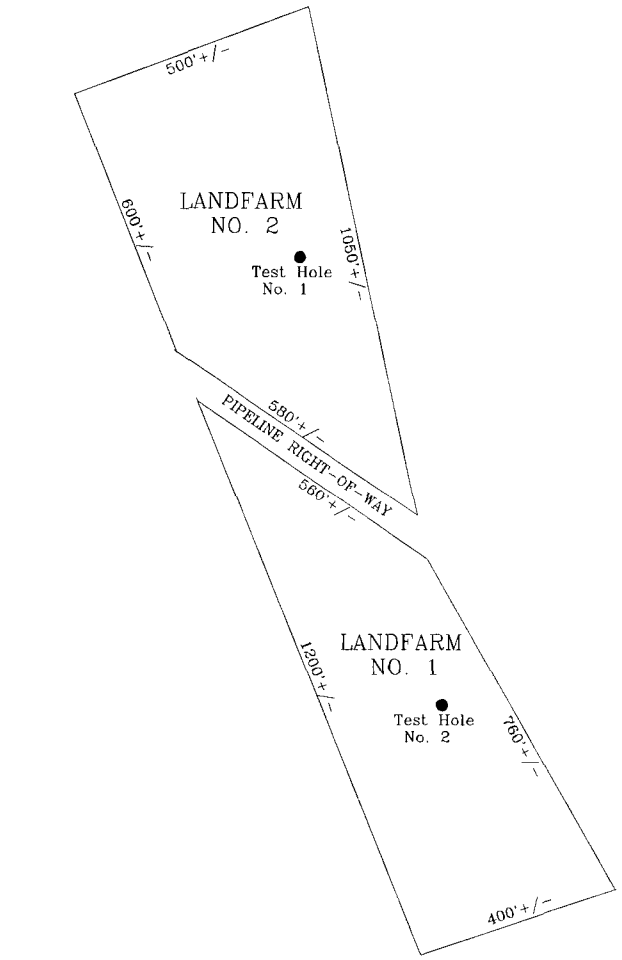


Note: Landfarm dimensions and orientation as indicated on this diagram are approximate only. This schematic is for demonstration purposes only.

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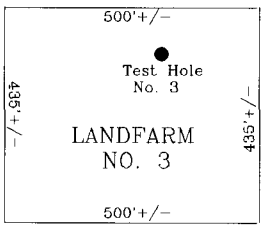
| JICARILLA APACHE ENVIRONMENTAL ENTERPRISE<br>LANDFARMS NO. 1 & 2<br>SEC 22 & 23-T25N-R4W, RIO ARRIBA CO., NEW MEXICO | | | *BLAGG ENGINEERING, INC.* |
| DATE: 8/95 | FIGURE 1 | BY: JCB | *P.O. BOX 87, BLOOMFIELD, NM*<br>*PHONE: (505)632-1199* |





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Note: Landfarm dimensions and orientation as indicated on this diagram are approximate only. This schematic is for demonstration purposes only.

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| JICARILLA APACHE ENVIRONMENTAL ENTERPRISE<br>LANDFARM NO. 3<br>SEC 14-T25N-R4W, RIO ARRIBA CO., NEW MEXICO | | | *BLAGG ENGINEERING, INC.* |
| DATE: 7/95 | FIGURE 2 | BY: JCB | *P.O. BOX 87, BLOOMFIELD, NM*<br>*PHONE: (505)632-1199* |

ENVIRONMENTAL PROTECTION COMPANY

# CERTIFICATE OF WASTE STATUS
# EXEMPT OILFIELD WASTE

Originating
Site: (Include Name, Section, Township, Range, 1/4, etc.)

_____

_____

This material originated:

_____ In the State of New Mexico, Jicarilla Apache Reservation

_____From the State of _____. Letter from the Regulatory Agency having jurisdiction therefore is attached.

Source: _____

_____

_____

Destination: Jicarilla Landfarms, LLP
Landfarm No. _____
Legal:

I _____

representative for _____

do hereby certify that the waste describe above is material that is exempted from regulation by the Resource Conservation and Recovery Act (RCRA) and is considered non-hazardous oilfield waste. I further certify that to the best of my knowledge, no other material has been commingled with the exempt waste that would otherwise cause the waste to be classified as "hazardous" by RCRA or any other Federal, State or Local law, regulation or ordinance.

Signature _____

Title _____

Address _____

Date _____

805 South Carlton • Farmington, New Mexico 87401 • (505) 327-5570 • Fax: (505) 325-8680

MANIFEST

**Jicarilla Landfarms L.L.P.**

Landfarm No.: Date In:

Cell No.:

Generator: Contact:

Type of Material: Yards: Remediation Technique:

***Testing***

| Date | OVM(ppm) | TPH(ppm) | Total BTEX(ppm) | Benzene(ppm) | Tested By |
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Bill of Lading

**Jicarilla Landfarms L. L. P.**

Month Of:

805 S. Carlton, Farmington, NM 87401
(505) 327-5570

| MANIFEST | | COMPLETE DESCRIPTION OF SHIPMENT | | | TRANSPORTING COMPANY | | | | |
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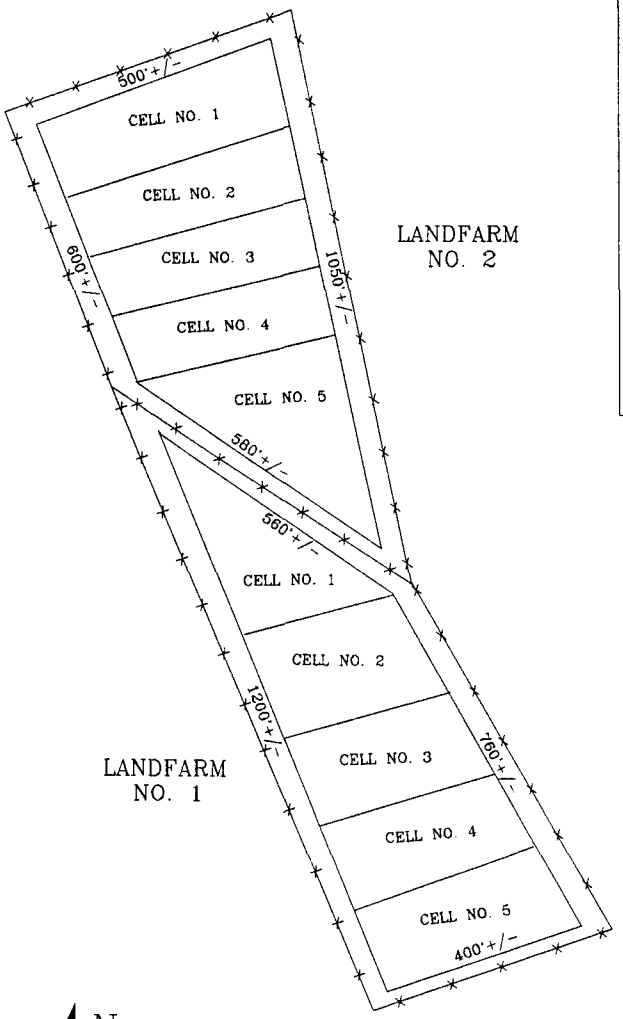
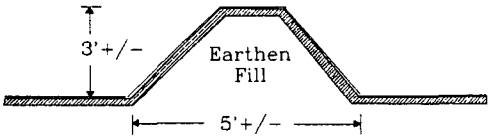
" I certify the material hauled from the above location has not been added to or mixed with, and is the same material recieved from the above mentioned Generator, and that no additional materials have been added."

Print Name: Company: Signature:

Date:




BERM SIDE VIEW




Note: Landfarm dimensions and orientation as indicated on this diagram are approximate only. This schematic is for demonstration purposes only.

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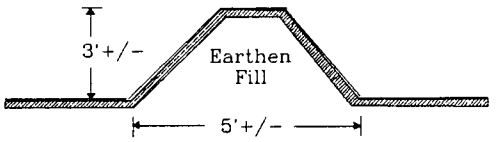
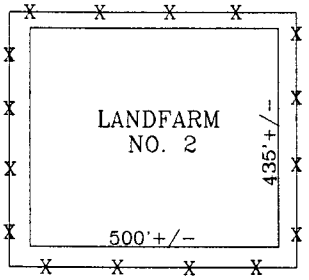
|---|---|---|---|
| JICARILLA APACHE ENVIRONMENTAL ENTERPRISE<br>LANDFARMS NO. 1 & 2<br>SEC 22 & 23-T25N-R4W, RIO ARRIBA CO., NEW MEXICO | | | *BLAGG ENGINEERING, INC.* |
| DATE: 8/95 | FIGURE 1 | BY: JCB | *P.O. BOX 87, BLOOMFIELD, NM*<br>*PHONE: (505)632-1199* |

BERM SIDE VIEW

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Fencing

Berm

0 500 1000 FEET

Note: Landfarm dimensions and orientation as indicated on this diagram are approximate only. This schematic is for demonstration purposes only.

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|---|---|---|---|
| JICARILLA APACHE ENVIRONMENTAL ENTERPRISE<br>LANDFARM NO. 3<br>SEC 14-T25N-R4W, RIO ARRIBA CO., NEW MEXICO | | | *BLAGG ENGINEERING, INC.* |
| DATE: 8/95 | FIGURE 2 | BY: JCB | *P.O. BOX 87, BLOOMFIELD, NM*<br>*PHONE: (505)632-1199* |