

1R - 254

**APPROVALS**

**YEAR(S):**

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STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

February 2, 1999

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. Z-274-520-612**

Mr. Rodney Bailey  
Texaco E&P Inc.  
205 E. Bender  
Hobbs, New Mexico 88240

**RE: G.L. ERWIN "A&B" FEDERAL NCT-2 TANK BATTERY  
LEA COUNTY, NEW MEXICO**

Dear Mr. Bailey:

The New Mexico Oil Conservation Division (OCD) has reviewed Texaco Exploration & Development's (Texaco) November 18, 1998 "WORK PLAN FOR PLUME DELINEATION AND MODIFICATION TO PROPOSED GROUNDWATER MONITORING SCHEDULE, TEXACO EXPLORATION AND PRODUCTION, INC., G.L. ERWIN "A&B" FEDERAL NCT-2 TANK BATTERY, LEA COUNTY, NEW MEXICO". This document which was submitted on behalf of Texaco by their consultant Highlander Environmental Corp. contains the Texaco's proposed work plan for additional investigation of the extent of ground water contamination related to the G.L. Irwin "A&B" Federal NCT-2 Tank Battery located in Unit O, Section 35, T24S, R37E NMPM, Lea County, New Mexico. The document also contains Texaco's proposed modifications to the site ground water monitoring plan.

The above referenced investigation work plan and proposed ground water monitoring plan modifications are **approved** with the following conditions:

1. Texaco will complete the new monitor wells as follows:
  - a. An appropriately sized gravel pack will be set in the annulus around the well screen from the bottom of the hole to 2-3 feet above the top of the well screen.

Mr. Rodney G. Bailey  
February 2, 1999  
Page 2

- b. A 2-3 foot bentonite plug will be placed above the gravel pack.
  - c. The remainder of the hole will be grouted to the surface with cement containing 3-5% bentonite.
  - d. A concrete pad and locking well cover will be placed at the surface.
  - e. The well will be developed after construction using EPA approved procedures.
2. No less than 48 hours after the wells are developed, ground water from all monitor wells at each site will be purged, sampled and analyzed for concentrations of major cations and anions, total dissolved solids (TDS) EPA approved methods and quality assurance/quality control (QA/QC).
3. All wastes generated during the investigation will be disposed of at an OCD approved facility.
4. Texaco will submit the results of the additional investigations to the OCD in the annual report. The report will include the following investigative information:
- a. A description of the investigation activities which occurred including conclusions and recommendations.
  - b. A geologic/lithologic log and well completion diagram for each monitor well.
  - c. A water table map showing the location of the pit, monitor wells, recovery wells and any other pertinent site features as well as the direction and magnitude of the hydraulic gradient created using the water table elevation from each monitor well.
  - d. Summary tables of all past and present ground water quality sampling results and copies of all recent laboratory analytical data sheets and associated QA/QC data.
  - e. The disposition of all wastes generated.

Please be advised that OCD approval does not relieve Texaco of liability should the investigation actions fail to adequately define the extent of contamination related to Texaco's activities, or if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve Texaco of responsibility for compliance with any other federal, state or local laws and regulations.

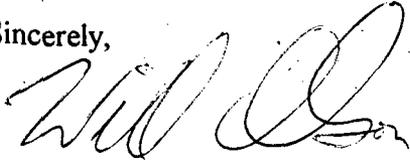
Mr. Rodney G. Bailey

February 2, 1999

Page 3

If you have any questions, please contact me at (505) 827-7154.

Sincerely,

A handwritten signature in cursive script, appearing to read "Will Olson".

William C. Olson

Hydrologist

Environmental Bureau

xc: Chris Williams, OCD Hobbs District Office  
Mark J. Larson, Highlander Environmental Corp.



## Highlander Environmental Corp.

Midland, Texas

November 18, 1998

Mr. William C. Olson  
State of New Mexico  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

NOV 23 1998

**Re: Work Plan for Groundwater Contaminant Plume Delineation and Modification to Proposed Groundwater Monitoring Schedule, Texaco Exploration and Production, Inc., G. L. Erwin "A&B" Federal NCT-2 Tank Battery, Lea County, New Mexico**

Dear Mr. Olson:

Texaco Exploration and Production, Inc. (Texaco) has requested Highlander Environmental Corp. (Highlander) to prepare a work plan to delineate a groundwater contaminant plume and to modify the proposed groundwater monitoring schedule for the G. L. Erwin "A&B" Federal NCT-2 Tank Battery, located in Lea County, New Mexico.

Based on our meeting of November 12, 1998, Texaco will install one additional monitor well to determine the down gradient extent of chloride and total dissolved solids (TDS) in groundwater at the Site. The monitor well will be installed about 350 feet south-southeast (down gradient) of well MW-6. The well will be drilled to the top of the Triassic-age redbed, approximately 75 feet below ground surface (BGS). Drilling will be performed using a truck-mounted rotary drilling rig. The well will fully screen the Ogallala aquifer and will be completed with 2-inch diameter schedule 40 PVC casing and screen. The well screen, approximately 15 feet in length, will be gravel packed from the base of the well to approximately 3 to 5 feet above the screen using graded silica sand. The well will be developed following installation by purging with a bailer. The purged water will be contained in a portable tank or drum and disposed at an OCD approved Class II injection or disposal well.

After the well has stabilized, groundwater samples will be collected and analyzed for major anions and cations. The groundwater samples will be collected using a dedicated disposable PVC bailer. The samples will be delivered to the laboratory under chain-of-custody control. The sample results will be reviewed upon receipt of the laboratory report and submitted to the New Mexico Oil Conservation Commission (OCD).

Mr. William C. Olson  
November 18, 1998  
Page 2

On November 12, 1998, the OCD also approved Texaco's request to modify the schedule for groundwater monitoring to include semi-annual and annual monitoring. Groundwater samples will be collected twice yearly (semi-annual) from down gradient monitor wells MW-2, MW-6, MW-7 and MW-8 (new), and once yearly (annually) from the remaining wells, following remediation system startup.

I feel this correctly summarizes our discussion. Please call if you have any questions.

Sincerely,  
*Highlander Environmental Corp.*



Mark J. Larson  
Senior Project Manager

cc: Rodney Bailey, Texaco  
Wayne Price, OCD-Hobbs District





STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

October 5, 1998

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. Z-274-520-562**

Mr. Rodney Bailey  
Texaco E&P Inc.  
205 E. Bender  
Hobbs, New Mexico 88240

**RE: G. L. ERWIN "A&B" FEDERAL NCT-2 TANK BATTERY  
LEA COUNTY, NEW MEXICO**

Dear Mr. Bailey:

The New Mexico Oil Conservation Division (OCD) has reviewed Texaco Exploration & Production's (TEXACO) June 30, 1998 "GROUNDWATER CONTAMINANT PLUME DELINEATION WORK PLAN, TEXACO EXPLORATION AND PRODUCTION, INC., G.L. ERWIN "A&B" FEDERAL NCT-2 TANK BATTERY, SW/4, SE/4, SECTION 35, TOWNSHIP 24 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO". This document, which was submitted on behalf of TEXACO by their consultant Highlander Environmental Corp., contains TEXACO's work plan for additional investigation of the extent of ground water contamination related to an unlined emergency pit at the G.L. Erwin "A&B" Federal NCT-2 tank battery located in Unit O, Section 35, T24S, R37E NMPM, Lea County, New Mexico.

The above referenced investigation work plan is approved with the following conditions:

1. TEXACO will submit the results of the investigations in the subsequent annual report for the site.
2. All wastes generated will be disposed of at an OCD approved facility.
3. TEXACO will notify the OCD at least 1 week in advance of all scheduled activities such that the OCD has the opportunity to witness the events and split samples.

Mr. Rodney G. Bailey  
October 5, 1998  
Page 2

Please be advised that OCD approval does not relieve TEXACO of liability should the work plan fail to determine the extent of contamination related to TEXACO's activities, or if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve TEXACO of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please contact me at (505) 827-7154.

Sincerely,



William C. Olson  
Hydrologist  
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Supervisor  
Mark J. Larson, Highlander Environmental Corp.

Z 274 520 562

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PS Form 3800, April 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

March 28, 1995

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. P-667-242-232**

Mr. T.L. Frazier  
Texaco E & P  
Box 730  
Lea County, New Mexico 88241-0730

**RE: GROUND WATER INVESTIGATION WORK PLAN  
G.L. ERWIN "B" NCT-2 TANK BATTERY  
LEA COUNTY, NEW MEXICO**

Dear Mr. Frazier:

The New Mexico Oil Conservation Division (OCD) has completed a review of Texaco E & P's (TEP) February 14, 1995 "HYDROGEOLOGICAL INVESTIGATION FOR THE G.L. ERWIN "B" NCT-2, TANK BATTERY". This document contains TEP's work plan for investigating the extent of ground water contamination related to the use of an unlined emergency pit at the G.L. Erwin "B" NCT-2 tank battery in Section 35, T24S, R38E NMPM Lea County, New Mexico.

The above referenced work plan is approved with the following conditions:

1. All monitor wells will be constructed with at least 10 feet of well screen below the water table and 5 feet of well screen above the water table.
2. TEP will sample ground water from all monitor wells. Ground water from these monitor wells will be sampled and analyzed for concentrations of benzene, toluene, ethylbenzene, xylene (BTEX), major cations and anions, heavy metals and polynuclear aromatic hydrocarbons using EPA approved methods.

**NOTE:** The OCD will not require TEP to analyze ground water samples for heavy metals and PAH's, if, TEP can provide the OCD with an analysis of the produced water from this line showing that these constituents do not exceed New Mexico Water Quality Control Commission ground water standards.

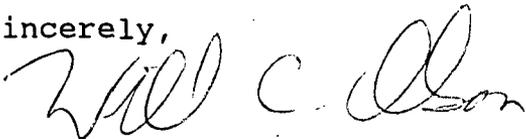
3. TEP will submit a report on the investigation to the OCD by June 30, 1995. The report will contain:
  - a. A description of all activities which occurred during the investigation, conclusions and recommendations.

Mr. T.L. Frazier  
March 28, 1995  
Page 2

- b. A summary of the laboratory analytic results of water quality sampling of the monitor wells.
  - c. A water table elevation map using the water table elevation of the ground water in all monitor wells.
  - d. A geologic log and as built well completion diagram for each well.
4. Provide the OCD with the following information which was included in the work plan:
- The results of the "initial Environmental Site Assessment".
  - b. The locations and any other available information about the referenced "test holes at the location to determine the extent of hydrocarbon contamination of the pit".
  - c. The size of the excavated area, the final concentrations of contaminants in the bottom of the excavated area and the disposition or remediation method of the soils excavated.
  - d. Copies of the water analyses which are stated as being enclosed in the work plan.
5. TEP will notify the OCD at least one week in advance of all scheduled activities such that the OCD has the opportunity to witness the events and or split samples.
6. All original documents submitted for approval will be submitted to the OCD Santa Fe Office with copies provided to the OCD Hobbs District Office.

Please be advised that OCD approval does not relieve TEP of liability should the investigation activities determine that contamination exists which is beyond the scope of the work plan or if the activities fail to adequately determine the extent of contamination related to TEP's activities. In addition, OCD approval does not relieve TEP of responsibility for compliance with any other federal, state or local laws and/or regulations. If you have any questions, please call me at (505) 827-7154.

Sincerely,



William C. Olson  
Hydrogeologist  
Environmental Bureau

xc: Jerry Sexton, OCD Hobbs District Supervisor  
Wayne Price, OCD Hobbs Office

P 667 242 232



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**RECEIVED**

FEB 27 1995

Environmental Bureau  
Oil Conservation Division

*February 14, 1995*

*Mr. William C. Olsen  
Environmental Bureau Chief  
New Mexico Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87504*

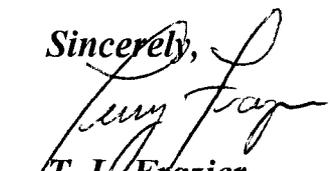
*RE: Hydrogeological Investigation for the G.L. Erwin "B" NCT-2, Tank  
Battery*

*Dear Mr. Olsen:*

*Please find attached a work plan to conduct a Hydrogeologic Investigation  
at the above referenced site. Historical information is included with the  
attachment.*

*This work will be conducted in coordination with the Hobbs NMOCD  
Office for final C-103 filing. If additional information or questions need  
addressed, please contact, Larry Lehman at 505-397-0432.*

*Sincerely,*

  
*T. L. Frazier  
Hobbs Area Manager*

397-6348

*Attachment*

*cc: Mr. Jerry Sexton  
Mr. Wayne Price*