

1R - 221

**APPROVALS**

**YEAR(S):**

CLOSED

## Price, Wayne

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**From:** Price, Wayne  
**Sent:** Wednesday, December 05, 2001 11:58 AM  
**To:** 'Mike @ Whole Earth'; Price, Wayne  
**Cc:** Carolyn Haynes  
**Subject:** RE: L-21 Closure

The OCD hereby approves of the closure plan for the L-21 site.

Please be advised that NMOCD approval of this plan does not relieve Rice Operating Company of liability should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve Rice Operating Company of responsibility for compliance with any other federal, state, or local laws and/or regulations.

-----Original Message-----

**From:** Mike @ Whole Earth [mailto:whearth@iamerica.net]  
**Sent:** Monday, November 19, 2001 8:37 AM  
**To:** Wayne Price  
**Cc:** Carolyn Haynes  
**Subject:** L-21 Closure

Wayne,

I'm in receipt of your e-mail of November 17th regarding the L-21 Closure Project.

Having reviewed your request, I can see how we failed to define the test points adequately. (A mistake we shall not make in the future.)

B,N,E,W & S all refer to the tank area excavation and relate to compass points within the excavation, (ie, N = North). Each side-wall sample was taken from the area having either the most stain or odor and thus may come from various depths within the excavation. Each is a discrete sample. The bottom sample is a five point composite taken from each of the corners and the excavation center.

Those codes designated PN, PE, etc., come from the small pit area northwest of the the main excavation. Sample locations were all from the individual spots within the walls showing evidence of staining or odor. Again, the PB sample is a five point composite.

Please advise if you need anything further on this project.

Have a great Thanksgiving week!

Mike Griffin

## Price, Wayne

---

**From:** Mike @ Whole Earth [whearth@iamerica.net]  
**Sent:** Monday, November 19, 2001 8:37 AM  
**To:** Wayne Price  
**Cc:** Carolyn Haynes  
**Subject:** L-21 Closure

1R0221

Wayne,

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Having reviewed your request, I can see how we failed to define the test points adequately. (A mistake we shall not make in the future.)

B,N,E,W & S all refer to the tank area excavation and relate to compass points within the excavation, (ie, N = North). Each side-wall sample was taken from the area having either the most stain or odor and thus may come from various depths within the excavation. Each is a discrete sample. The bottom sample is a five point composite taken from each of the corners and the excavation center.

Those codes designated PN, PE, etc., come from the small pit area northwest of the the main excavation. Sample locations were all from the individual spots within the walls showing evidence of staining or odor. Again, the PB sample is a five point composite.

Please advise if you need anything further on this project.

Have a great Thanksgiving week!

Mike Griffin

## Price, Wayne

---

**From:** Price, Wayne  
**Sent:** Saturday, November 17, 2001 12:24 PM  
**To:** 'riceswd@leaco.net'  
**Cc:** 'whearth@iamerica.net'  
**Subject:** Rice L-21 Remediation Project

**Contacts:** Carolyn Doran Haynes

Dear Ms. Haynes:

The OCD is in receipt of the above subject request for closure document dated March 20, 2000. IN order to issue closure OCD requires the following information:

1. Please supply documentation via E-mail describing the analytical field codes. Where were these samples taken? ie. depth, location, etc.

# **RICE** *Operating*

## **L-21 Remediation Project**



**Whole Earth Environmental  
19606 San Gabriel  
Houston, Tx. 77084**

# RICE Operating Company

122 West Taylor • Hobbs, New Mexico 88240  
Phone: (505)393-9174 • Fax: (505) 397-1471

RECEIVED  
MAR 23 2000  
Environmental Bureau  
Oil Conservation Division

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. Z 577 009 795**

March 20, 2000

Mr. Wayne Price  
NM Energy, Minerals, and Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
2040 S. Pacheco  
Santa Fe, NM 87505

RECEIVED  
MAR 23 2000  
Environmental Bureau  
Oil Conservation Division

RE: REDWOOD TANK AND EMERGENCY OVERFLOW PIT (Permit No. H-73)  
CLOSURE REPORT FOR EME SWD FACILITY L-21  
Unit Letter L, Sec. 21, T21S, R36E  
Lea County, New Mexico

Mr. Price:

Rice Operating Company (ROC) appreciates the consideration and response of the NMOCD concerning the closure plan revisions for the emergency overflow pits and below-grade redwood tanks. At this time, based on the following report, ROC petitions the NMOCD for closure of Pit Permit # H-73 and the below-grade redwood tanks at the Eunice-Monument-Eumont (EME) Salt Water Disposal Site SWD Well L-21, located in Unit L, Sec. 21, T21S, R36E, Lea County, NM.

ROC is the service provider (operator) for the EME Salt Water Disposal System and has no ownership of any portion of pipeline, well or facility. The EME System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. Closure projects require System Partner AFE approval and work begins as funds are received. The Closure Project AFE for the SWD L-21 Facility was approved by the System Partners and work was started in January 2000.

The final excavation of the tank site and the pit site resulted in TPH and BTEX levels at bottoms and sides that are below the recommended guidelines for vadose zone impact when groundwater is more than 100 feet below surface. Groundwater at this site is 175'-245'.

The sources of contamination have been removed and the impacted soil has been excavated to delineation of <100ppm TPH and <250 ppm Cl. The highly impacted soil (about 10%) was properly disposed at a licensed facility and the remaining soil was blended with clean fill soil to an average level of <500 ppm TPH. A compacted clay layer was installed in the bottom of the excavation and the blended soil was used to backfill.

This facility is currently operating with a temporary tank system in preparation for new fiberglass tanks. There will be two 500bbl flow-through tanks and one 500bbl overflow tank. The tanks will be erected at surface elevation, on top of a 30 mil polyethylene liner, installed to protect the vadose zone from any detrimental impact for the remaining useful life of the facility.

The 2.5-acre lease with the NM State Land Office is valid for this site until June 2000. ROC has every expectation that the lease for this site will be renewed.

ROC is applying for closure at the L-21 Facility and is submitting the Pit Remediation and Closure Final Report. Thank you for your consideration of this closure request.

If you have any questions, please call.

RICE OPERATING COMPANY



Carolyn Doran Haynes  
Operations Engineer

Enclosures    Pit Remediation and Closure Report L-21 Facility  
                  State Land Office Lease Copy  
                  Pit Inventory Permit H-73  
                  Pit Inventory Forms  
                  Generic Closure Work Plans – 3<sup>rd</sup> Revision  
                  Photos, Maps, Analytical Data of Site and Excavations  
                  Disposal Manifests

Cc: KH, file, Ms. Donna Williams,  
                  NMOCD, District I Office  
                  1625 N. French Drive  
                  Hobbs, NM 88240

Mr. Leon Anderson  
NM State Land Office  
3830 N. Grimes Suite C  
Hobbs, NM 88240



RECEIVED  
MAR 23 2000  
Environmental Bureau  
Oil Conservation Division

## Executive Summary

Whole Earth Environmental, Inc. began the remediation of the Rice Operating L-21 site on February 22, 2000. The L-21 Station is a brine disposal facility consisting of two 25' diameter redwood storage tanks, an injection well and related ancillary equipment.

### Preliminary Site Preparation

Prior to the commencement of the remediation operations, Rice dismantled the wooden storage tanks removed the transite flowlines and expanded the site perimeter to accommodate equipment access. The cement bases of the tank were thoroughly cleaned and left in place. Two temporary 500 bbl storage tanks were temporarily placed at the northeast corner and one temporary 210 bbl. tank at the southeast corner of the facility.

### Remediation Detail

The cement base structures were demolished and subsequently buried in four locations (see enclosed plat map) at depths sufficient to insure that the top of the cement shards were a minimum of 5' below ground level. The tank area was excavated to a depth of approximately 9' below ground level and field tested for the presence and concentrations of TPH, BTEX and chlorides. Approximately 180 cubic yards of contaminate soil was excavated and transported to Sundance Disposal facility, near Eunice, New Mexico.

Donna Williams of the NMOCD Hobbs office was notified on February 24<sup>th</sup> that the site was available for OCD sampling or witness. Composite samples of each side wall and excavation bottom were collected in accordance with WEQP-77 (enclosed) and sent to Environmental Labs of Texas (test results and chain of custody documents are provided within this report. All results were nominal.

The excavation was lined with approximately 18' of clay and density tested by Pettigrew and Associates on March 3<sup>rd</sup> (density analysis and associated proctor are included within this report).

The excavation was backfilled with remediated topsoils with composite samples collected at each 3' lift. The site was finally contoured to match the existing topography and an area prepared for new storage tanks.

District I

1625 N. French Drive, Hobbs, NM 88240

District II

811 South First, Artesia, NM 88210

District III

1000 Rio Brazos, Aztec, NM 87410

District IV

2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
2040 South Pacheco  
Santa Fe, NM 87505

Submit 1 copy to  
Appropriate District  
Office and 1 copy to  
Santa Fe Office

PIT REMEDIATION AND CLOSURE REPORT

Operator: RICE OPERATING COMPANY Telephone: 505-393-9174

Address: 122 West Taylor, Hobbs, NM 88240

Facility or:  
Well Name: SWD L-21

Location: Unit or Qtr/Qtr Sec Unit Letter L Sec 21 T 21S R 36E County LEA

Pit type: Emergency Overflow Pit Permit # H-73; 2-Below-grade Redwood Tanks (not permitted)

Land Type: BLM \_\_\_\_\_ State XX Fee \_\_\_\_\_ Other \_\_\_\_\_

Pit Location Pit Dimensions: length 55' width 17' depth 3.5'

(Attach diagram)

Reference: wellhead YES other \_\_\_\_\_

Footage from reference: NE Corner of pit is ~ 130' West then 3' South of Wellhead L-21

Direction from reference: \_\_\_\_\_ Degrees \_\_\_\_\_ East North \_\_\_\_\_  
of  
\_\_\_\_\_ 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)

0

**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)

0

**RANKING SCORE (TOTAL POINTS):** 0

Date Remediation Started: February 29, 2000 Date Completed: March 4, 2000

Remediation Method: Excavation YES (180yds) Approx. cubic yards total 1980

(Check all appropriate sections)

Landfarmed YES (180yds) In-situ Bioremediation \_\_\_\_\_

Other Commercial Landfarm

Remediation Location: Onsite \_\_\_\_\_ Offsite Sundance Parabo, Eunice, NM

(ie.: landfarmed onsite, name and location of offsite facility)

General Description of Remedial Action: Cleaned and dismantled below-grade redwood tanks and concrete bases.

Excavated and disposed of highly impacted soil at the redwood site and the overflow pit site. Excavation

continued until bottoms and sidewalls of sites measured < 100 TPH. Excavation was then covered

with a compacted clay-layer, excavated soil blended < 1000 TPH and sampled by lift as backfill progressed.

Test results and color photo reproductions are included in this closure package.

Ground Water Encountered: No NO Yes \_\_\_\_\_ Depth (175-245')

Final Pit Closure Sampling (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location See attached diagrams. All analytical reports, CoC, etc., are included in the accompanying closure package submitted with this report.

Sample depth \_\_\_\_\_

Sample date March 2,3, 2000 Sample time \_\_\_\_\_

Sample Results

Benzene (ppm) all < 0.100mg/kg

Total BTEX (ppm) all < 1.000mg/kg; high of 0.928mg/kg

Field headspace (ppm) \_\_\_\_\_

TPH bottoms, sides <100ppm. Blended fill average: 494ppm TPH

Ground Water Sample: Yes \_\_\_\_\_ No XX (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 MARCH 20, 2000

PRINTED NAME CAROLYN DORAN HAYNES

SIGNATURE

*Carolyn Doran Haynes*

TITLE OPERATIONS ENGINEER

District I - (505) 393-6161  
P. O. Box 1980  
Hobbs, NM 88241-1980  
District II - (505) 748-1283  
811 S. First  
Artesia, NM 88210  
District III - (505) 334-6178  
1000 Rio Boscon Road  
Artesia, NM 87410  
District IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Originated 6/27/97

Submit Original  
Plus 1 Copy  
to Santa Fe

PIT INVENTORY FORM

Operator: RICE OPERATING COMPANY

Address: 122 West Taylor  
Hobbs, New Mexico 88240  
(505) 393-9174

Phone Number: \_\_\_\_\_

Previous Operator(s): None

Is the pit permitted: Yes  No

Unit Letter: L Section: 21 Township: 21S Range: 36E

County: Lea County

Location Name: Funice-Monument-Fumont Salt Water Disposal Well L-21

Number of wells to the pit: System Terminal Tanks (Varies)

Are the wells to the pit operated by one operator  or multiple operators

Total daily volume (in barrels) to the pit: 1,500

Pit Type: 2-Below ground redwood terminal tanks  
(Emergency Production, Workover Reserve/Drilling (greater than 6 months old), Flare, Blowdown, Separator, Dehydrator, Line Drip, BS&W/Tank Bottoms, Compressor Piggings, Washdowns, or other)

What types of wastes are accepted in the pit (Exempt, Non-exempt, Both, None): Exempt (production water)

Pit age (years): 35

Is the pit lined  or unlined

Type of liner (None, Synthetic, Clay): Redwood tank resting on concrete pad

Is leak detection present: Yes  No  Observation boxes around tanks

Is the pit netted: Yes  No  Covered with redwood top

Pit dimensions (LxWxD): two-28'diaX8'Ht

CERTIFICATION

I hereby certify that the information submitted is true and correct to the best of my knowledge and belief.

Name: Roger Hall Title: Operations Engineer

Signature: Roger Hall Date: 10/31/97

District I - (505) 393-6161  
P. O. Box 1980  
Hobbs, NM 88241-1980  
District II - (505) 748-1283  
811 S. First  
Artesia, NM 88210  
District III - (505) 334-6178  
1000 Rio Benson Road  
Aztec, NM 87410  
District IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Originated 6/27/97

Submit Original  
Plus 1 Copy  
to Santa Fe

PIT INVENTORY FORM

Operator: RICE OPERATING COMPANY

Address: 122 WEST TAYLOR  
Hobbs, New Mexico 88240

Phone Number: (505) 393-9174

Previous Operator(s): None

Is the pit permitted: Yes  No

Unit Letter: L Section: 21 Township: 21S Range: 36E

County: Lea County

Location Name: EME Salt Water Disposal System Well L-21

Number of wells to the pit: 1

Are the wells to the pit operated by one operator  or multiple operators

Total daily volume (in barrels) to the pit: None

Pit Type: Emergency

(Emergency, Production, Workover, Reserve/Drilling (greater than 6 months old), Flare, Blowdown, Separator, Dehydrator, Line Drip, BS&W/Tank Bottoms, Compressor, Pigging, Washdown, or other)

What types of wastes are accepted in the pit (Exempt, Non-exempt, Both, None): Exempt (production water)

Pit age (years): 35

Is the pit lined  or unlined

Type of liner (None, Synthetic, Clay): None

Is leak detection present: Yes  No

Is the pit netted: Yes  No

Pit dimensions (LxWxD): 51'x17'x2 $\frac{1}{2}$ '

CERTIFICATION

I hereby certify that the information submitted is true and correct to the best of my knowledge and belief.

Name: Roger Hall Title: Operations Engineer

Signature: Roger Hall Date: 10/28/97

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

OIL CONSERVATION DIVISION

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

DISTRICT II  
O. Drawer DD, Artesia, NM 88211-0719

Permit No. H-73  
(For Division Use Only)

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

APPLICATION FOR EXCEPTION TO DIVISION ORDER R-8952  
FOR PROTECTION OF MIGRATORY BIRDS Rule 8(b), Rule 105(b), Rule 312(h), Rule 313, or Rule 711(I)

Operator Name: Rice Engineering Corporation

Operator Address: 122 W. Taylor, Hobbs, New Mexico 88240

Lease or Facility Name E-M-E SWD System Well L-21 Location L 21 21S 36E  
Size of pit or tank: 51'x17'x2 1/2' deep, approx. 400 bbls. Ut. Ltr. Sec. Twp. Rge

Operator requests exception from the requirement to screen, net or cover the pit or tank at the above-described facility.

X The pit or tank is not hazardous to migratory waterfowl. Describe completely the reason pit is non-hazardous.  
The pit is used only in emergencies such as major well remedial work.  
Normally kept empty.

1) If any oil or hydrocarbons should reach this facility give method and time required for removal:

Method: Vacuum truck

Time: Within 24 hrs. of discovery

2) If any oil or hydrocarbons reach the above-described facility the operator is required to notify the appropriate District Office of the OCD with 24 hours.

Operator proposes the following alternate protective measures: \_\_\_\_\_

CERTIFICATION BY OPERATOR: I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature S. A. Haktanir Title Division Manager Date July 25, 1990

Printed Name S. A. Haktanir Telephone No. 393-9174

FOR OIL CONSERVATION DIVISION USE

Date Facility Inspected 8/2/90

Inspected by R. A. [Signature]

Approved by [Signature]

Title DIL & GIB [Signature]

Date SEP 05 1990

# **RICE** Operating Company

122 West Taylor • Hobbs, New Mexico 88240  
Phone: (505)393-9174 • Fax: (505) 397-1471

**CERTIFIED MAIL  
RETURN RECEIPT NO. Z 577 009 531**

February 23, 2000

Mr. Wayne Price  
NM Energy, Minerals, and Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
2040 S. Pacheco  
Santa Fe, NM 87505

RE: REDWOOD TANK AND EMERGENCY OVERFLOW PIT (Permit No. H-73)  
CLOSURE PLAN FOR EME SWD FACILITY L-21  
Unit Letter L, Sec. 21, T21S, R36E  
Lea County, NM

Mr. Price:

Rice Operating Company requests closure plan approval for the emergency overflow pit, Pit Permit # H-73 and the below-grade redwood tanks at the Eunice-Monument-Eumont (EME) Salt Water Disposal Site SWD Well L-21, located in Unit L, Sec. 21, T21S, R36E, Lea County, NM.

ROC is the service provider (operator) for the EME Salt Water Disposal System and has no ownership of any portion of pipeline, well or facility. The EME System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. Closure projects require System Partner AFE approval and work begins as funds are received.

The Closure Project AFE for the SWD L-21 Facility has been approved by the System Partners and work was started in January 2000.

The L-21 facility is included in the Rice Operating Company (ROC) generic closure plan for emergency pits and below-grade redwood tanks and is the third facility to apply under the generic plan. Rather than repair the below-grade redwood tanks, the EME SWD System will replace them with aboveground fiberglass tanks (including an emergency overflow tank) set within secondary containment (poly-liner). The emergency overflow pit will be closed. ROC expects to simultaneously close the pit and tanks pursuant to NMOCD guidelines and the ROC generic plan (awaiting February 23, 2000 revision approval). The enclosed C-103 form addresses this intention and defines the site-specific assessment for OCD guidelines. Supporting documentation is also enclosed.

This facility is currently operating with a temporary tank system and the below-grade redwood tanks have been dismantled and removed. The tank materials have been properly disposed and will be included in the manifests of the Final Closure Report.

ROC will schedule all major events with a 48-hour advance notice to the NMOCD. Ms. Donna Williams has visited this site and Whole Earth Environmental will be the on-site manager of the excavation project. The Final Closure Report will follow at the end of the project.

Thank you for your consideration of this closure plan request.

RICE OPERATING COMPANY



Carolyn Doran Haynes  
Operations Engineer

Enclosures

Cc: KH, file, Ms. Donna Williams,  
NMOCD, District I Office  
1625 N. French Drive  
Hobbs, NM 88240

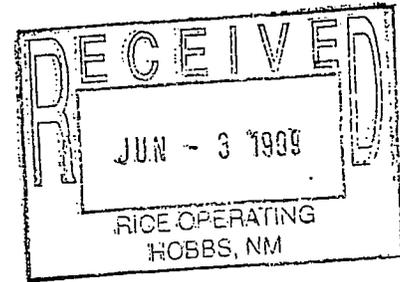


NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

June 1, 1999

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. Z 357 870 131**



Carolyn Doran Haynes  
Rice Operating Company  
122 West Taylor  
Hobbs, NM 88240

**Re: Closure Work Plan for Existing Pits and Below-Grade Redwood Tanks (Generic Closure Work Plan) for Rice Operating Company's saltwater disposal system facilities.**

Dear Ms. Haynes:

The New Mexico Oil Conservation Division (NMOCD) has reviewed Rice Operating Company's (ROC) closure work plans dated March 22, 1999 and revisions to the plans dated April 23, 1999 for the saltwater disposal system facilities. **The NMOCD Hereby approves the plans subject to the following conditions:**

1. ROC shall complete all monitor well(s) as follows:
  - a. At least 15 feet of well screen shall be placed across the water table interface with 5 feet of the well screen above the water table and 10 feet of the well screen below the water table.
  - b. An appropriately sized gravel pack shall 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.
  - c. A 2-3 foot bentonite plug shall be placed above the gravel pack.
  - d. The remainder of the hole shall be grouted to the surface with cement containing 3-5% bentonite.
  - e. A concrete pad shall be placed at the surface around the well. The well shall be installed with a suitable protective locking device.
  - f. The well(s) shall be developed after construction using EPA approved procedures.

2. No less than 48 hours after the well(s) are developed, ground water from all monitor well(s) shall be purged, sampled and analyzed for concentrations of benzene, toluene, ethyl benzene, xylene, polycyclic aromatic hydrocarbons (PAH's), total dissolved solids (T.S.) and New Mexico Water Quality Control Commission (WQCC) metals and major cations and anions using EPA approved methods and quality assurance/quality control (QA/QC) procedures.
3. ROC shall notify OCD pursuant to Rule 116 upon discovery of groundwater contamination.
4. All final soil samples submitted for laboratory analyses shall be sampled for BTEX (8021), TPH (418.1 or 8015 GRO & DRO) and Chlorides.
5. ROC will notify the OCD Santa Fe office and the OCD District office at least 48 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and/or split samples during OCD's normal business hours.
6. ROC is required to sample and provide to NMOCD the analytical test results for each side wall and bottom of any excavated areas. The samples taken shall be tested for BTEX (8021), TPH and Chlorides. Composite samples will be allowed if there are no obvious hot spots. TPH methods can be EPA 418.1, or 8015 if both GRO and DRO are ran. All sampling and testing shall be pursuant to approved EPA methods and procedures.
7. All wastes generated during the investigation shall be disposed of at an OCD approved site.
8. ROC shall submit a report of the investigations to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office. ROC must receive NMOCD approval before commencing backfilling, liner or new equipment installations. The report shall include the following:
  - a. A description of all investigations, remediation and monitoring activities which have occurred including conclusions, recommendations, risk assessments and request for implementation of any future work and/or closure.
  - b. A geologic/lithologic log and well completion diagram for all soil borings and/or monitor well(s).
  - c. Vertical and horizontal Isopleth maps for remaining contaminants of concern which were observed during the investigations.

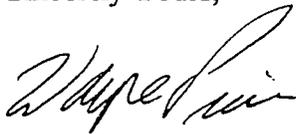
Ms: Haynes  
June 1, 1999  
Page 3

- e. Summary tables of all soil and/or ground water quality sampling results and copies of all laboratory analytical data sheets and associated QA/QC data collected.
- f. The quantity and disposition of all wastes generated.

Please be advised that NMOCD approval of this plan does not relieve ROC of liability should their investigations and/or operations fail to adequately investigate and/or remediate contamination that poses a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve ROC of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you require any further information or assistance please do not hesitate to write or call me at (505-827-7155).

Sincerely Yours,



Wayne Price-Pet. Engr. Spec.  
Environmental Bureau

cc: OCD Hobbs Office

# RICE Operating Company

122 West Taylor • Hobbs, NM 88240

Phone: (505) 393-9174 • Fax: (505) 397-1471

April 23, 1999

Mr. Wayne Price  
NM Energy, Minerals and Natural Resources Department  
Oil Conservation Division, Environmental Bureau  
2040 S. Pacheco  
Santa Fe, NM 87505

Re: Revision of Closure Work Plan for Existing Pits and Below-Grade Redwood Tanks

Mr. Price:

Enclosed are the revised Closure Plans for Below Grade Redwood Tanks and for Permitted Emergency Pits. The revisions concern changes in items #3B, #8 and #10 for the Below Grade Redwood tanks and items #4B, #6 and #8 for the Permitted Emergency Pits, as directed by our telephone conversation of April 22, 1999, and your subsequent e-mail.

It is important to reiterate that **all activities** pertaining to closure of emergency pits and replacement of the redwood tanks will be conducted **pursuant to NMOCD guidelines**. All site assessments, work plans, time schedules, sample and test plans, impacted soil removal, replacement tankage and facilities, etc., will be specifically fitted to the particular site applying for closure but will generally follow these generic plans. NMOCD will be notified in advance of significant occasions and will be consulted throughout the closure process for concurrence of plan alterations, assessment and analytical interpretations, etc.

Also enclosed are preliminary generic drafts of the open, below-ground-level replacement tank facility that you requested. The elevation of the collection vessel is vital to the system's gravity-flow capability, and in most cases, the replacement tank facility must remain at the same lower-than-surface elevation as the redwood tanks. Each site will be assessed for elevation limitations and the replacement facility will be designed accordingly. Rice Operating Company proposes to contain new tanks and piping within a concrete, sealed and frequently inspected (for integrity) vault-like enclosure, thus insuring future impact minimization to the environment and the public.

Thank you,



Carolyn Doran Haynes  
Operations Engineer

Enclosures

Cc KH; JC; file; Ms. Donna Williams, OCD District I, Hobbs, NM

# RICE Operating Company

122 West Taylor • Hobbs, NM 88240  
Phone: (505) 393-9174 • Fax: (505) 397-1471

March 22, 1999

Mr. Wayne Price  
NM Energy, Minerals and Natural Resources Department  
Oil Conservation Division, Environmental Bureau  
2040 S. Pacheco  
Santa Fe, NM 87505

Re: Closure Work Plan for Existing Pits and Below-Grade Redwood Tanks

Mr. Price:

Enclosed are copies of emergency pit permits and below grade redwood tank installations for our operations in Lea County, New Mexico, that were previously submitted to NMOCD in October, 1997. This documentation serves as a list of facilities operated by Rice Operating Company (ROC) that contain or have contained pits or below grade tanks.

Closure plans for two locations, F-29 and H-35, are in process with the OCD now. The generic "Closure Plan for Below Grade Redwood Tanks" detailed below will accommodate the systematic closure of existing ROC operated below-grade redwood tanks. The existing emergency pits will be closed pursuant to the generic "Closure Plan for Permitted Emergency Pits", also detailed below. It is expected that at facilities containing both, the below-grade redwood tank (s) and the emergency pit will be closed at the same time, but under separate closure plans and closure reports.

Rice Operating Company is the service provider (operator) for these salt-water disposal systems in SE NM. Rice Operating has no ownership of any of the pipelines, wells, or facilities. Each system is owned by a consortium of oil producers and they are called "System Partners," and the System Partners provide all operating capital on a percentage ownership/usage basis. Each location will independently require System Partner AFE approval and advance billing for the closure funds. Only after funds are received can closure work begin.

Thank you,

Carolyn Doran Haynes  
Operations Engineer

**COPY**

Cc KH; JC; file; Ms. Donna Williams, OCD District I, Hobbs, NM

**Closure Plan for Below Grade Redwood Tank**

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Procure soil samples from 3' below bottom of tanks (9-11' below grade) at tank sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 4.
  - B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 3.
3. Delineate any portion of tank site that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 4.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
4. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing.
5. Move onto SWD facility site with temporary tank system. Re-route fluid flow from below grade redwood tanks into the temporary tank system. Plumb to SWD well.
6. Empty and clean redwood tanks, properly disposing of any BS & W. Excavate sides of redwood tanks to allow for working space to manipulate tank support banding. Remove redwood tanks reserving boards for proper disposal.
7. Excavate ramp into redwood tank hole. Remove and properly dispose of concrete base.
8. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
9. Procure random 5-point composite bottom sample from 3' below tank bottom and random 4-point composite side sample for lab TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 11.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 10.
10. Evaluate site for risk assessment: propose to excavate hole bottom and sides as practical to minimize risk; install 40-mil polyethylene liner on sanded bottom, graded to direct moisture accumulation away from the impacted area; cover and compact bottom with 2' sand fill.
11. Apply to NMOCD for closure of redwood tank site per NMOCD guidelines and site results.
12. After approval is received, proceed with installation of new fiberglass or steel tanks and appropriate plumbing changes within engineered secondary containment system.

**Closure Plan for Permitted Emergency Pits**

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Remove and properly dispose of visibly contaminated soil pursuant to NMOCD guidelines.
3. Procure soil samples from surface and 3' below excavation bottom and excavation sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 6.
  - B. If soil samples are > 100ppm TPH or > 250ppm Chlorides, proceed to Step 4.
4. Delineate any portion of excavation that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 5.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for Chloride and BETX levels. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
5. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing
6. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
7. Procure random 5-point composite bottom sample and random 4-point composite side sample for laboratory TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 9.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 8.
8. Evaluate site for risk assessment. Excavate bottom and sides to a depth and width that is deemed practical by soil analytical results. Install a 40-mil polyethylene liner on bottom, graded to provide water run-off away from the contamination left in place below the liner; cover and compact over the liner with 1-2' of sand fill.
9. Apply to NMOCD for closure of permitted emergency pit site per NMOCD guidelines and site results.
10. After approval is received, proceed with backfill and grading of pit site with clean soil and/or appropriately blended soil compatible with the on-site soil.

**Closure Plan for Below Grade Redwood Tank**

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Procure soil samples from 3' below bottom of tanks (9-11' below grade) at tank sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 4.
  - B. If soil samples are > 100ppm TPH or > 250ppm Chlorides, proceed to Step 3.
3. Delineate any portion of tank site that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 4.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for major cations and anions, TDS and BTEX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
4. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing.
5. Move onto SWD facility site with temporary tank system. Re-route fluid flow from below grade redwood tanks into the temporary tank system. Plumb to SWD well.
6. Empty and clean redwood tanks, properly disposing of any BS & W. Excavate sides of redwood tanks to allow for working space to manipulate tank support banding. Remove redwood tanks reserving boards for proper disposal.
7. Excavate ramp into redwood tank hole. Remove and properly dispose of concrete base if impacted. If concrete is not impacted, use as fill (below plow depth) in excavation area.
8. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
9. Procure random 5-point composite bottom sample from 3' below tank bottom and random 4-point composite side sample for lab TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 11.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 10.
10. Evaluate site for risk assessment: delineate to assess depth and horizontal extent of impact corresponding to NMOCD guidelines for site assessment value; excavate bottom and sides as practical to minimize risk; install compacted clay liner to meet or exceed 95% of a Proctor Test ASTM-D-698 with permeability (hydraulic conductivity) equal or less than  $1 \times 10^{-7}$  cm/sec for containment/isolation of impact.
11. Discuss results/risk assessment with NMOCD for verbal approval to proceed with backfill/installation of new tanks and plumbing within engineered secondary containment system.
12. Apply to NMOCD for closure of redwood tank site per NMOCD guidelines and site results.

**Closure Plan for Permitted Emergency Pits**

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Remove and properly dispose of visibly contaminated soil pursuant to NMOCD guidelines.
3. Procure soil samples from surface and 3' below excavation bottom and excavation sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 6.
  - B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 4.
4. Delineate any portion of excavation that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 5.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
5. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing
6. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
7. Procure random 5-point composite bottom sample and random 4-point composite side sample for laboratory TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 9.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 8.
8. Evaluate site for risk assessment: delineate to assess depth and horizontal extent of impact corresponding to NMOCD guidelines for site assessment value; excavate bottom and sides as practical to minimize risk; install compacted clay liner to meet or exceed 95% of a Proctor Test ASTM-D-698 with permeability (hydraulic conductivity) equal or less than  $1 \times 10^{-7}$  cm/sec for containment/isolation of impact.
9. Discuss results/risk assessment with NMOCD for verbal approval to proceed with backfill.
10. Apply to NMOCD for closure of permitted emergency pit site per NMOCD guidelines and site results.

# NEW MEXICO STATE LAND OFFICE

## SALT WATER DISPOSAL EASEMENT

SALT WATER DISPOSAL

EASEMENT NO. **SWD-063**

THIS AGREEMENT, dated this 10<sup>th</sup> day of June, 1998, made and entered into between the State of New Mexico, acting by and through the undersigned, its Commissioner of Public Lands, hereinafter called the grantor, and Rice Engineering, 122 West Taylor, Hobbs, New Mexico 88240, hereinafter called the grantee,

WITNESSETH:

That, whereas, the said grantee has filed in the Land Office an application for salt water disposal easement and has tendered the sum of \$500.00, together with the sum of \$30.00 application fee;

NOW, THEREFORE, in consideration of the foregoing tender, receipt of which is acknowledged, and the covenants herein, grantor does grant to the grantee a salt water disposal easement for the sole and only purpose of underground disposal of salt water produced in connection with oil and gas operations, together with the right to make such reasonable use of the land as may be necessary to dispose of said salt water. Said easement shall cover the following described lands:

<u>INSTITUTION</u>	<u>SECTION</u>	<u>TOWNSHIP</u>	<u>RANGE</u>	<u>SUBDIVISION</u>	<u>ACRES</u>
C.S.	21	21S	36E	Portion Within NW $\frac{1}{4}$ SW $\frac{1}{4}$	2.5

TO HAVE AND TO HOLD said lands and privileges hereunder for a term of Two years from the date first above written, subject to all terms and conditions hereinafter set forth:

1. Grantee shall pay the grantor the sum of \$500.00 annually, in advance.

2. With the consent of the grantor and payment of a fee of \$30.00, the grantee may surrender or relinquish this salt water disposal easement to the grantor; provided, however, that this surrender clause shall become absolutely inoperative immediately and concurrently with the filing of any suit in any court or law or equity by the grantor or grantee or any assignee to enforce any of the terms of this salt water disposal easement.

3. The grantee, with the prior written consent of the grantor, may assign his salt water disposal easement in whole only. Upon approval of the assignment, in writing, by the grantor, the grantee shall stand relieved from all obligations to the grantor with respect to the lands embraced in the assignment, and the grantor shall likewise be relieved from all obligations to the assignor as to such tracts, and the assignee shall succeed to all of the rights and privileges of the assignor with respect to such tracts and shall be held to have assumed all of the duties and obligations of the assignor to the grantor as to such tracts.

4. The grantor may cancel this salt water disposal easement for non-payment of annual consideration or for violation of any of the terms and covenants hereof; provided, however, that before any such cancellation shall be made, the grantor must mail to the grantee or assignee, by registered mail, addressed to the post office address of such grantee or assignee, shown by the records, a thirty-day notice of intention to cancel said salt water disposal easement, specifying the default for which the salt water disposal easement is subject to cancellation. No proof of receipt of notice shall be necessary and thirty days after such mailing, the grantor may enter cancellation unless the grantee shall have sooner remedied the default.

5. The grantee shall furnish copies of records and such reports and plats of his operations, including any and all data relating to geological formations as the grantor may reasonably deem necessary to his administration of the lands.

6. Grantee may make or place such improvements and equipment upon the land as may reasonably be necessary to dispose of salt water, and upon termination of this salt water disposal easement for any reason, grantee may remove such improvements and equipment as can be removed without material injury to the premises; provided, however, that all sums due the grantor have been paid and that such removal is accomplished within one year of the termination date or before such earlier date as the grantor may set upon thirty days written notice to the grantee. All improvements and equipment remaining upon the premises after the removal date, as set in accordance with this paragraph, shall be forfeited to the grantor without compensation. All pipelines constructed hereunder shall be buried below plow depth.

7. This salt water disposal easement is made subject to all the provisions and requirements applicable thereto which are to be found in various acts of the legislature of New Mexico and the rules of the Commissioner of Public Lands of the State of New Mexico, the same as though they were fully set forth herein, and said laws and rules, so far as applicable to this salt water disposal easement, are to be taken as a part hereof.

8. All the obligations, covenants, agreements, rights and privileges of this salt water disposal easement shall extend to and be binding and inure to the benefit of the lawful and recognized assigns or successors in interest of the parties hereto.

9. Grantee shall post with grantor a bond or undertaking in an amount required by grantor in favor of the owner of improvements lawfully located upon the lands herein to secure payment of damage, if any, done to such improvements by reason of grantee's operations.

10. Payment of all sums due hereunder shall be made at the office of the Commissioner of Public Lands, 310 Old Santa Fe Trail, P. O. Box 1148, Santa Fe, New Mexico 87504-1148.

11. Grantee, including his heirs, assigns, agents, and contractors shall at their own expense fully comply with all laws, regulations, rules, ordinances, and requirements of the city, county, state, federal authorities and agencies, in all matters and things affecting the premises and operations thereon which may be enacted or promulgated under the governmental police powers pertaining to public health and welfare, including but not limited to conservation, sanitation, aesthetics, pollution, cultural properties, fire, and ecology. Such agencies are not to be deemed third party beneficiaries hereunder; however, this clause is enforceable by the grantor as herein provided or as otherwise permitted by law.

12. Grantee shall save and hold harmless, indemnify and defend the State of New Mexico, the Commissioner of Public Lands, and his agent or agents, in their official and individual capacities, of and from any and all liability claims, losses, or damages arising out of or alleged to arise out of or indirectly connected with the operations of grantee hereunder, off or on the herein above described lands, or the presence on said lands of any agent, contractor or sub-contractor of grantee.

AFFIRMATION OF GEOLOGIC, ENGINEERING & HYDROLOGIC INVESTIGATION: I hereby affirm that the available geologic and engineering data have been examined and no evidence has been found of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

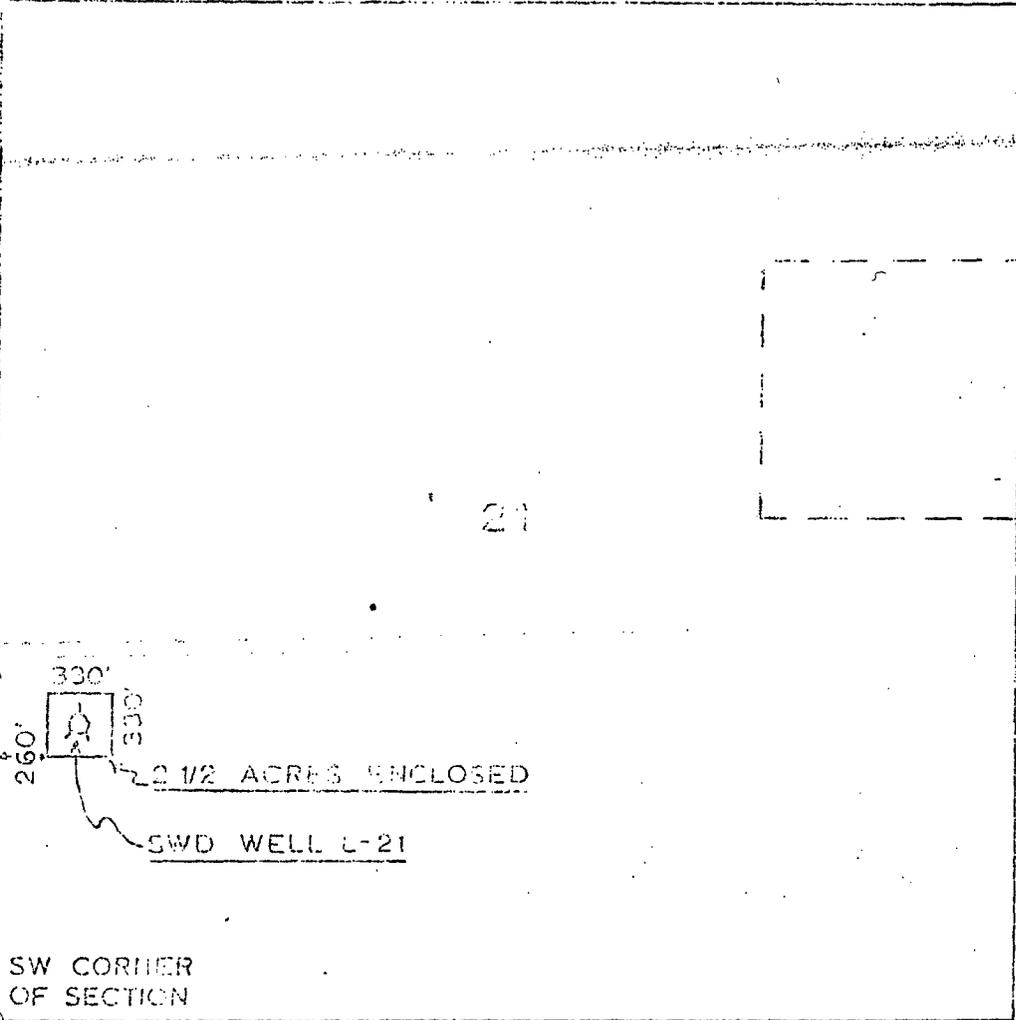


R 36 E

N

21

T  
21  
S



LEA COUNTY, NEW MEXICO

DWN	AMM	8-68	BUSINESS LEASE	COVER
			EME SWD WELL L-21	1" = 1000'
			Geo. Engineering & Surveying, Inc.	DATE 1/1/74



## **Site Profile**

### **Location**

The site is situated approximately 6 miles northwest of Eunice New Mexico. The legal descriptions and geo-coordinates are described on the attached plat map.

### **Site History**

The site was used as a temporary storage station for four water disposal lines feeding a brine disposal system. The storage equipment has been made redundant by changes within the disposal system.

The main physical features at the site are two 25' diameter redwood storage tanks, a wellhead, a 210 bbl. fiberglass chemical storage tank and an emergency overflow pit.

### **Land Use**

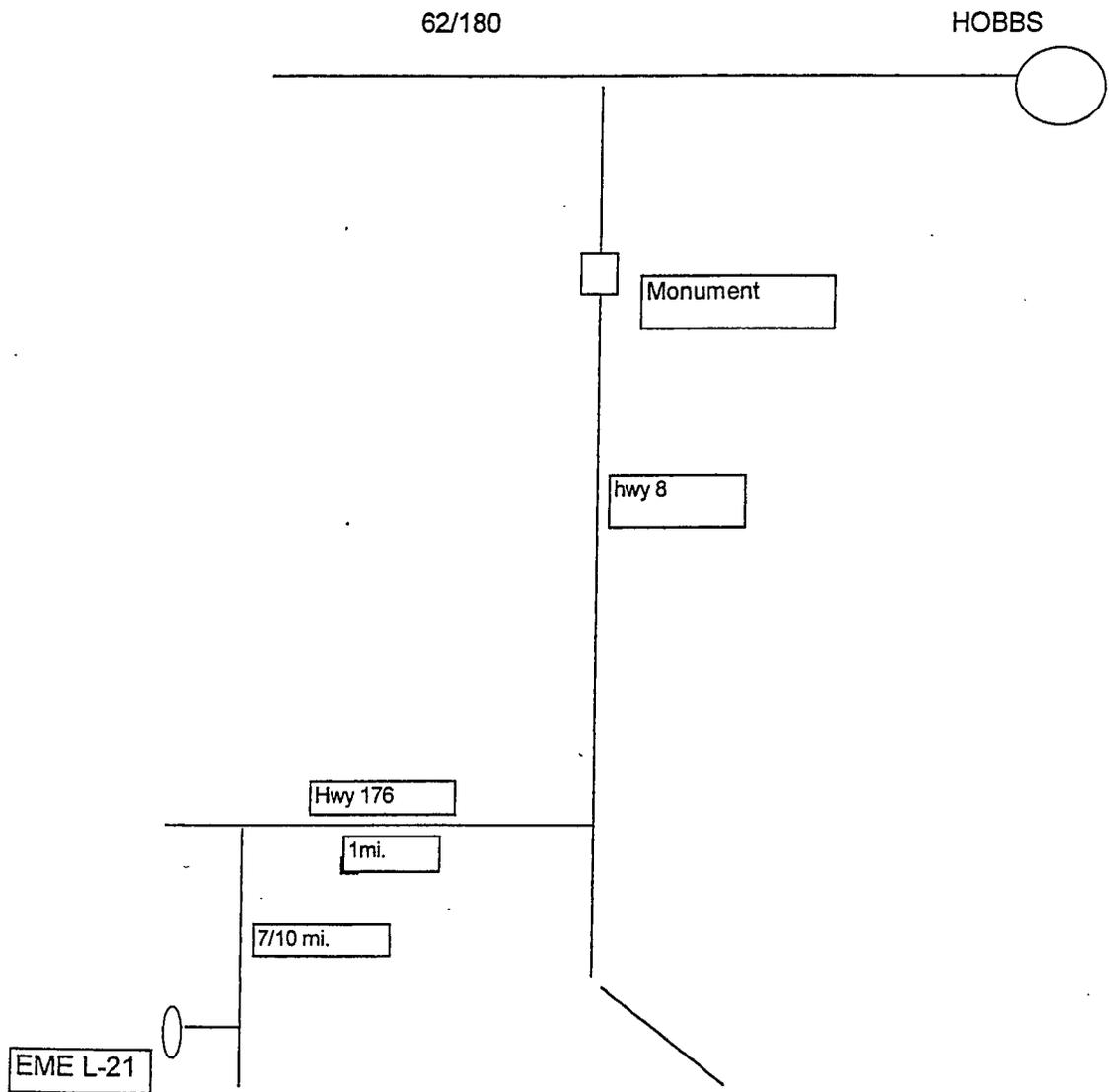
The site is on New Mexico State Lands. The primary land use is oil and gas production. The topography is unremarkable.

### **Distance to Surface and Ground Water**

There are no windmills, water pumps or surface waters within one mile of the facility. The vertical distance to groundwater is estimated to be over 100'

System: EME  
Well: L-21  
Legals: 21-21S-36E

South of Monument on Hwy 8 to the junction of Hwy 176. Turn west on Hwy 176 and go 1 mile. Turn left through cattle guard and go 7/10 mile south. Turn right into location.



Submit 3 Copies  
To Appropriate  
District Office  
DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-103  
Revised 1-1-89

### OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, NM 87505

DISTRICT II  
811 South First, Artesia NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS)		WELL API NO. 30-025-21852
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other Emergency pit and Below-grade Redwood Tank <input type="checkbox"/>		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator RICE OPERATING COMPANY		6. State Oil & Gas Lease No.
3. Address of Operator 122 West Taylor, Hobbs, NM 88240		7. Lease Name or Unit Agreement Name: Eunice-Monument-Eumont Salt Water Disposal System, SWD Facility L-21
4. Well Location Unit letter <u>L</u> : <u>1520</u> feet from the <u>SOUTH</u> line and <u>440</u> feet from the <u>WEST</u> line Section 21 Township 21 South Range 36 East NMPM, Lea County, NM		8. Well No. L-21
10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3589' above sea level		9. Pool name or Wildcat

Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

#### NOTICE OF INTENTION TO:

#### SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK	PLUG AND ABANDON WORK	REMEDIAL WORK	ALTERING CASING
TEMPORARILY ABANDON	CHANGE PLANS	COMMENCE DRILLING OPNS.	PLUG AND ABANDONMENT
PULL OR ALTER CASING		CASING TEST AND CEMENT JOB	
OTHER: Remove below-grade redwood tanks and close emergency pit		OTHER: _____	

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103.

Proposed work according to generic closure plans for below grade redwood tanks and permitted pits:

Delineate site for contamination, remove redwood tanks, close emergency overflow pit (Pit Permit # H-73) and clean-up location pursuant to NMOCD guidelines. Replace redwood tanks with fiberglass tanks within an engineered secondary-containment. Work began in January, 2000 under approved generic closure plan (attached). All major events will be coordinated to allow 48 hrs notice to OCD.

Information from the State Engineer's Office in Roswell estimated depth to ground water at 175-247' and indicate closest water well to be in Unit "G" of Section 29, T21S-R36E, which is more than 5000' from the facility at Well L-21. Topographic maps show no indication of surface water bodies within 1000' of the L-21 facility. A site review indicated no water sources at all within 1000' feet of the facility.

Depth to ground water: >100' = 0; No water source within 1000' = 0; >1000' to surface water body = 0 **Site Assessment=0**

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Carolyn Doran Haynes TITLE OPERATIONS ENGINEER DATE 2-23-00

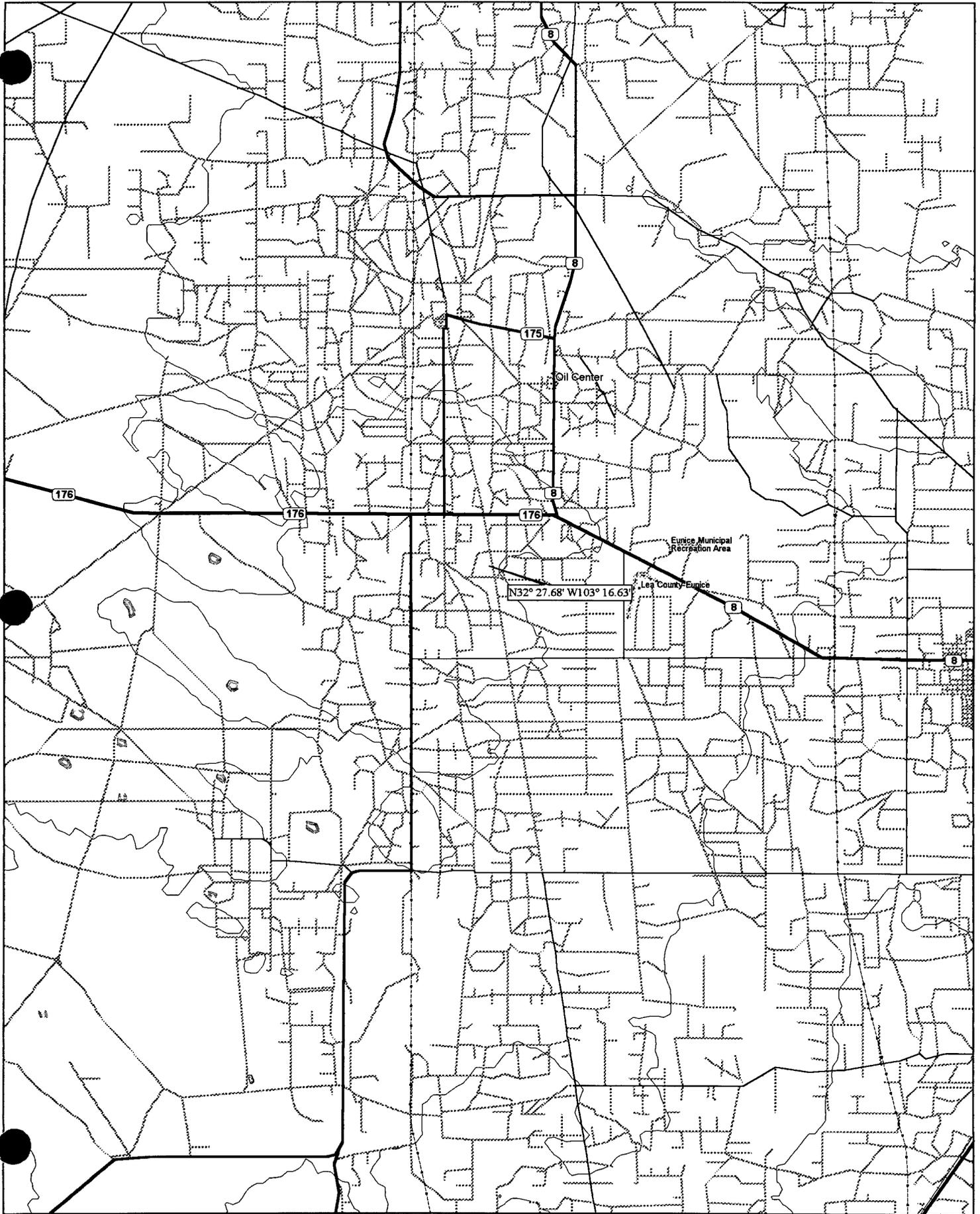
Type or print name CAROLYN DORAN HAYNES Telephone No. 505-393-9174

(This space for State use)

APPROVED

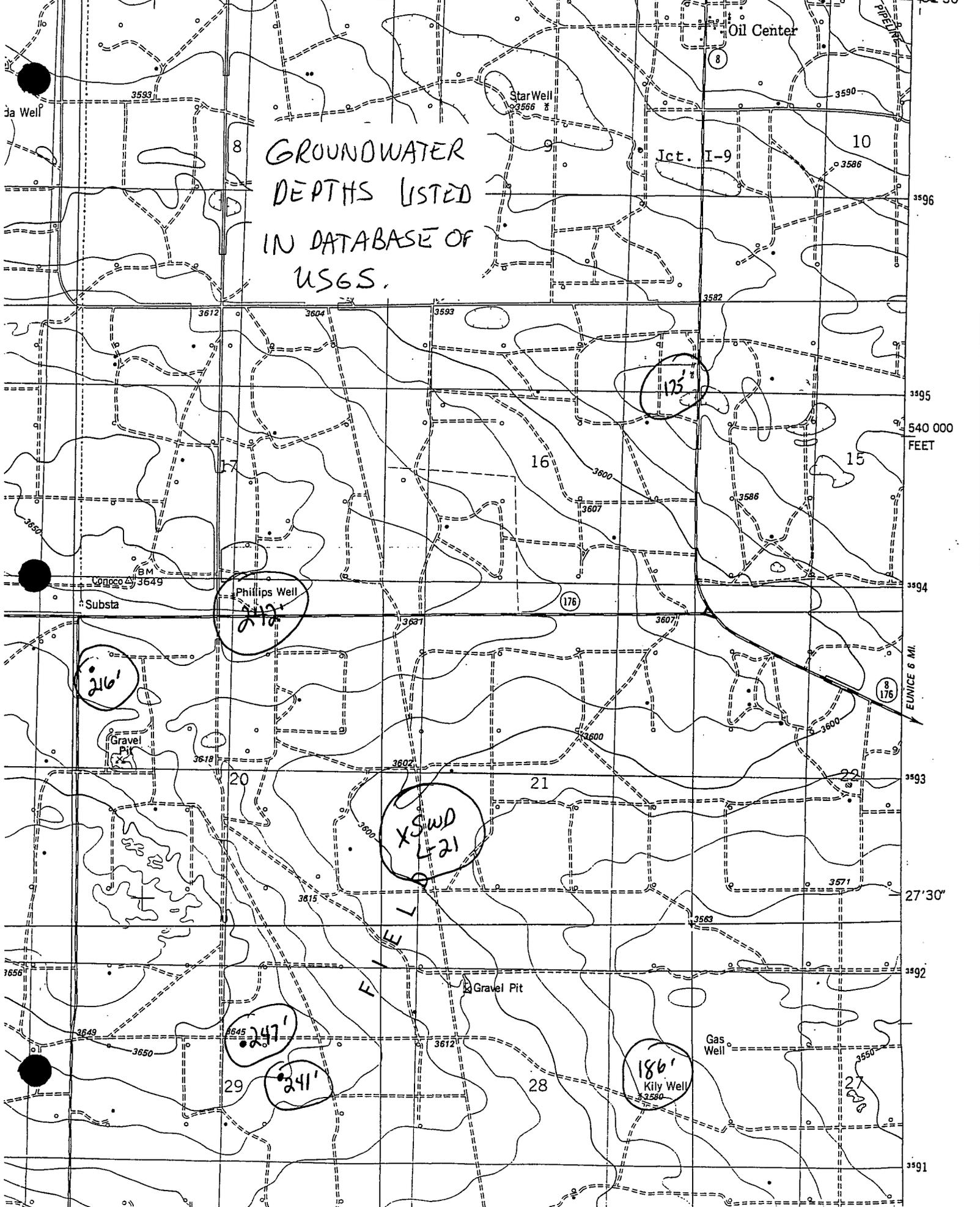
BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Conditions of approval, if any:



1 mi

60 17'30" 61 62 830 000 MONUMENT 9 MI. 64 103°15' 32'30"



GROUNDWATER  
DEPTHS LISTED  
IN DATABASE OF  
USGS.

175'

216'

Phillips Well  
3612'

X SWD  
L-21

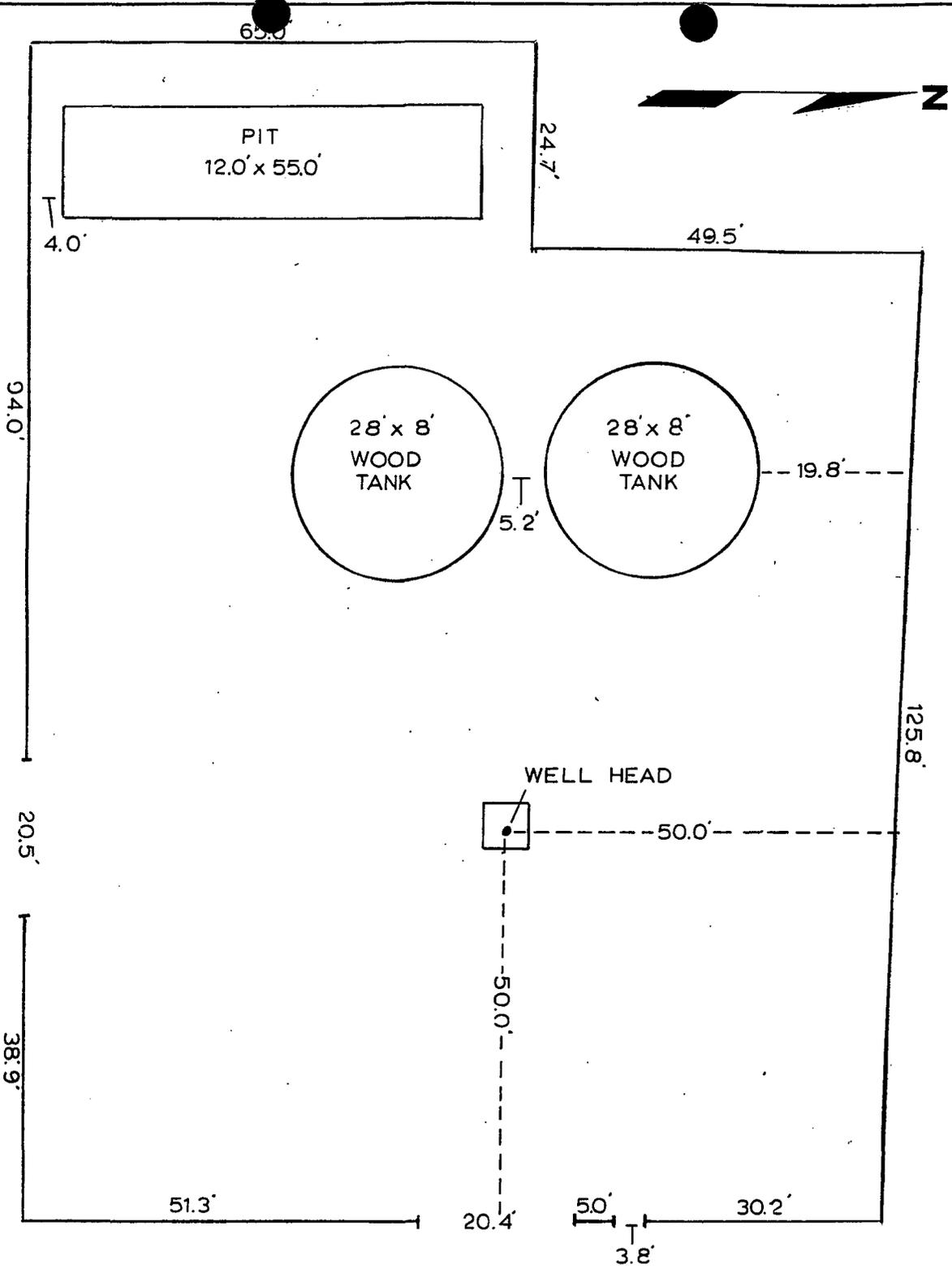
247'

241'

186'  
Kily Well  
3580

MONUMENT 6 MI.

540 000  
FEET



DWN	KDP	1-73	EME SWD WELL L-21 SCHEMATIC OF LOCATION	SCALE 1" = 20'
				Rice Engineering & Operating, Inc. Hobbs, New Mexico

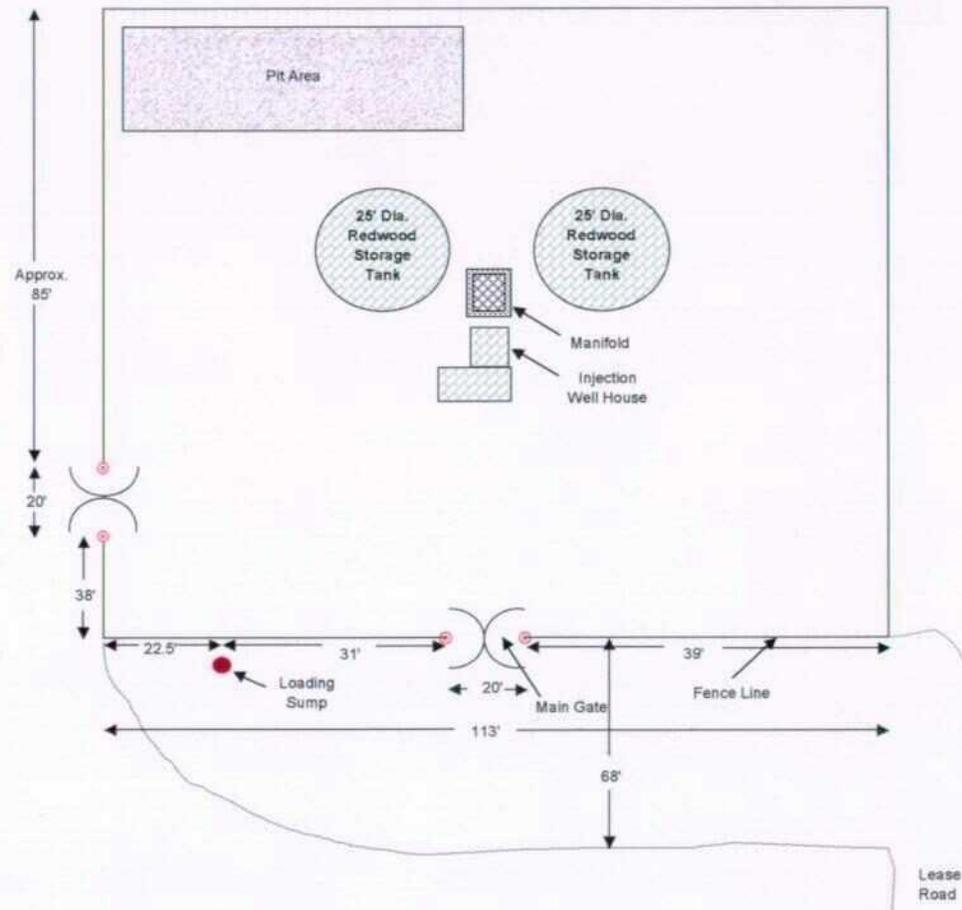
**RICE** Operating Company

Well No. L-21

Sec. 21

T21S R 36E

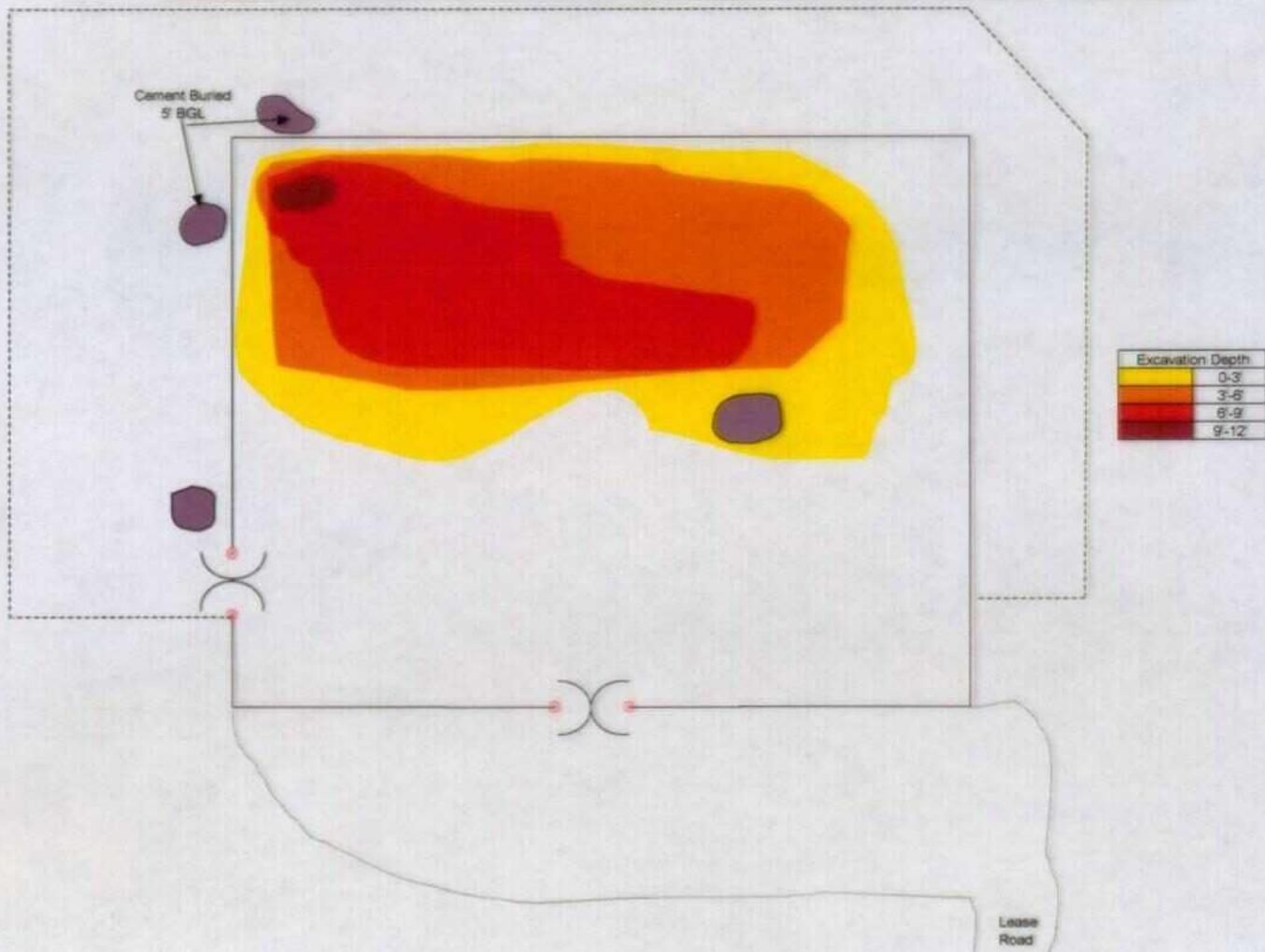
Original Site Configuration



# RICE Operating Company

Well No. L-21

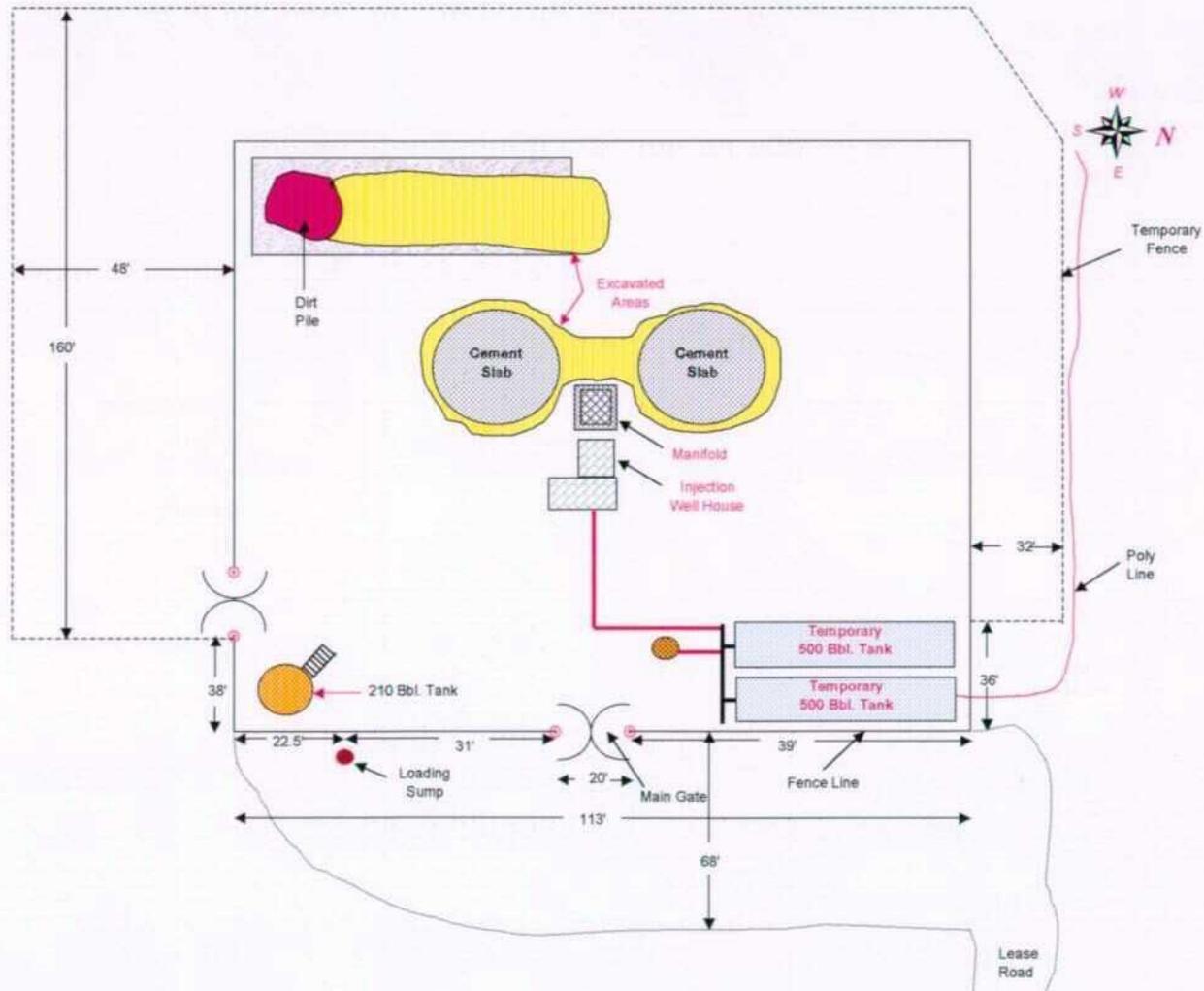
Excavation Schematic



# RICE Operating Company

Well No. L-21

2-1-2000 Site Configuration



**CAUTION**

**FLAMMABLE  
GAS MAY BE  
PRESENT**

RICE ENGINEERING CORPORATION

E.M.E. SWD SYSTEM

WELL NO. L-21

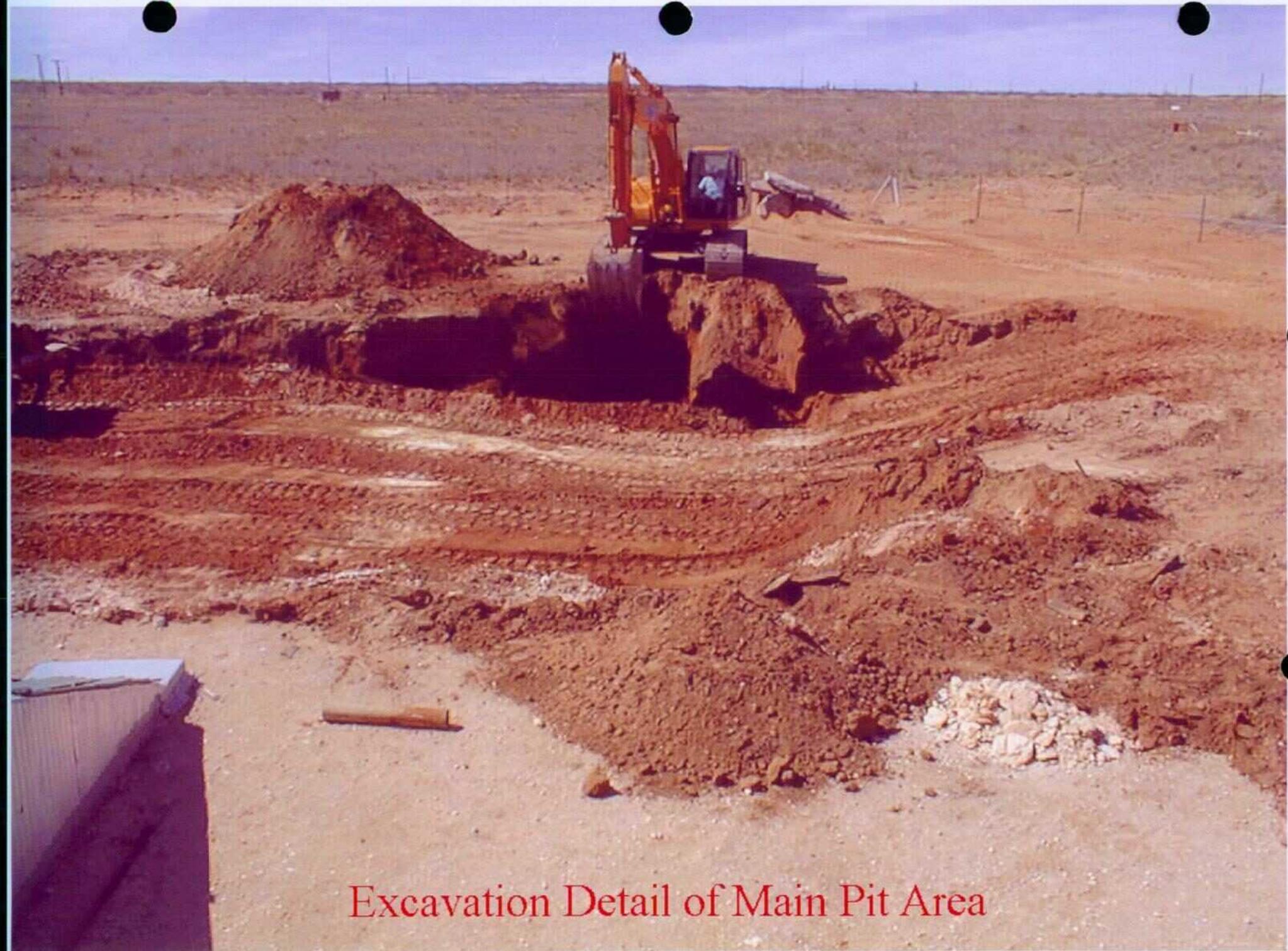
NW/4 SW/4, SEC. 21-T21S-R36E

DISPOSAL ORDER NO. R-3102

T  
&  
C



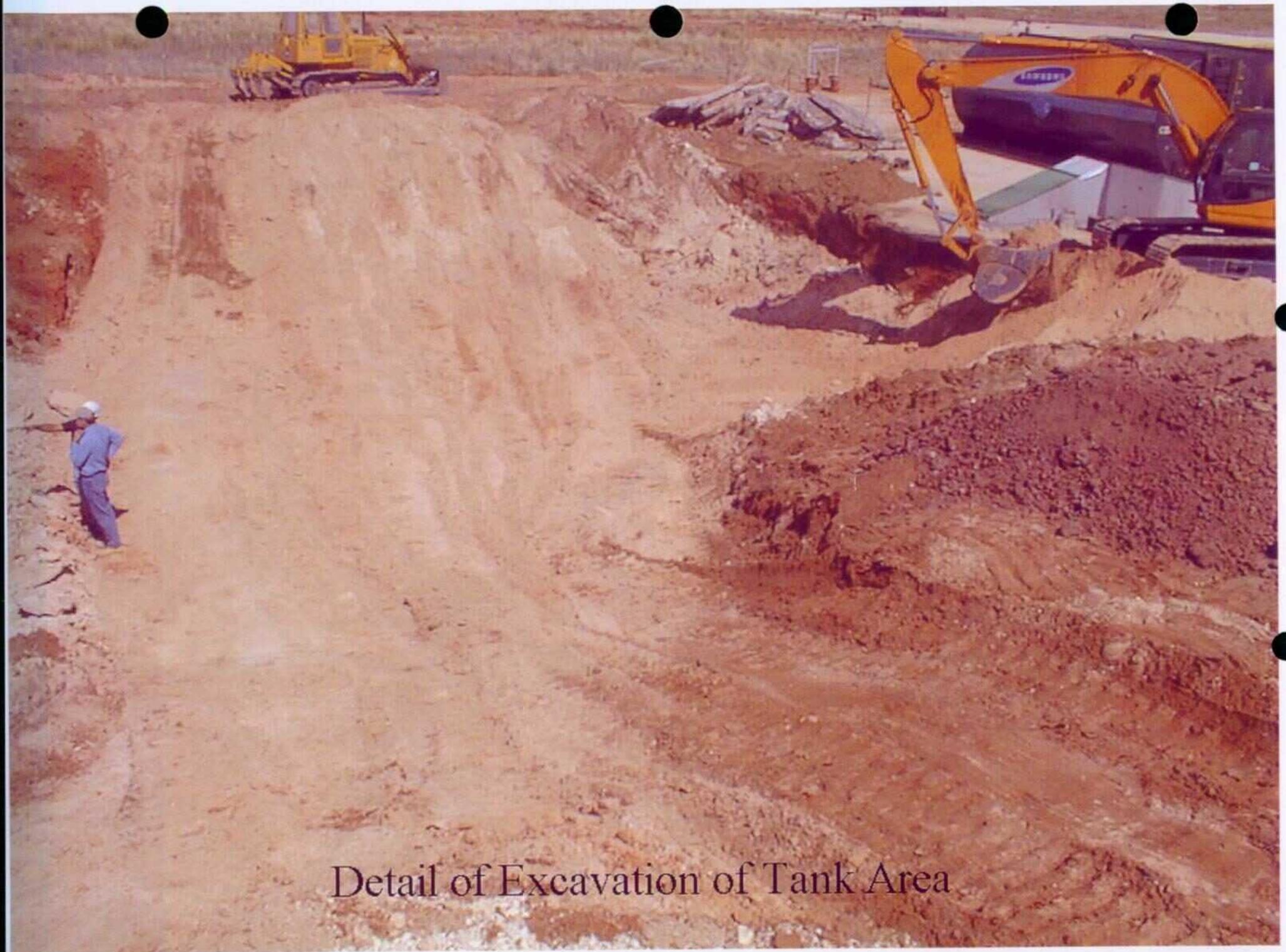
Detail of Tank Area  
2-1-00



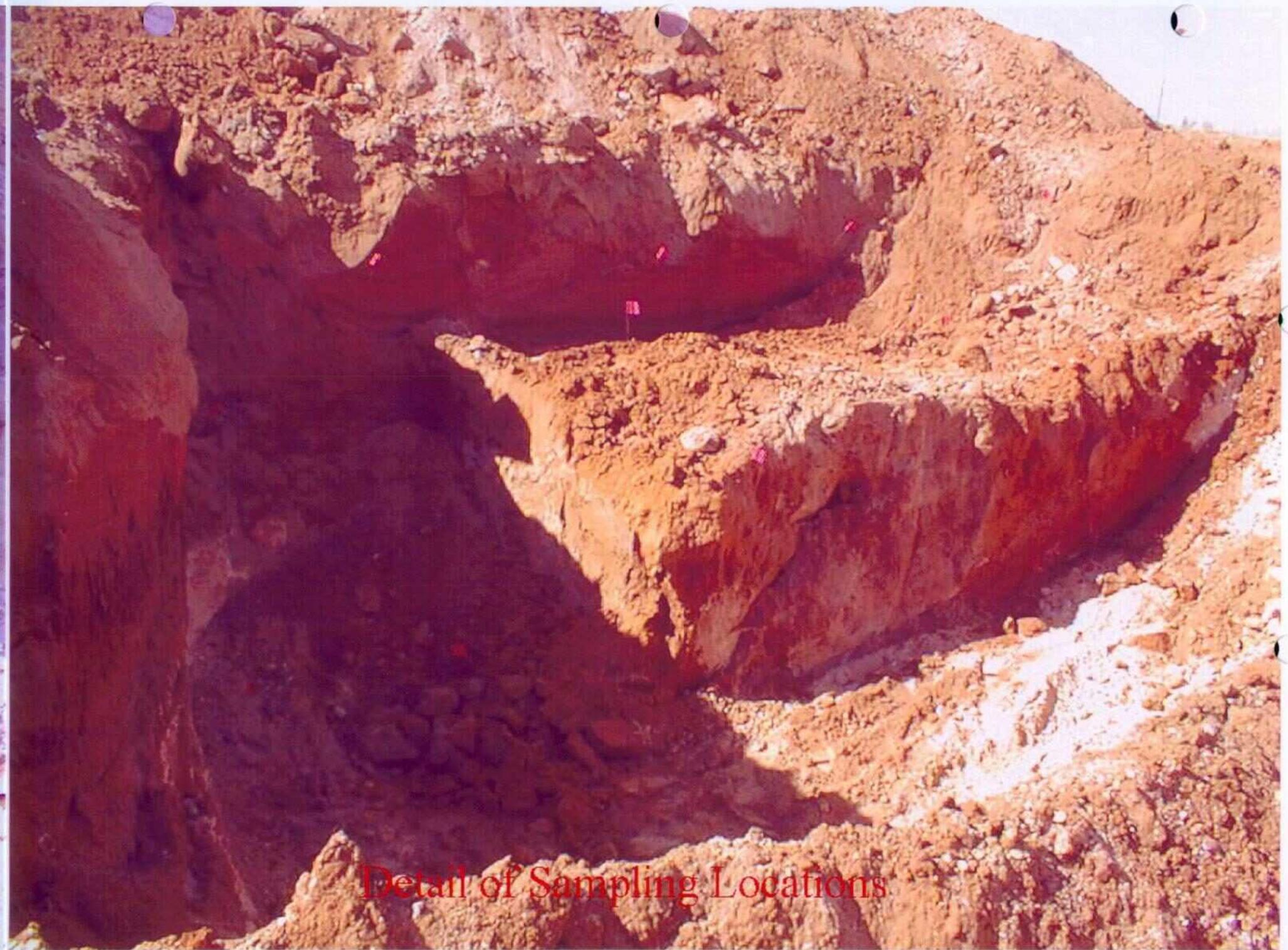
Excavation Detail of Main Pit Area



Excavation Detail of Tank Area



Detail of Excavation of Tank Area



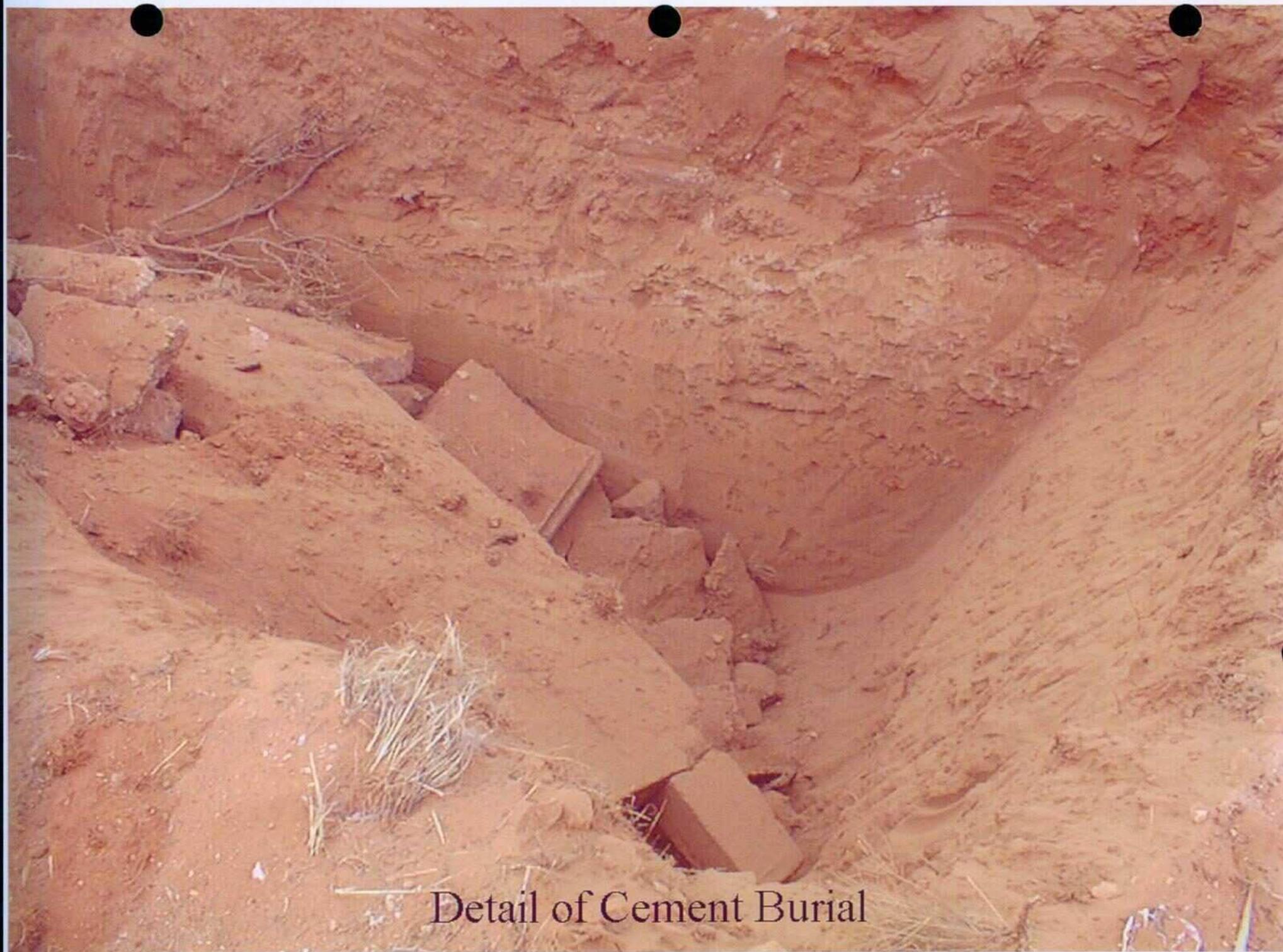
Detail of Sampling Locations



Detail of Cement Burial



Detail of Cement Burial



Detail of Cement Burial



Detail of Cement Burial



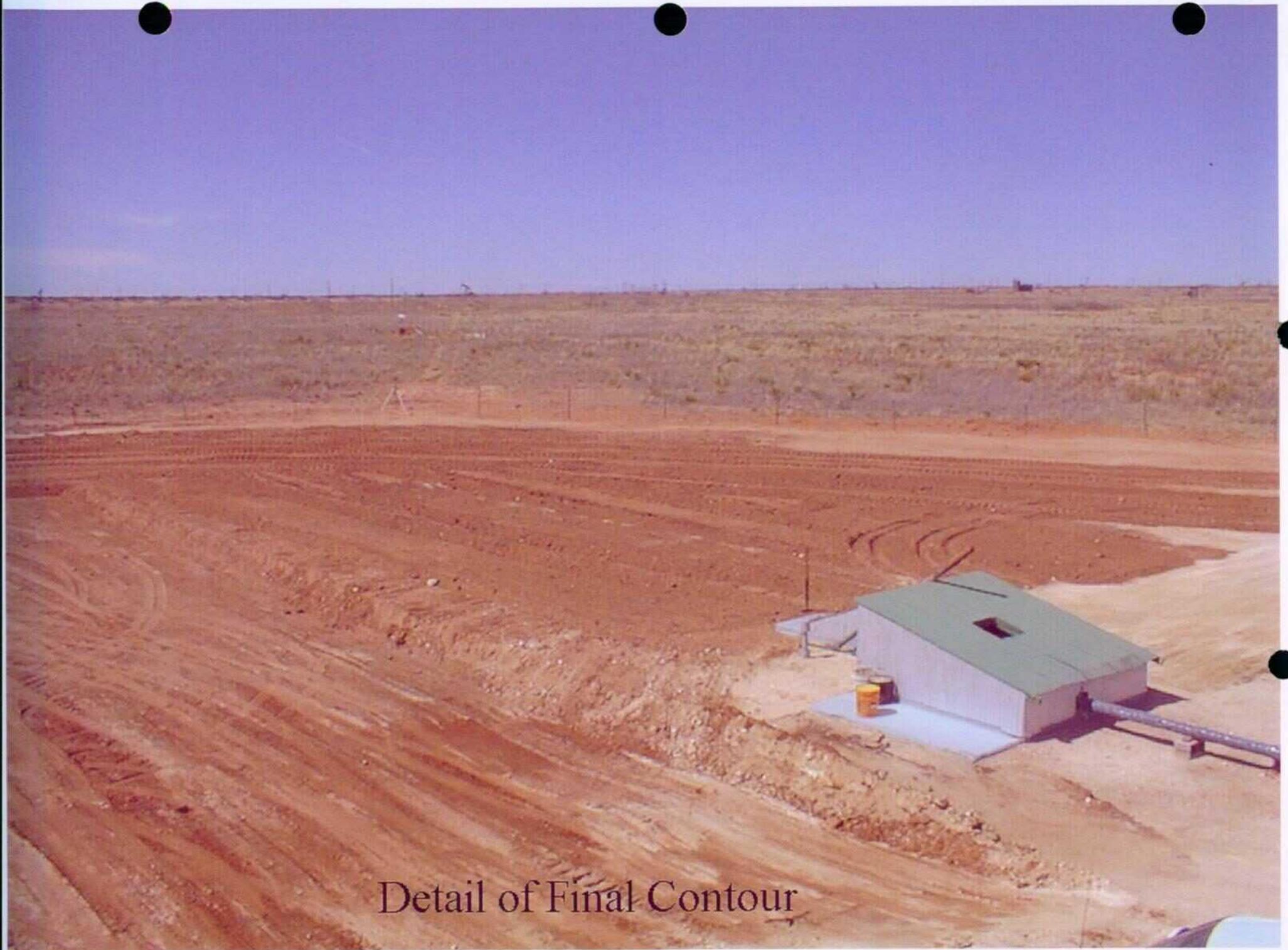
*Detail of Clay Density Testing*

Detail of Tank Prep. Area





Detail of Tank Prep. Area



Detail of Final Contour



## **Protocol**

This section contains a copy of the remediation protocol used on this project.



---

**Remediation Protocol  
Rice Operating Company  
Site L-21**

---

**1.0 Purpose**

This protocol is to provide a detailed outline of the steps to be employed in the remediation of a pit located south of Hobbs, New Mexico.

**2.0 Scope**

This protocol is site specific for the Rice Operating remediation project.

**3.0 Preliminary**

Prior to any field operations, Whole Earth Environmental shall conduct the following activities:

**3.1 Client Review**

3.1.1 Whole Earth shall meet with cognizant personnel within Rice to review this protocol and make any requested modifications or alterations.

3.1.2 Changes to this protocol will be documented and submitted for final review by Client prior to the initiation of actual field work.

**4.0 Safety**

4.1 Prior to work on the site, Whole Earth shall obtain the location and phone numbers of the nearest emergency medical treatment facility. We will review all safety related issues with the appropriate Client personnel, sub-contractors and exchange phone numbers.

4.2 A tailgate safety meeting shall be held and documented each day. All sub-contractors must attend and sign the daily log-in sheet.

4.3 Anyone allowed on to location must be wearing sleeved shirts, steel toed boots, and long pants. Each vehicle must be equipped with two way communication capabilities.

4.4 Prior to any excavation, New Mexico One Call will be notified. The One Call notification number will be included within the closure report. If lines are discovered within the area to be excavated they shall be marked with pin flags on either side of the line at maximum five foot intervals.

### **5.0 Remediation Procedure**

5.1 All soils containing a TPH concentration >100 ppm, chlorides > 250 ppm and all soils containing a benzene concentration >10ppm or a total BTEX concentration >50ppm will be excavated. Soils containing TPH concentrations >5,000 ppm will be transported to Sundance Services. The side walls and bottom of the excavation will be field tested for TPH and BTEX concentrations in accordance with WEQP-06 and WEQP-19.

5.2 The Hobbs branch of the OCD will be notified to witness the final confirmation sampling of the side walls and bottom of the excavation. Samples will be collected in accordance with WEQP-77 and analyzed for TPH and BTEX.

5.3 The pit bottoms will be covered with proctored clay and compacted to 100% density.

5.3 The remaining soils will be mixed and blended with sub-strait materials to achieve the concentrations of <1,000 ppm TPH, <10 ppm benzene and < 250 ppm chlorides.

### **6.0 Closure Report**

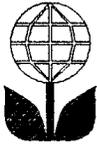
6.1 At the conclusion of the project, Whole Earth shall prepare a closure report which contains the following minimum information:

- Photographs of the location prior to remediation
- Photographs of the location at time of final closure
- Contaminant concentrations at the conclusion of the project
- Copies of this protocol and all testing procedures
- Independent laboratory analyses
- Shipping manifests for all materials taken to disposal
- Disposal manifests for all materials sent to commercial disposal



## **Procedures**

This section contains copies of the detailed sample collection and field testing procedures used on this project.



QP-06 Rev. C

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**WHOLE EARTH ENVIRONMENTAL  
QUALITY PROCEDURE**

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**Procedure for Conducting Field TPH Analysis**

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Completed By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Effective Date: 02/15/97

---

**1.0 Purpose**

To define the procedure to be used in conducting total percentage hydrocarbon testing in accordance with EPA Method 418.1 (modified) using the "MEGA" TPH Analyzer.

**2.0 Scope**

This procedure is to be used for field testing and on site remediation information.

**3.0 Procedure**

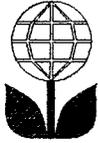
- 3.1 The G.A.C. "MEGA" TPH analyzer is an instrument that measures concentrations of aliphatic hydrocarbons by means of infra-red spectrometry. It is manufactured to our specifications and can accurately measure concentrations from two parts per million through 100,000 parts per million. The unit is factory calibrated however minor calibration adjustments may be made in the field. Quality Procedure 25 defines the field calibration methods to be employed.
- 3.2 Prior to taking the machine into the field, insert a 500 ppm and 5,000 ppm calibration standard into the sample port of the machine. Zero out the Range dial until the instrument records the exact standard reading.
- 3.3 Once in the field, insert a large and small cuvette filled with clean Freon 113 into the sample port of the machine. Use the range dial to zero in the reading. If the machine does not zero, do not attempt to adjust the span dial. Immediately implement Quality Procedure 25 .

- 3.4 Place a 100 g. weight standard on the field scale to insure accuracy. Zero out the scale as necessary.
  - 3.5 Tare a clean 100 ml. sample vial with the Teflon cap removed. Add 10 g. (+/- .01 g), of sample soil into the vial taking care to remove rocks or vegetable matter from the sample to be tested. If the sample is wet, add up to 5 g. silica gel or anhydrous sodium sulfate to the sample after weighing.
  - 3.6 Dispense 10 ml. Freon 113 into the sample vial.
  - 3.7 Cap the vial and shake for five minutes.
  - 3.8 Carefully decant the liquid contents of the vial into a filter/desiccant cartridge and affix the cartridge cap. Recap the sample vial and set aside.
  - 3.9 Insert the metal tip of the pressure syringe into the cap opening and slowly pressurize. **WARNING: APPLY ONLY ENOUGH PRESSURE ON THE SYRINGE TO EFFECT FLOW THROUGH THE FILTERS. TOO MUCH PRESSURE MAY CAUSE THE CAP TO SEPARATE FROM THE BODY OF THE CARTRIDGE.** Once flow is established through the cartridge direct the flow into the 5 cm. cuvette until the cuvette is full. Reverse the pressure on the syringe and remove the syringe tip from the cartridge cap. Set the cartridge aside in vertical position.
  - 3.10 The cuvette has two clear and two frosted sides. Hold the cuvette by the frosted sides and carefully insert into the sample port of the machine. Read the right hand digital read-out of the instrument. If the reading is less than 1,000 ppm. the results shall be recorded in the field Soil Analysis Report. If the result is higher than 1,000 ppm, continue with the dilution procedure.
- 4.0 Dilution Procedure**
- 4.1 When initial readings are greater than 1,000 ppm using the 5 cm. cuvette, pour the contents of the 5 cm. cuvette into a 1 cm. cuvette. Insert the 1. cm cuvette into the metal holder and insert into the test port of the instrument.

- 4.1 Read the left hand digital read-out of the machine. If the results are less than 10,000 ppm, record the results into the field Soil Analysis Report. If greater than 10,000 ppm, continue the dilution process. **Concentrations >10,000 ppm are to be used for field screen purposes only.**
- 4.2 Pour the contents of the small cuvette into a graduated glass pipette. Add 10 ml. pure Freon 113 into the pipette. Shake the contents and pour into the 1cm. cuvette. Repeat step 4.2. adding two zeros to the end of the displayed number. If the reported result is greater than 100,000 ppm. the accuracy of further readings through additional dilutions is extremely questionable. **Do not use for reporting purposes.**
- 4.4 Pour all sample Freon into the recycling container.

#### 5.0 Split Samples

- 5.1 Each tenth test sample shall be a split sample. Decant approximately one half of the extraction solvent through a filter cartridge and insert into the instrument to obtain a concentration reading. Clean and rinse the cuvette and decant the remainder of the fluid to obtain a second concentration reading from the same sample. If the second reading varies by more than 1% from the original, it will be necessary to completely recalibrate the instrument.



QP-25

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**WHOLE EARTH ENVIRONMENTAL  
QUALITY PROCEDURE**

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**Procedure for Instrument Calibration  
and Quality Assurance Analysis for  
General Analysis "MEGA" TPH Analyzer**

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Completed By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Effective Date: / /

---

**1.0 Purpose**

This procedure outlines the methods to be employed in calibrating the GAC MEGA TPH analyzer and for determining and reporting of accuracy curves.

**2.0 Scope**

This procedure shall be followed each day that the instrument is used.

**3.0 Procedure**

3.1 Turn the instrument on and allow to warm up with no cuvette in the receptacle. The instrument will take between five and ten minutes to come to equilibrium as can be determined by the concentration display readings moving a maximum of 5 ppm on the low scale. If the instrument continues to display erratic readings greater than 5 ppm, remove the cover and check both the mirrors and chopper to insure cleanliness.

3.2 All TPH standards shall be purchased from Environmental Resources Corporation and as a condition of their manufacture subject to independent certification by third party laboratories. Each standard is received with a calibration certificate.

3.3 Insert the low range (100 ppm) calibration standard into the receiving port and note the result on the right hand digital display. If the displayed reading is less than 98 ppm or greater than 102 ppm, remove the circuit board cover panel and zero out the instrument in accordance with QP-26.

3.4 Repeat the process with the mid range (500 ppm) calibration standard. If the displayed reading is less than 490 ppm or greater than 510 ppm zero out the span as described in QP-26.

3.5 Repeat the process again with the 1,000 and 5,000 ppm calibration standards.

3.6 Pour clean Freon 113 into a filter cartridge and extract into 10 ml cuvette. Insert the cuvette into the receiving port and zero out the instrument reading using the far right adjustment knob on the instrument. Repeat using the 1 ml cuvette and the left hand zero dial.

#### 4.0 Determining & Reporting Instrument Accuracy

4.1 After making the fine adjustment with the zero dials reinsert each calibration standard into the instrument and note the concentration values. *If any concentration value exceeds 2% of the standard set point, repeat all steps in section 3.0 of this Procedure.* Note the actual concentration values displayed by the instrument after each calibration standard.

4.2 The four calibration standards shall be used in reporting span deviation as follows:

Standards Range			
100 ppm	500 ppm	1,000 ppm	5,000 ppm
0-250 ppm	251-750 ppm	751-2,500 ppm	2,501-10,000 ppm

4.3 Divide the actual instrument reading value of each calibration sample by the concentration shown on the standard (e.g., 501 ppm instrument reading / 500 ppm standard = 1.002%). These readings shall be reported for each test performed.

**5.0 Re-calibration**

- 5.1 If any sample exceeds the concentration of 1,000 ppm on the 10 ml cuvette or 10,000 ppm on the 1 ml cuvette, the cuvette must be thoroughly rinsed with clean Freon and the instrument re-zeroed in accordance with 3.6 of this procedure.



QP-77

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**WHOLE EARTH ENVIRONMENTAL  
QUALITY PROCEDURE**

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**Procedure for Obtaining  
Soil Samples for Transportation to a Laboratory**

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Completed By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Effective Date: / /

---

**1.0 Purpose**

This procedure outlines the methods to be employed when obtaining soil samples to be taken to a laboratory for analysis.

**2.0 Scope**

This procedure is to be used when collecting soil samples intended for ultimate transfer to a testing laboratory.

**3.0 Preliminary**

3.1 Obtain sterile sampling containers from the testing laboratory designated to conduct analyses of the soil. The shipment should include a Certificate of Compliance from the manufacturer of the collection bottle or vial and a Serial Number for the lot of containers. Retain this Certificate for future documentation purposes.

3.2 If collecting TPH, BTEX, RCRA 8 metals, cation / anions or O&G, the sample jar may be a clear 4 oz. container with Teflon lid. If collecting PAH's, use an amber 4 oz. container with Teflon lid.

**4.0 Chain of Custody**

4.1 Prepare a Sample Plan. The plan will list the number, location and designation of each planned sample and the individual tests to be performed on the sample. The sampler will check the list against the available inventory of appropriate sample collection bottles to insure against shortage.

4.2 Transfer the data to the Laboratory Chain of Custody Form. Complete all sections of the form except those that relate to the time of delivery of the samples to the laboratory.

- 4.3 Pre-label the sample collection jars. Include all requested information except time of collection. (Use a fine point Sharpie to insure that the ink remains on the label). Affix the labels to the jars.

### **5.0 Sampling Procedure**

- 5.1 Go to the sampling point with the sample container. If not analyzing for ions or metals, use a trowel to obtain the soil. Do not touch the soil with your bare hands. Use new latex gloves with each sample to help minimize any cross-contamination.
- 5.2 Pack the soil tightly into the container leaving the top slightly domed. Screw the lid down tightly. Enter the time of collection onto the sample collection jar label.
- 5.3 Place the sample directly on ice for transport to the laboratory.
- 5.4 Complete the Chain of Custody form to include the collection times for each sample. Deliver all samples to the laboratory.

### **6.0 Documentation**

- 6.1 The testing laboratory shall provide the following minimum information:
- A. Client, Project and sample name.
  - B. Signed copy of the original Chain of Custody Form including data on the time the sample was received by the lab.
  - C. Results of the requested analyses
  - D. Test Methods employed
  - E. Quality Control methods and results



## **Laboratory Analytical**

This section contains copies of the chain of custody and analytical results of testing for this project.

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL  
ATTN: MR. MIKE GRIFFIN  
19606 SAN GABRIEL  
HOUSTON, TEXAS 77084  
FAX: 1-281-646-8996

SampleType: Soil  
Sample Condition: Intact/ Iced  
Project #: None Given  
Project Name: L-21  
Project Location: Eunice, N.M.

Sampling Date: 03/01/00  
Receiving Date: 03/02/00  
Analysis Date: 3/02 & 3/03/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
23908	B	<0.100	<0.100	<0.100	<0.100	<0.100
23909	N	<0.100	<0.100	<0.100	<0.100	<0.100
23910	E	<0.100	<0.100	<0.100	<0.100	<0.100
23911	S	<0.100	<0.100	<0.100	<0.100	<0.100
23912	W	<0.100	<0.100	<0.100	<0.100	<0.100
23913	PB	<0.100	0.152	0.157	0.374	0.145
23914	PN	<0.100	<0.100	<0.100	<0.100	<0.100
23915	PS	<0.100	<0.100	<0.100	<0.100	<0.100
23916	PE	<0.100	<0.100	<0.100	<0.100	<0.100
23917	PW	<0.100	<0.100	<0.100	<0.100	<0.100
	% IA	101	97	96	98	95
	% EA	94	91	89	90	90
	BLANK	<0.100	<0.100	<0.100	<0.100	<0.100

METHODS: SW 846-8021B.5030

Raland K Tuttle  
Raland K. Tuttle

3-3-00  
Date

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL  
ATTN: MR. MIKE GRIFFIN  
19606 SAN GABRIEL  
HOUSTON, TEXAS 77084  
FAX: 1-281-646-8996

Sample Type: Soil  
Sample Condition: Intact/Iced  
Project #: None Given  
Project Name: L-21  
Project Location: Eunice, NM

Sampling Date: 03/01/00  
Receiving Date: 03/02/00  
Analysis Date: 3/02 & 3/03/00

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
23908	B	<10	<10
23909	N	<10	<10
23910	E	<10	<10
23911	S	<10	<10
23912	W	<10	<10
23913	PB	<10	<10
23914	PN	<10	<10
23915	PS	<10	<10
23916	PE	<10	<10
23917	PW	<10	<10
	% IA	107	89
	%EA	103	88
	BLANK	<10	<10

Methods: EPA SW 846-8015M GRO/DRO

  
Raland K. Tuttle

3-3-00  
Date

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL  
ATTN: MR. MIKE GRIFFIN  
19606 SAN GABRIEL  
HOUSTON, TEXAS 77084  
FAX: 1-281-646-8996

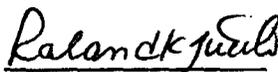
Sample Type: Soil  
Sample Condition: Intact/Iced  
Project #: None Given  
Project Name: L-21  
Project Location: Eunice, N.M.

Sampling Date: 03/01/00  
Receiving Date: 03/02/00  
Analysis Date: 03/03/00

ELT#	FIELD CODE	Chloride mg/kg
23908	B	35
23913	PB	230

QUALITY CONTROL	5140
TRUE VALUE	5000
% PRECISION	103
BLANK	<10

Methods: EPA SW 846-9052

  
Roland K Tuttle

3-3-00  
Date

**Environmental Lab of Texas, Inc.** 12600 West I-20 Odessa, Texas 79763  
 (915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REPORT

Project Manager: M. G. A. F.  
 Phone #: (800) 854-4358  
 FAX #: (281) 646-8996

Company Name & Address:  
Whole Earth Transition

Project #: \_\_\_\_\_  
 Project Name: L-21

Project Location: Enice, NM  
 Sampler Signature: M. G. A. F.

ANALYSIS REQUEST	
TPII #181	PROJ/GRO
BTEX #020/5030	✓
TCLP Metals Ag As Ba Cd Cr Pb Hg Se	
Total Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Volatiles	
TCLP Semi Volatiles	
TDS	
RCI	Chlorides

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX							PRESERVATIVE METHOD	SAMPLING					
				WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3		ICE	NONE	OTHER	DATE	TIME	
3908 B		1	40*	✓								✓			3-10-02	2:05	✓
3909 N															2:07		
3910 E															2:11		
3911 S															2:16		
3912 W															2:20		
3913 PB															3:27		X
3914 PA															3:29		
3915 PS															3:35		
3916 PE															3:37		
3917 PW															3:40		
3918																	

Requested by:	Date:	Times:	Received by:	REMARKS:
<u>M. G. A. F.</u>	03-02-00	1440	<u>J. Mcmurry</u>	ASAP
Requested by:	Date:	Times:	Received by:	
Requested by:	Date:	Times:	Received by Laboratory:	

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL  
ATTN: MR. MIKE GRIFFIN  
19606 SAN GABRIEL  
HOUSTON, TEXAS 77084  
FAX: 1-281-646-8996

SampleType: Soil  
Sample Condition: Intact/ Iced  
Project #: None Given  
Project Name: L-21 Battery  
Project Location: Eunice, N.M.

Sampling Date: See Below  
Receiving Date: 03/06/00  
Analysis Date: 03/06/00

ELT#	FIELD CODE/SAMPLE DATE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
24002	P-1 03/02/00	<0.100	<0.100	<0.100	0.109	<0.100
24003	P-2 03/02/00	<0.100	<0.100	<0.100	0.214	<0.100
24004	T-1 03/02/00	<0.100	<0.100	<0.100	<0.100	<0.100
24005	T-2 03/03/00	<0.100	<0.100	<0.100	0.213	<0.100
24006	T-3 03/03/00	<0.100	<0.100	<0.100	0.362	0.211
24007	P-L3 03/04/00	<0.100	<0.100	<0.100	0.417	0.195
24008	P-L4 03/04/00	<0.100	<0.100	<0.100	0.507	<0.100
	% IA	103	100	98	100	97
	% EA	115	101	96	114	98
	BLANK	<0.100	<0.100	<0.100	<0.100	<0.100

METHODS: SW 846-8021B.5030

  
Raland K. Tuttle

3-10-00  
Date

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL  
ATTN: MR. MIKE GRIFFIN  
19606 SAN GABRIEL  
HOUSTON, TEXAS 77084  
FAX: 1-281-646-8996

Sample Type: Soil  
Sample Condition: Intact/Iced  
Project #: None Given  
Project Name: L-21 Battery  
Project Location: Eunice, NM

Sampling Date: See Below  
Receiving Date: 03/06/00  
Analysis Date: 03/06/00

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg	Sample Date
24002	P-1	41	861	03/02/00
24003	P-2	36	1064	03/02/00
24004	T-1	<10	512	03/02/00
24005	T-2	<10	264	03/03/00
24006	T-3	12	246	03/03/00
24007	P-L3	16	280	03/04/00
24008	P-L4	13	93	03/04/00

% IA	107	116
%EA	115	39
BLANK	<10	<10

Methods: EPA SW 846-8015M GRO/DRO

  
Raland K. Tuttle

3-10-00  
Date

**Environmental Lab of Texas, Inc.** 12500 West I-20 East Odessa, Texas 79763  
 (915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: **M. Griffitt**  
 Phone #: (800) 854-4358  
 FAX #: (281) 646-8996

Company Name & Address:  
**Whole Earth Environ.**

Project #: \_\_\_\_\_  
 Project Name: **L-21 Bateav**  
 Sampler Signature: **M. Griffitt**

Project Location: **Eunice, NM**

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING TIME		
				WATER	SOIL	AIR	SLUDGE	OTHER	HCL	LiNO3	ICE		NONE	OTHER
24002	P-1	1	4oz	✓						✓			9-2 2:20	✓
24003	P-2												3:40	
24004	T-1												5:10	
24005	T-2												3-3 9:20	
24006	T-3												3-3 9:50	
24007	P-L3												3-4 3:20	
24008	P-L4	✓	✓	✓						✓			3-4 4:18	✓

Requested by:	Date:	Time:	Received by:	Time:	REMARKS
M. Griffitt	03-06-00	1400	J. McManney		
Requested by:	Date:	Time:	Received by:	Time:	
Requested by:	Date:	Time:	Received by Laboratory:	Time:	

ANALYSIS REQUEST

TCLP Metals Ag As Ba Cd Cr Pb Hg Se  
 TCLP Metals Ag As Ba Cd Cr Pb Hg Se  
 TCLP Volatiles  
 TCLP Semi Volatiles  
 TDS  
 RCI

FPII 1181- DR0/GRD  
 BTEX KMZU/SO30



## **Disposal Manifests**

This section contains copies of the disposal manifests for the soil sent to Sundance Services.

<b>Sundance Services, Inc.</b> P.O. Box 1737 • Bunkie, NM 88231 (505) 394-2811		<b>No 26416</b>
LEASE OPERATOR/SHIPPER/COMPANY: <u>Rice</u>		
LEASE NAME: <u>L-21</u>		
TRANSPORTER COMPANY: <u>Walter</u>	TIME: <u>AM/PM</u>	
DATE: <u>2-29-00</u>	VEHICLE NO.: <u>#429</u>	DRIVER NO.:
CHARGE TO: <u>Rice</u>		
<b>TYPE OF MATERIAL</b>		
<input type="checkbox"/> Production Water	<input type="checkbox"/> Drilling Fluids	<input type="checkbox"/> Completion Fluids
<input type="checkbox"/> Tank Bottoms	<input type="checkbox"/> Contaminated soil	<input type="checkbox"/> C-117 No.:
<input type="checkbox"/> Other Material:	<input type="checkbox"/> BS&W Content:	
Description: <u>oil dirt</u>		
VOLUME OF MATERIAL <input type="checkbox"/> BBLs. _____ : <input type="checkbox"/> YARD <u>12</u> : <input type="checkbox"/> _____		
<p>AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.</p> <p>ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.</p> <p><i>THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incidents.</i></p>		
DRIVER: <u>ROAN GONZALEZ</u> (SIGNATURE)		
FACILITY REPRESENTATIVE: <u>[Signature]</u> (SIGNATURE)		
<small>White-Sundance#1 Canary-Sundance Acc#1 Pink-Sundance Acc#2 Gold-Transporter Revised 12/27/95</small>		

**Sundance Services, Inc.**  
 P.O. Box 1737 \* Rosita, NM 88231  
 (505) 394-2511

LEASE OPERATOR/SHIPPER/COMPANY: Rice

LEASE NAME: L-21

TRANSPORTER COMPANY: Walton

DATE: 2-29-00 VEHICLE NO.: #430 DRIVER NO.: 1

CHARGE TO: Rice

**TYPE OF MATERIAL**

Production Water  
 Tank Bottoms  
 Other Materials: oil/dirt

Drilling Fluids  
 Contaminated soil  
 BSLW Content: \_\_\_\_\_

Description: \_\_\_\_\_

**VOLUME OF MATERIAL ( ) BBLs:** 17 YARD 12 : ( )

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.

**THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.**

DRIVER: Bryan Blum (SIGNATURE)

FACILITY REPRESENTATIVE: Felicia Felt (SIGNATURE)

White Sundance Quarry-Sundance Acct#1 Prit-Sundance Acct#2 Gold-Transporter  
 Revised 12/27/95

**Sundance Services, Inc.**  
 P.O. Box 1737 \* Rosita, NM 88231  
 (505) 394-2511

LEASE OPERATOR/SHIPPER/COMPANY: Rice

LEASE NAME: L-21

TRANSPORTER COMPANY: Walton

DATE: 2-29-00 VEHICLE NO.: 427 DRIVER NO.: \_\_\_\_\_

CHARGE TO: Rice

**TYPE OF MATERIAL**

Production Water  
 Tank Bottoms  
 Other Materials: \_\_\_\_\_

Drilling Fluids  
 Contaminated soil  
 BSLW Content: \_\_\_\_\_

Description: oil

**VOLUME OF MATERIAL ( ) BBLs:** 17 YARD 12 : ( )

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.

**THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.**

DRIVER: Mark Wilds (SIGNATURE)

FACILITY REPRESENTATIVE: Brendy Belva (SIGNATURE)

White Sundance Quarry-Sundance Acct#1 Prit-Sundance Acct#2 Gold-Transporter  
 Revised 12/27/95

**Sundance Services, Inc.**  
 P.O. Box 1337 \* Boulder, NM 88231  
 (505) 944-2511

**No 26420**

LEASE OPERATOR/SHIPPER/COMPANY: Rice

LEASE NAME: L-21

TRANSPORTER COMPANY: WALTON TIME: AM/PM

DATE: 2-29-00 VEHICLE NO.: 529 DRIVER NO.:

CHARGE TO: Rice

**TYPE OF MATERIAL**

Production Water  
 Tank Bottoms  
 Other Material: oil

Description: oil

Drilling Fluids  
 Contaminated soil  
 BSEW Content:

Completion Fluids  
 C-117 No.:

**VOLUME OF MATERIAL ( ) BBLs. : WYARD 12 : ( )**

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DRIVER: Raymond Gonzalez (SIGNATURE)

FACILITY REPRESENTATIVE: Bradley Bluma (SIGNATURE)

White-Sundance Curry-Sundance Asst/1 Pub-Sundance Asst/2 Cont-Transporter  
 Revised 12/21/95

**Sundance Services, Inc.**  
 P.O. Box 1337 \* Boulder, NM 88231  
 (505) 944-2511

**No 26421**

LEASE OPERATOR/SHIPPER/COMPANY: Rice

LEASE NAME: L-21

TRANSPORTER COMPANY: WALTON TIME: AM/PM

DATE: 2-29-00 VEHICLE NO.: 530 DRIVER NO.:

CHARGE TO: Rice

**TYPE OF MATERIAL**

Production Water  
 Tank Bottoms  
 Other Material: oil

Description: oil

Drilling Fluids  
 Contaminated soil  
 BSEW Content:

Completion Fluids  
 C-117 No.:

**VOLUME OF MATERIAL ( ) BBLs. : WYARD 12 : ( )**

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: Raymond Gonzalez (SIGNATURE)

FACILITY REPRESENTATIVE: Bradley Bluma (SIGNATURE)

White-Sundance Curry-Sundance Asst/1 Pub-Sundance Asst/2 Cont-Transporter  
 Revised 12/21/95

**Sundance Services, Inc.**  
P.O. Box 1737 • Barber, NM 88231  
(505) 344-2511

LEASE OPERATOR/SHIPPER/COMPANY: *Rice*

LEASE NAME: *L. #21* TIME: *2:40 AM/PM*

TRANSPORTER COMPANY: *Walter* DRIVER NO.:

DATE: *2-28-00* VEHICLE NO.: *429*

CHARGE TO: *rice*

**TYPE OF MATERIAL**

Production Water  Drilling Fluids  Completion Fluids  
 Tank Bottoms  Contaminated soil  C-117 No.:  
 Other Material:  BSAW Content: \_\_\_\_\_

Description: *Only Dist 12 yds*

VOLUME OF MATERIAL ( ) BBLs. ( ) YARD *12* ( )

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: *Ronan Gorman* (SIGNATURE)

FACILITY REPRESENTATIVE: *Spencer Mann* (SIGNATURE)

White-Sundance County-Sundance Area(1) Full-Sundance Area(2) Cold-Transporter  
Revised 12/27/99

**Sundance Services, Inc.**  
P.O. Box 1737 • Barber, NM 88231  
(505) 344-2511

LEASE OPERATOR/SHIPPER/COMPANY: *Rice*

LEASE NAME: *L. #21* TIME: *2:35 AM/PM*

TRANSPORTER COMPANY: *Walter* DRIVER NO.:

DATE: *2-29-00* VEHICLE NO.: *427*

CHARGE TO: *Rice*

**TYPE OF MATERIAL**

Production Water  Drilling Fluids  Completion Fluids  
 Tank Bottoms  Contaminated soil  C-117 No.:  
 Other Material:  BSAW Content: \_\_\_\_\_

Description: *Only Dist 12 yds*

VOLUME OF MATERIAL ( ) BBLs. ( ) YARD *12* ( )

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: *Max Goble* (SIGNATURE)

FACILITY REPRESENTATIVE: *Brandy Stevens* (SIGNATURE)

White-Sundance County-Sundance Area(1) Full-Sundance Area(2) Cold-Transporter  
Revised 12/27/99

**Sundance Services, Inc.**  
P.O. Box 1737 • Dunbar, NM 88231  
(505) 394-2511

LEASE OPERATOR/SHIPPER/COMPANY: Rice No 26425

LEASE NAME: L-21

TRANSPORTER COMPANY: Walter TIME: AM/PM

DATE: 2-29-00 VEHICLE NO.: 477 DRIVER NO.:

CHARGE TO: Rice

**TYPE OF MATERIAL**

Production Water  Drilling Fluids  Completion Fluids  
 Tank Bottoms  Contaminated soil  C-117 No.:  
 Other Material:  BSAW Content:

Description: oil/dirt

VOLUME OF MATERIAL ( ) BBLs. : 1 YARD 12 : ( )

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6801, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, AND REGULATIONS RELATED THERETO, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: [Signature] (SIGNATURE)

FACILITY REPRESENTATIVE: [Signature] (SIGNATURE)

White-Sundance Query-Sundance Asset/1: Full-Sundance Asset/2: C-117-Transporter  
Revised 12/27/99

**Sundance Services, Inc.**  
P.O. Box 1737 • Dunbar, NM 88231  
(505) 394-2511

LEASE OPERATOR/SHIPPER/COMPANY: Rice No 26424

LEASE NAME: L-21

TRANSPORTER COMPANY: Walter TIME: 2:45 AM/PM

DATE: 2-29-00 VEHICLE NO.: 430 DRIVER NO.:

CHARGE TO: Rice

**TYPE OF MATERIAL**

Production Water  Drilling Fluids  Completion Fluids  
 Tank Bottoms  Contaminated soil  C-117 No.:  
 Other Material:  BSAW Content:

Description: Oil/Dirt 12 yds

VOLUME OF MATERIAL ( ) BBLs. : ( ) YARD 12 : ( )

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6801, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, AND REGULATIONS RELATED THERETO, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: [Signature] (SIGNATURE)

FACILITY REPRESENTATIVE: [Signature] (SIGNATURE)

White-Sundance Query-Sundance Asset/1: Full-Sundance Asset/2: C-117-Transporter  
Revised 12/27/99

**Sundance Services, Inc.**  
 P.O. Box 1737 • Bunker, NM 88231  
 (505) 394-2511

**No 26427**

LEASE OPERATOR/SHIPPER/COMPANY: Rice

LEASE NAME: L-21

TRANSPORTER COMPANY: Valter TIME: \_\_\_\_\_ AM/PM

DATE: 2-24-00 VEHICLE NO.: 430 DRIVER NO.: \_\_\_\_\_

CHARGE TO: Rice

**TYPE OF MATERIAL**

Production Water  
 Tank Bottoms  
 Other Material: \_\_\_\_\_

Description: oil/dirt

Completion Fluids  
 C-117 No.: \_\_\_\_\_

VOLUME OF MATERIAL ( ) BBLs. : 197 12 : ( )

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1974, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: Brian John (SIGNATURE)

FACILITY REPRESENTATIVE: Felix Felt (SIGNATURE)

While-Sundance County-Sundance Area/1 Peak-Sundance Area/2 Gold-Transporter Revised 12/27/95

**Sundance Services, Inc.**  
 P.O. Box 1737 • Bunker, NM 88231  
 (505) 394-2511

**No 26426**

LEASE OPERATOR/SHIPPER/COMPANY: Rice

LEASE NAME: L-21

TRANSPORTER COMPANY: Valter TIME: \_\_\_\_\_ AM/PM

DATE: 2-29-00 VEHICLE NO.: 429 DRIVER NO.: \_\_\_\_\_

CHARGE TO: Rice

**TYPE OF MATERIAL**

Production Water  
 Tank Bottoms  
 Other Material: \_\_\_\_\_

Description: oil/dirt

Completion Fluids  
 C-117 No.: \_\_\_\_\_

VOLUME OF MATERIAL ( ) BBLs. : 197 12 : ( )

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1974, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: Raymond Gonzalez (SIGNATURE)

FACILITY REPRESENTATIVE: Felix Felt (SIGNATURE)

While-Sundance County-Sundance Area/1 Peak-Sundance Area/2 Gold-Transporter Revised 12/27/95

**Sundance Services, Inc.**  
P.O. Box 1737 • Durbin, N.M. 86231  
(505) 394-2511

LEASE OPERATOR/SHIPPER/COMPANY: *Rice*

LEASE NAME: *L-21*

TRANSPORTER COMPANY: *Walter*

DATE: *2-29-00* VEHICLE NO.: *427* DRIVER NO.: *1*

CHARGE TO: *Rice*

**TYPE OF MATERIAL**

Production Waste  
 Tank Bottoms  
 Other Material: *oil/dirt*

Drilling Fluids  
 Contaminated soil  
 BSAW Content: \_\_\_\_\_

Completion Fields  
 C-117 No.: \_\_\_\_\_

DESCRIPTION: \_\_\_\_\_

VOLUME OF MATERIAL  BBLs: *17* YARD *12* :

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: *[Signature]*  
FACILITY REPRESENTATIVE: *[Signature]*

White-Sundance Curry-Sundance Acct#1 P#8-Sundance Acct#2 Ode#-Transporter  
Revised 12/17/95

**Sundance Services, Inc.**  
P.O. Box 1737 • Durbin, N.M. 86231  
(505) 394-2511

LEASE OPERATOR/SHIPPER/COMPANY: *Rice*

LEASE NAME: *L-21*

TRANSPORTER COMPANY: *Walter*

DATE: *2-29-00* VEHICLE NO.: *429* DRIVER NO.: \_\_\_\_\_

CHARGE TO: *Rice*

**TYPE OF MATERIAL**

Production Waste  
 Tank Bottoms  
 Other Material: *oil/dirt*

Drilling Fluids  
 Contaminated soil  
 BSAW Content: \_\_\_\_\_

Completion Fields  
 C-117 No.: \_\_\_\_\_

DESCRIPTION: \_\_\_\_\_

VOLUME OF MATERIAL  BBLs: *17* YARD *12* :

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: *[Signature]*  
FACILITY REPRESENTATIVE: *[Signature]*

White-Sundance Curry-Sundance Acct#1 P#8-Sundance Acct#2 Ode#-Transporter  
Revised 12/17/95

**Sundance Services, Inc.**  
P.O. Box 1737 • Durak, NM 88231  
(505) 394-2511

No 26432

LEASE OPERATOR/SHIPPER/COMPANY: *Rice*

LEASE NAME: *L-21*

TRANSPORTER COMPANY: *Valter*

DATE: 2-29-00 VEHICLE NO.: #430 DRIVER NO.:

CHARGE TO: *Rice*

**TYPE OF MATERIAL**

Production Water  
 Tank Bottoms  
 Other Material

Description: *oil/diat*

Drilling Fluids  
 Contaminated soil  
 BSAW Content:

Completion Fluids  
 C-117 No.:

VOLUME OF MATERIAL [ ] BBLs. : 14 YARD 12 : [ ]

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWIT IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTHS AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION APPROVED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: *[Signature]* (SIGNATURE)

FACILITY REPRESENTATIVE: *[Signature]* (SIGNATURE)

White-Sundance Curry-Subsolar Acct#1 P.H. Sundance Acct#2 Gold-Transporter  
Revised 12/7/95

**Sundance Services, Inc.**  
P.O. Box 1737 • Durak, NM 88231  
(505) 394-2511

No 26415

LEASE OPERATOR/SHIPPER/COMPANY: *Rice*

LEASE NAME: *L-21*

TRANSPORTER COMPANY: *Valter*

DATE: 2-29-00 VEHICLE NO.: #427 DRIVER NO.:

CHARGE TO: *Rice*

**TYPE OF MATERIAL**

Production Water  
 Tank Bottoms  
 Other Material

Description: *old*

Drilling Fluids  
 Contaminated soil  
 BSAW Content:

Completion Fluids  
 C-117 No.:

VOLUME OF MATERIAL [ ] BBLs. : [ ] YARD 12 : [ ]

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWIT IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTHS AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION APPROVED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will specify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: *[Signature]* (SIGNATURE)

FACILITY REPRESENTATIVE: *[Signature]* (SIGNATURE)

White-Sundance Curry-Subsolar Acct#1 P.H. Sundance Acct#2 Gold-Transporter  
Revised 12/7/95



## **Clay Density**

This section contains copies of the proctor and laboratory test report for the clay liners constructed at the bottom of the excavated areas.



LABORATORY TEST REPORT  
**PETTIGREW and ASSOCIATES**  
 1110 N. GRIMES  
 HOBBS, NM 88240  
 (505) 393-9827

DEBRA P. HICKS, P.E./L.S.I.  
 WILLIAM M. HICKS, III, P.E./P.S.

**TO:** Rice Engineering Corporation  
 Attn: Scott Curtis  
 122 W. Taylor  
 Hobbs, NM 88240

**MATERIAL:** Red Clay

**PROJECT:** Lease # L21

**TEST METHOD:** ASTM 2922

**DATE OF TEST:** March 2, 2000

**DEPTH:** See Below

TEST NO.	LOCATION	DRY DENSITY % Maximum	% MOISTURE	DEPTH
SG-1	Sludge Pit 10' E. of SW Corner of Pit	100.5	19.9	10' Below Finished Subgrade
SG-2	Sludge Pit 30' E. and 50' N. of SW Corner of Pit	104.0	17.9	8' Below Finished Subgrade
SG-3	Sludge Pit - 70' N. and 60' E. of SW Corner of Pit	100.8	18.7	8' Below Finished Subgrade

Moisture Density Information Provided by Others.

**CONTROL DENSITY:** 98.9  
 ASTM D 698

**OPTIMUM MOISTURE:** 24.9%

**REQUIRED COMPACTION:** 95%

**LAB NO.:** 0H 608-612

**COPIES TO:** Rice

**PETTIGREW and ASSOCIATES**

BY:



# TRINITY ENGINEERING TESTING CORPORATION

ODESSA, TX

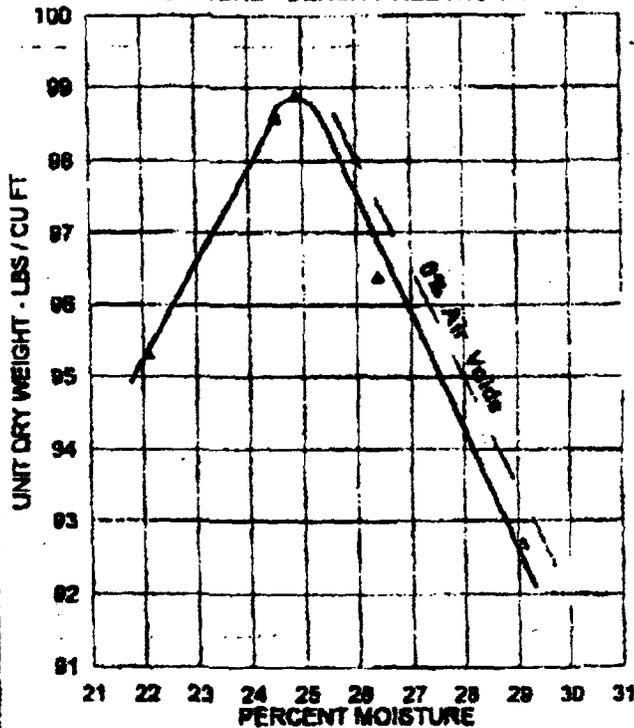
TO:

Mr. Rob Elam  
RE Environmental  
P. O. Box 13418  
Odessa, TX 79768

PROJECT: Hobbs, New Mexico Project

DATE: 09/22/89  
REPORT NO.: C-89876

### MOISTURE - DENSITY RELATIONSHIP



MATERIAL DESCRIPTION:  
Red CLAY

SAMPLE NUMBER:  
C-1350  
SAMPLED BY:  
Client: Received by Trinity on 9-21-89  
TEST PERFORMED BY:  
C. Kamper  
TEST METHOD:  
ASTM D 698-81, Method A,  
dry prep., 5.5 lb. mech. rammer

TRIAL NO.	PERCENT MOISTURE	UNIT DRY WEIGHT LBS / CU FT
1	22.1	95.3
2	24.5	98.6
3	28.4	96.4
4	28.1	92.7

COPIES TO: 1-ADDP

OPTIMUM MOISTURE PERCENT: 24.9

MAXIMUM DENSITY LBS / CU FT: 95.9

TRINITY ENGINEERING TESTING CORPORATION

Thomas R. Schlegel, P. E.

This certificate is valid only for the specific use of the data for which it was obtained and is not to be construed as a general statement of fact.

# **RICE** Operating Company

122 West Taylor • Hobbs, New Mexico 88240  
Phone: (505)393-9174 • Fax: (505) 397-1471

**CERTIFIED MAIL  
RETURN RECEIPT NO. Z 577 009 531**

February 23, 2000

Mr. Wayne Price  
NM Energy, Minerals, and Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
2040 S. Pacheco  
Santa Fe, NM 87505

RECEIVED  
FFR 2 R 2000  
Environmental Bureau  
Oil Conservation Division

RE: REDWOOD TANK AND EMERGENCY OVERFLOW PIT (Permit No. H-73)  
CLOSURE PLAN FOR EME SWD FACILITY L-21  
Unit Letter L, Sec. 21, T21S, R36E  
Lea County, NM

Mr. Price:

Rice Operating Company requests closure plan approval for the emergency overflow pit, Pit Permit # H-73 and the below-grade redwood tanks at the Eunice-Monument-Eumont (EME) Salt Water Disposal Site SWD Well L-21, located in Unit L, Sec. 21, T21S, R36E, Lea County, NM.

ROC is the service provider (operator) for the EME Salt Water Disposal System and has no ownership of any portion of pipeline, well or facility. The EME System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. Closure projects require System Partner AFE approval and work begins as funds are received.

The Closure Project AFE for the SWD L-21 Facility has been approved by the System Partners and work was started in January 2000.

The L-21 facility is included in the Rice Operating Company (ROC) generic closure plan for emergency pits and below-grade redwood tanks and is the third facility to apply under the generic plan. Rather than repair the below-grade redwood tanks, the EME SWD System will replace them with aboveground fiberglass tanks (including an emergency overflow tank) set within secondary containment (poly-liner). The emergency overflow pit will be closed. ROC expects to simultaneously close the pit and tanks pursuant to NMOCD guidelines and the ROC generic plan (awaiting February 23, 2000 revision approval). The enclosed C-103 form addresses this intention and defines the site-specific assessment for OCD guidelines. Supporting documentation is also enclosed.

EME SWD L-21  
Rdwd Tk; Pit Closure Plan  
February 23, 2000  
Page 2 of 2

This facility is currently operating with a temporary tank system and the below-grade redwood tanks have been dismantled and removed. The tank materials have been properly disposed and will be included in the manifests of the Final Closure Report.

ROC will schedule all major events with a 48-hour advance notice to the NMOCD. Ms. Donna Williams has visited this site and Whole Earth Environmental will be the on-site manager of the excavation project. The Final Closure Report will follow at the end of the project.

Thank you for your consideration of this closure plan request.

RICE OPERATING COMPANY



Carolyn Doran Haynes  
Operations Engineer

Enclosures

Cc: KH, file, Ms. Donna Williams,  
NMOCD, District I Office  
1625 N. French Drive  
Hobbs, NM 88240

Submit 3 Copies  
 To Appropriate  
 District Office  
**DISTRICT I**  
 P.O. Box 1980, Hobbs, NM 88240

State of New Mexico  
 Energy, Minerals and Natural Resources Department  
**OIL CONSERVATION DIVISION**  
 2040 South Pacheco  
 Santa Fe, NM 87505

Form C-103  
 Revised 1-1-89

**DISTRICT II**  
 811 South First, Artesia NM 88210

**DISTRICT III**  
 1000 Rio Brazos Rd., Aztec, NM 87410

WELL API NO. 30-025-21852
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name: Eunice-Monument-Eumont Salt Water Disposal System, SWD Facility L-21
8. Well No. L-21
9. Pool name or Wildcat

**SUNDRY NOTICES AND REPORTS ON WELLS**  
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A  
 DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH  
 PROPOSALS)

1. Type of Well:  
 Oil Well  Gas Well  **Other Emergency pit and  
 Below-grade Redwood Tank**

2. Name of Operator  
 RICE OPERATING COMPANY

3. Address of Operator  
 122 West Taylor, Hobbs, NM 88240

4. Well Location  
 Unit letter L : 1520 feet from the SOUTH line and 440 feet from the WEST line  
 Section 21 Township 21 South Range 36 East NMPM, Lea County, NM

10. Elevation (Show whether DF, RKB, RT, GR, etc.)  
 3589' above sea level

Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

**NOTICE OF INTENTION TO:**

**SUBSEQUENT REPORT OF:**

- |   |                  |                            |                      |
|---|------------------|----------------------------|----------------------|
| PERFORM REMEDIAL WORK   | PLUG AND ABANDON | REMEDIAL WORK              | ALTERING CASING      |
| TEMPORARILY ABANDON   | CHANGE PLANS     | COMMENCE DRILLING OPNS.    | PLUG AND ABANDONMENT |
| PULL OR ALTER CASING  |                  | CASING TEST AND CEMENT JOB |                      |
| OTHER: Remove below-grade redwood tanks and close emergency pit |                  | OTHER: _____               |                      |

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103.

**Proposed work according to generic closure plans for below grade redwood tanks and permitted pits:**

Delineate site for contamination, remove redwood tanks, close emergency overflow pit (Pit Permit # H-73) and clean-up location pursuant to NMOCOD guidelines. Replace redwood tanks with fiberglass tanks within an engineered secondary-containment. Work began in January, 2000 under approved generic closure plan (attached). All major events will be coordinated to allow 48 hrs notice to OCD.

Information from the State Engineer's Office in Roswell estimated depth to ground water at 175-247' and indicate closest water well to be in Unit "G" of Section 29, T21S-R36E, which is more than 5000' from the facility at Well L-21. Topographic maps show no indication of surface water bodies within 1000' of the L-21 facility. A site review indicated no water sources at all within 1000' feet of the facility.

Depth to ground water: >100' = 0; No water source within 1000' = 0; >1000' to surface water body = 0 **Site Assessment=0**

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Carolyn Doran Haynes TITLE OPERATIONS ENGINEER DATE 2-23-00

Type or print name CAROLYN DORAN HAYNES Telephone No. 505-393-9174

(This space for State use)

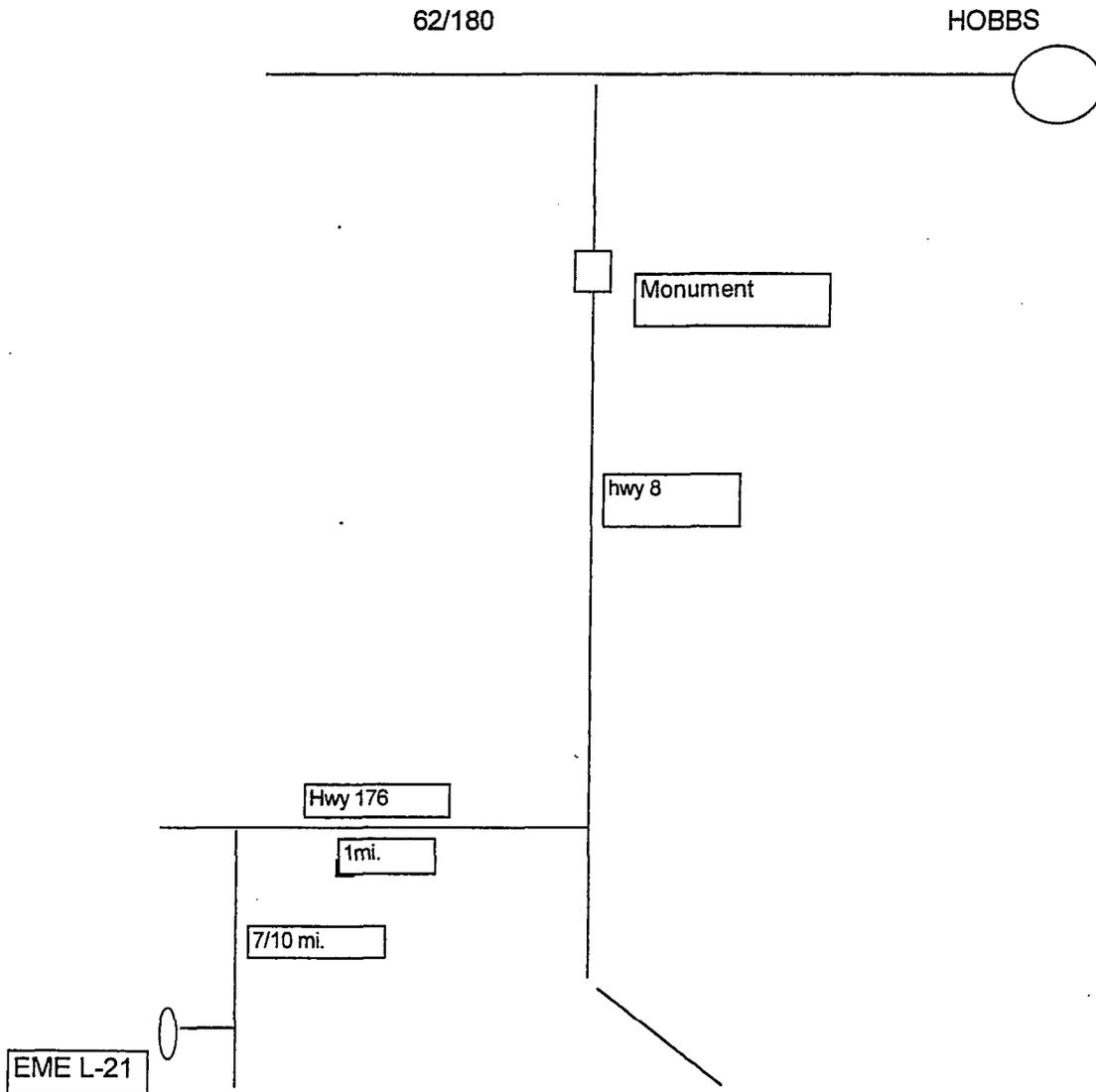
APPROVED

BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Conditions of approval, if any:

System: EME  
Well: L-21  
Legals: 21-21S-36E

South of Monument on Hwy 8 to the junction of Hwy 176. Turn west on Hwy 176 and go 1 mile. Turn left through cattle guard and go 7/10 mile south. Turn right into location.



# NEW MEXICO STATE LAND OFFICE

## SALT WATER DISPOSAL EASEMENT

SALT WATER DISPOSAL

EASEMENT NO. **SWD-063**

THIS AGREEMENT, dated this 10<sup>th</sup> day of June, 1998, made and entered into between the State of New Mexico, acting by and through the undersigned, its Commissioner of Public Lands, hereinafter called the grantor, and Rice Engineering, 122 West Taylor, Hobbs, New Mexico 88240, hereinafter called the grantee,

WITNESSETH:

That, whereas, the said grantee has filed in the Land Office an application for salt water disposal easement and has tendered the sum of \$500.00, together with the sum of \$30.00 application fee;

NOW, THEREFORE, in consideration of the foregoing tender, receipt of which is acknowledged, and the covenants herein, grantor does grant to the grantee a salt water disposal easement for the sole and only purpose of underground disposal of salt water produced in connection with oil and gas operations, together with the right to make such reasonable use of the land as may be necessary to dispose of said salt water. Said easement shall cover the following described lands:

<u>INSTITUTION</u>	<u>SECTION</u>	<u>TOWNSHIP</u>	<u>RANGE</u>	<u>SUBDIVISION</u>	<u>ACRES</u>
C.S.	21	21S	36E	Portion Within NW $\frac{1}{4}$ SW $\frac{1}{4}$	2.5

TO HAVE AND TO HOLD said lands and privileges hereunder for a term of Two years from the date first above written, subject to all terms and conditions hereinafter set forth:

1. Grantee shall pay the grantor the sum of \$500.00 annually, in advance.
2. With the consent of the grantor and payment of a fee of \$30.00, the grantee may surrender or relinquish this salt water disposal easement to the grantor; provided, however, that this surrender clause shall become absolutely inoperative immediately and concurrently with the filing of any suit in any court or law or equity by the grantor or grantee or any assignee to enforce any of the terms of this salt water disposal easement.
3. The grantee, with the prior written consent of the grantor, may assign his salt water disposal easement in whole only. Upon approval of the assignment, in writing, by the grantor, the grantee shall stand relieved from all obligations to the grantor with respect to the lands embraced in the assignment, and the grantor shall likewise be relieved from all obligations to the assignor as to such tracts, and the assignee shall succeed to all of the rights and privileges of the assignor with respect to such tracts and shall be held to have assumed all of the duties and obligations of the assignor to the grantor as to such tracts.
4. The grantor may cancel this salt water disposal easement for non-payment of annual consideration or for violation of any of the terms and covenants hereof; provided, however, that before any such cancellation shall be made, the grantor must mail to the grantee or assignee, by registered mail, addressed to the post office address of such grantee or assignee, shown by the records, a thirty-day notice of intention to cancel said salt water disposal easement, specifying the default for which the salt water disposal easement is subject to cancellation. No proof of receipt of notice shall be necessary and thirty days after such mailing, the grantor may enter cancellation unless the grantee shall have sooner remedied the default.

5. The grantee shall furnish copies of records and such reports and plats of his operations, including any and all data relating to geological formations as the grantor may reasonably deem necessary to his administration of the lands.

6. Grantee may make or place such improvements and equipment upon the land as may reasonably be necessary to dispose of salt water, and upon termination of this salt water disposal easement for any reason, grantee may remove such improvements and equipment as can be removed without material injury to the premises; provided, however, that all sums due the grantor have been paid and that such removal is accomplished within one year of the termination date or before such earlier date as the grantor may set upon thirty days written notice to the grantee. All improvements and equipment remaining upon the premises after the removal date, as set in accordance with this paragraph, shall be forfeited to the grantor without compensation. All pipelines constructed hereunder shall be buried below plow depth.

7. This salt water disposal easement is made subject to all the provisions and requirements applicable thereto which are to be found in various acts of the legislature of New Mexico and the rules of the Commissioner of Public Lands of the State of New Mexico, the same as though they were fully set forth herein, and said laws and rules, so far as applicable to this salt water disposal easement, are to be taken as a part hereof.

8. All the obligations, covenants, agreements, rights and privileges of this salt water disposal easement shall extend to and be binding and inure to the benefit of the lawful and recognized assigns or successors in interest of the parties hereto.

9. Grantee shall post with grantor a bond or undertaking in an amount required by grantor in favor of the owner of improvements lawfully located upon the lands herein to secure payment of damage, if any, done to such improvements by reason of grantee's operations.

10. Payment of all sums due hereunder shall be made at the office of the Commissioner of Public Lands, 310 Old Santa Fe Trail, P. O. Box 1148, Santa Fe, New Mexico 87504-1148.

11. Grantee, including his heirs, assigns, agents, and contractors shall at their own expense fully comply with all laws, regulations, rules, ordinances, and requirements of the city, county, state, federal authorities and agencies, in all matters and things affecting the premises and operations thereon which may be enacted or promulgated under the governmental police powers pertaining to public health and welfare, including but not limited to conservation, sanitation, aesthetics, pollution, cultural properties, fire, and ecology. Such agencies are not to be deemed third party beneficiaries hereunder; however, this clause is enforceable by the grantor as herein provided or as otherwise permitted by law.

12. Grantee shall save and hold harmless, indemnify and defend the State of New Mexico, the Commissioner of Public Lands, and his agent or agents, in their official and individual capacities, of and from any and all liability claims, losses, or damages arising out of or alleged to arise out of or indirectly connected with the operations of grantee hereunder, off or on the herein above described lands, or the presence on said lands of any agent, contractor or sub-contractor of grantee.

AFFIRMATION OF GEOLOGIC, ENGINEERING & HYDROLOGIC INVESTIGATION: I hereby affirm that the available geologic and engineering data have been examined and no evidence has been found of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.



R 36 E

N

21

T  
21  
S

330'

260'

330'

2 1/2 ACRES ENCLOSED

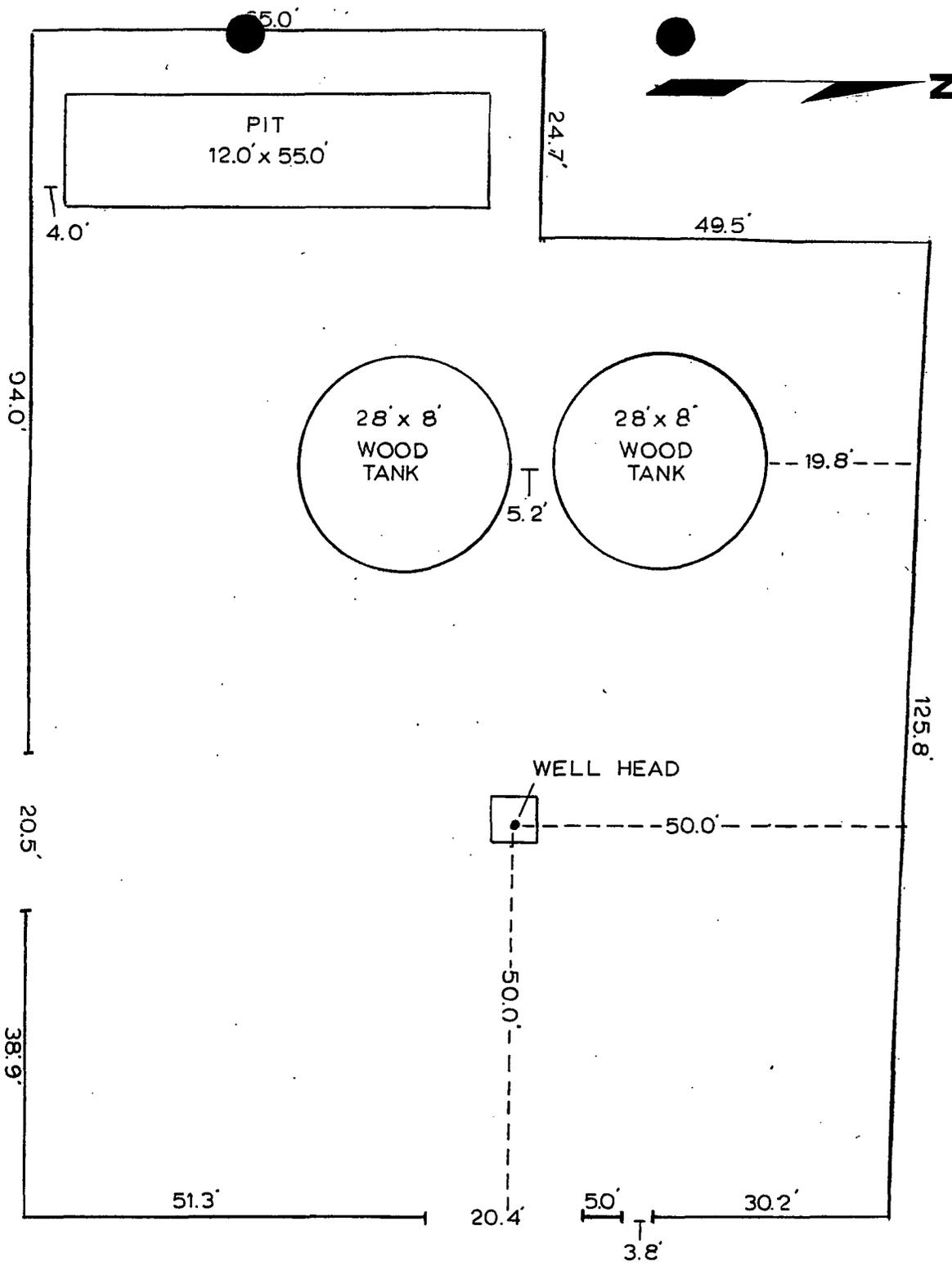
SWD WELL L-21

1390'

SW CORNER  
OF SECTION

LEA COUNTY, NEW MEXICO

DWN	AMM	6-66	BUSINESS LEASE EME SWD WELL L-21	SCALE 1" = 1000'
			Rice Engineering & Operating, Inc. Dallas, Texas	DWG NO.



DWN	KDP	1-73	EME SWD WELL L-21 SCHEMATIC OF LOCATION	SCALE 1" = 20'
				Rice Engineering & Operating, Inc. Hobbs, New Mexico



District I - (505) 393-6161  
P.O. Box 1900  
Hobbs, NM 88241-1900  
District II - (505) 748-1283  
811 S. First  
Artesia, NM 88210  
District III - (505) 334-6178  
1000 Rio Bosson Road  
Aztec, NM 87410  
District IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Originated 6/27/97

Submit Original  
Plus 1 Copy  
to Santa Fe

PIT INVENTORY FORM

Operator: RICE OPERATING COMPANY

Address: 122 West Taylor  
Hobbs, New Mexico 88240  
(505) 393-9174

Phone Number: \_\_\_\_\_

Previous Operator(s): None

Is the pit permitted: Yes  No

Unit Letter: L Section: 21 Township: 21S Range: 36E

County: Lea County

Location Name: Funice-Monument-Fumont Salt Water Disposal Well 1-21

Number of wells to the pit: System Terminal Tanks (Varies)

Are the wells to the pit operated by one operator  or multiple operators

Total daily volume (in barrels) to the pit: 1,500

Pit Type: 2-Below ground redwood terminal tanks  
(Emergency Production, Workover Reserve/Drilling (greater than 6 months old), Flare, Blowdown, Separator, Dehydrator, Line Drip, BS&W/Tank Bottoms, Compressor Pigging, Washdown, or other)

What types of wastes are accepted in the pit (Exempt, Non-exempt, Both, None): Exempt (production water)

Pit age (years): 35

Is the pit lined  or unlined

Type of liner (None, Synthetic, Clay): Redwood tank resting on concrete pad

Is leak detection present: Yes  No  Observation boxes around tanks

Is the pit netted: Yes  No  Covered with redwood top

Pit dimensions (LxWxD): two-28'diax8'Ht

CERTIFICATION

I hereby certify that the information submitted is true and correct to the best of my knowledge and belief.

Name: Roger Hall Title: Operations Engineer

Signature: Roger Hall Date: 10/31/97

District I - (505) 393-6161  
P. O. Box 1980  
Hobbs, NM 88241-1980  
District II - (505) 748-1283  
811 S. First  
Artesia, NM 88210  
District III - (505) 334-6178  
1000 Rio Brazos Road  
Aztec, NM 87410  
District IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Originated 6/27/97

Submit Original  
Plus 1 Copy  
to Santa Fe

PIT INVENTORY FORM

Operator: RICE OPERATING COMPANY

Address: 122 WEST TAYLOR  
Hobbs, New Mexico 88240

Phone Number: (505) 393-9174

Previous Operator(s): None

Is the pit permitted: Yes  No

Unit Letter: L Section: 21 Township: 21S Range: 36E

County: Lea County

Location Name: EME Salt Water Disposal System Well L-21

Number of wells to the pit: 1

Are the wells to the pit operated by one operator  or multiple operators

Total daily volume (in barrels) to the pit: None

Pit Type: Emergency

(Emergency, Production, Workover, Reserve/Drilling (greater than 6 months old), Flare, Blowdown, Separator, Dehydrator,  
Line Drip, BS&W/Tank Bottoms, Compressor, Piggings, Washdown, or other)

What types of wastes are accepted in the pit (Exempt, Non-exempt, Both, None): Exempt (production water)

Pit age (years): 35

Is the pit lined  or unlined

Type of liner (None, Synthetic, Clay): None

Is leak detection present: Yes  No

Is the pit netted: Yes  No

Pit dimensions (LxWxD): 51'x17'x2 $\frac{1}{2}$ '

CERTIFICATION

I hereby certify that the information submitted is true and correct to the best of my knowledge and belief.

Name: Roger Hall Title: Operations Engineer

Signature: Roger Hall Date: 10/28/97

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

### OIL CONSERVATION DIVISION

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

Permit No. H-73  
(For Division Use Only)

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

#### APPLICATION FOR EXCEPTION TO DIVISION ORDER R-8952 FOR PROTECTION OF MIGRATORY BIRDS Rule 8(b), Rule 105(b), Rule 312(h), Rule 313, or Rule 711(f)

Operator Name: Rice Engineering Corporation

Operator Address: 122 W. Taylor, Hobbs, New Mexico 88240

Lease or Facility Name E-M-E SWD System Well L-21 Location L 21 21S 36E  
Size of pit or tank: 51'x17'x2 1/2' deep, approx. 400 bbls. Ut. Ltr. Sec. Twp. Rge

Operator requests exception from the requirement to screen, net or cover the pit or tank at the above-described facility.

X The pit or tank is not hazardous to migratory waterfowl. Describe completely the reason pit is non-hazardous.  
The pit is used only in emergencies such as major well remedial work.  
Normally kept empty.

1) If any oil or hydrocarbons should reach this facility give method and time required for removal:

Method: Vacuum truck

Time: Within 24 hrs. of discovery

2) If any oil or hydrocarbons reach the above-described facility the operator is required to notify the appropriate District Office of the OCD with 24 hours.

Operator proposes the following alternate protective measures: \_\_\_\_\_

CERTIFICATION BY OPERATOR: I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature S. A. Haktanir Title Division Manager Date July 25, 1990

Printed Name S. A. Haktanir Telephone No. 393-9174

FOR OIL CONSERVATION DIVISION USE

Date Facility Inspected 8/2/90  
Inspected by R. A. Sedell

Approved by Eddie W. Dean  
Title DIL & G.S. Division  
Date SEP 05 1990

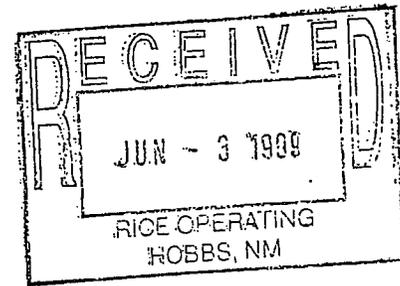


NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

June 1, 1999

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. Z 357 870 131**



Carolyn Doran Haynes  
Rice Operating Company  
122 West Taylor  
Hobbs, NM 88240

**Re: Closure Work Plan for Existing Pits and Below-Grade Redwood Tanks (Generic Closure Work Plan) for Rice Operating Company's saltwater disposal system facilities.**

Dear Ms. Haynes:

The New Mexico Oil Conservation Division (NMOCD) has reviewed Rice Operating Company's (ROC) closure work plans dated March 22, 1999 and revisions to the plans dated April 23, 1999 for the saltwater disposal system facilities. **The NMOCD Hereby approves the plans subject to the following conditions:**

1. ROC shall complete all monitor well(s) as follows:
  - a. At least 15 feet of well screen shall be placed across the water table interface with 5 feet of the well screen above the water table and 10 feet of the well screen below the water table.
  - b. An appropriately sized gravel pack shall 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.
  - c. A 2-3 foot bentonite plug shall be placed above the gravel pack.
  - d. The remainder of the hole shall be grouted to the surface with cement containing 3-5% bentonite.
  - e. A concrete pad shall be placed at the surface around the well. The well shall be installed with a suitable protective locking device.
  - f. The well(s) shall be developed after construction using EPA approved procedures.

2. No less than 48 hours after the well(s) are developed, ground water from all monitor well(s) shall be purged, sampled and analyzed for concentrations of benzene, toluene, ethyl benzene, xylene, polycyclic aromatic hydrocarbons (PAH's), total dissolved solids (T.S.) and New Mexico Water Quality Control Commission (WQCC) metals and major cations and anions using EPA approved methods and quality assurance/quality control (QA/QC) procedures.
3. ROC shall notify OCD pursuant to Rule 116 upon discovery of groundwater contamination.
4. All final soil samples submitted for laboratory analyses shall be sampled for BTEX (8021), TPH (418.1 or 8015 GRO & DRO) and Chlorides.
5. ROC will notify the OCD Santa Fe office and the OCD District office at least 48 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and/or split samples during OCD's normal business hours.
6. ROC is required to sample and provide to NMOCD the analytical test results for each side wall and bottom of any excavated areas. The samples taken shall be tested for BTEX (8021), TPH and Chlorides. Composite samples will be allowed if there are no obvious hot spots. TPH methods can be EPA 418.1, or 8015 if both GRO and DRO are ran. All sampling and testing shall be pursuant to approved EPA methods and procedures.
7. All wastes generated during the investigation shall be disposed of at an OCD approved site.
8. ROC shall submit a report of the investigations to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office. ROC must receive NMOCD approval before commencing backfilling, liner or new equipment installations. The report shall include the following:
  - a. A description of all investigations, remediation and monitoring activities which have occurred including conclusions, recommendations, risk assessments and request for implementation of any future work and/or closure.
  - b. A geologic/lithologic log and well completion diagram for all soil borings and/or monitor well(s).
  - c. Vertical and horizontal Isopleth maps for remaining contaminants of concern which were observed during the investigations.

Ms: Haynes  
June 1, 1999  
Page 3

- e. Summary tables of all soil and/or ground water quality sampling results and copies of all laboratory analytical data sheets and associated QA/QC data collected.
- f. The quantity and disposition of all wastes generated.

Please be advised that NMOCD approval of this plan does not relieve ROC of liability should their investigations and/or operations fail to adequately investigate and/or remediate contamination that poses a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve ROC of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you require any further information or assistance please do not hesitate to write or call me at (505-827-7155).

Sincerely Yours,



Wayne Price-Pet. Engr. Spec.  
Environmental Bureau

cc: OCD Hobbs Office

# RICE Operating Company

122 West Taylor • Hobbs, NM 88240

Phone: (505) 393-9174 • Fax: (505) 397-1471

April 23, 1999

Mr. Wayne Price  
NM Energy, Minerals and Natural Resources Department  
Oil Conservation Division, Environmental Bureau  
2040 S. Pacheco  
Santa Fe, NM 87505

Re: Revision of Closure Work Plan for Existing Pits and Below-Grade Redwood Tanks

Mr. Price:

Enclosed are the revised Closure Plans for Below Grade Redwood Tanks and for Permitted Emergency Pits. The revisions concern changes in items #3B, #8 and #10 for the Below Grade Redwood tanks and items #4B, #6 and #8 for the Permitted Emergency Pits, as directed by our telephone conversation of April 22, 1999, and your subsequent e-mail.

It is important to reiterate that **all activities** pertaining to closure of emergency pits and replacement of the redwood tanks will be conducted **pursuant to NMOCD guidelines**. All site assessments, work plans, time schedules, sample and test plans, impacted soil removal, replacement tankage and facilities, etc., will be specifically fitted to the particular site applying for closure but will generally follow these generic plans. NMOCD will be notified in advance of significant occasions and will be consulted throughout the closure process for concurrence of plan alterations, assessment and analytical interpretations, etc.

Also enclosed are preliminary generic drafts of the open, below-ground-level replacement tank facility that you requested. The elevation of the collection vessel is vital to the system's gravity-flow capability, and in most cases, the replacement tank facility must remain at the same lower-than-surface elevation as the redwood tanks. Each site will be assessed for elevation limitations and the replacement facility will be designed accordingly. Rice Operating Company proposes to contain new tanks and piping within a concrete, sealed and frequently inspected (for integrity) vault-like enclosure, thus insuring future impact minimization to the environment and the public.

Thank you,



Carolyn Doran Haynes  
Operations Engineer

Enclosures

Cc KH; JC; file; Ms. Donna Williams, OCD District I, Hobbs, NM

# RICE Operating Company

122 West Taylor • Hobbs, NM 88240  
Phone: (505) 393-9174 • Fax: (505) 397-1471

March 22, 1999

Mr. Wayne Price  
NM Energy, Minerals and Natural Resources Department  
Oil Conservation Division, Environmental Bureau  
2040 S. Pacheco  
Santa Fe, NM 87505

Re: Closure Work Plan for Existing Pits and Below-Grade Redwood Tanks

Mr. Price:

Enclosed are copies of emergency pit permits and below grade redwood tank installations for our operations in Lea County, New Mexico, that were previously submitted to NMOCD in October, 1997. This documentation serves as a list of facilities operated by Rice Operating Company (ROC) that contain or have contained pits or below grade tanks.

Closure plans for two locations, F-29 and H-35, are in process with the OCD now. The generic "Closure Plan for Below Grade Redwood Tanks" detailed below will accommodate the systematic closure of existing ROC operated below-grade redwood tanks. The existing emergency pits will be closed pursuant to the generic "Closure Plan for Permitted Emergency Pits", also detailed below. It is expected that at facilities containing both, the below-grade redwood tank (s) and the emergency pit will be closed at the same time, but under separate closure plans and closure reports.

Rice Operating Company is the service provider (operator) for these salt-water disposal systems in SE NM. Rice Operating has no ownership of any of the pipelines, wells, or facilities. Each system is owned by a consortium of oil producers and they are called "System Partners," and the System Partners provide all operating capital on a percentage ownership/usage basis. Each location will independently require System Partner AFE approval and advance billing for the closure funds. Only after funds are received can closure work begin.

Thank you,

Carolyn Doran Haynes  
Operations Engineer

**COPY**

Cc KH; JC; file; Ms. Donna Williams, OCD District I, Hobbs, NM

**Closure Plan for Below Grade Redwood Tank**

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Procure soil samples from 3' below bottom of tanks (9-11' below grade) at tank sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 4.
  - B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 3.
3. Delineate any portion of tank site that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 4.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
4. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing.
5. Move onto SWD facility site with temporary tank system. Re-route fluid flow from below grade redwood tanks into the temporary tank system. Plumb to SWD well.
6. Empty and clean redwood tanks, properly disposing of any BS & W. Excavate sides of redwood tanks to allow for working space to manipulate tank support banding. Remove redwood tanks reserving boards for proper disposal.
7. Excavate ramp into redwood tank hole. Remove and properly dispose of concrete base.
8. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
9. Procure random 5-point composite bottom sample from 3' below tank bottom and random 4-point composite side sample for lab TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 11.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 10.
10. Evaluate site for risk assessment: propose to excavate hole bottom and sides as practical to minimize risk; install 40-mil polyethylene liner on sanded bottom, graded to direct moisture accumulation away from the impacted area; cover and compact bottom with 2' sand fill.
11. Apply to NMOCD for closure of redwood tank site per NMOCD guidelines and site results.
12. After approval is received, proceed with installation of new fiberglass or steel tanks and appropriate plumbing changes within engineered secondary containment system.

**Closure Plan for Permitted Emergency Pits**

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Remove and properly dispose of visibly contaminated soil pursuant to NMOCD guidelines.
3. Procure soil samples from surface and 3' below excavation bottom and excavation sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 6.
  - B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 4.
4. Delineate any portion of excavation that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 5.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for Chloride and BETX levels. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
5. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing
6. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
7. Procure random 5-point composite bottom sample and random 4-point composite side sample for laboratory TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 9.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 8.
8. Evaluate site for risk assessment. Excavate bottom and sides to a depth and width that is deemed practical by soil analytical results. Install a 40-mil polyethylene liner on bottom, graded to provide water run-off away from the contamination left in place below the liner; cover and compact over the liner with 1-2' of sand fill.
9. Apply to NMOCD for closure of permitted emergency pit site per NMOCD guidelines and site results.
10. After approval is received, proceed with backfill and grading of pit site with clean soil and/or appropriately blended soil compatible with the on-site soil.

**REVISED**

4-23-99

2-23-00

## Closure Plan for Below Grade Redwood Tank

*Approved by [Signature]*

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Procure soil samples from 3' below bottom of tanks (9-11' below grade) at tank sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 4.
  - B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 3.
3. Delineate any portion of tank site that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 4.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
4. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing.
5. Move onto SWD facility site with temporary tank system. Re-route fluid flow from below grade redwood tanks into the temporary tank system. Plumb to SWD well.
6. Empty and clean redwood tanks, properly disposing of any BS & W. Excavate sides of redwood tanks to allow for working space to manipulate tank support banding. Remove redwood tanks reserving boards for proper disposal.
7. Excavate ramp into redwood tank hole. Remove and properly dispose of concrete base if impacted. If concrete is not impacted, use as fill (below plow depth) in excavation area.
8. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
9. Procure random 5-point composite bottom sample from 3' below tank bottom and random 4-point composite side sample for lab TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 11.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 10.
10. Evaluate site for risk assessment: delineate to assess depth and horizontal extent of impact corresponding to NMOCD guidelines for site assessment value; excavate bottom and sides as practical to minimize risk; install compacted clay liner to meet or exceed 95% of a Proctor Test ASTM-D-698 with permeability (hydraulic conductivity) equal or less than  $1 \times 10^{-7}$  cm/sec for containment/isolation of impact.
11. Discuss results/risk assessment with NMOCD for verbal approval to proceed with backfill/installation of new tanks and plumbing within engineered secondary containment system.
12. Apply to NMOCD for closure of redwood tank site per NMOCD guidelines and site results.

**REVISED**

4-23-99

2-23-00

*arranging for...*

## Closure Plan for Permitted Emergency Pits

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Remove and properly dispose of visibly contaminated soil pursuant to NMOCD guidelines.
3. Procure soil samples from surface and 3' below excavation bottom and excavation sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 6.
  - B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 4.
4. Delineate any portion of excavation that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 5.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
5. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing
6. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
7. Procure random 5-point composite bottom sample and random 4-point composite side sample for laboratory TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 9.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 8.
8. Evaluate site for risk assessment: delineate to assess depth and horizontal extent of impact corresponding to NMOCD guidelines for site assessment value; excavate bottom and sides as practical to minimize risk; install compacted clay liner to meet or exceed 95% of a Proctor Test ASTM-D-698 with permeability (hydraulic conductivity) equal or less than  $1 \times 10^{-7}$  cm/sec for containment/isolation of impact.
9. Discuss results/risk assessment with NMOCD for verbal approval to proceed with backfill.
10. Apply to NMOCD for closure of permitted emergency pit site per NMOCD guidelines and site results.

Submit 3 Copies  
To Appropriate  
District Office  
**DISTRICT I**  
P.O. Box 1980, Hobbs, NM 88240

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-103  
Revised 1-1-89

**OIL CONSERVATION DIVISION**

2040 South Pacheco  
Santa Fe, NM 87505

**DISTRICT II**  
811 South First, Artesia NM 88210

**DISTRICT III**  
1000 Rio Brazos Rd., Aztec, NM 87410

WELL API NO.  
30-025-21852

5. Indicate Type of Lease  
STATE  FEE

6. State Oil & Gas Lease No.

**SUNDRY NOTICES AND REPORTS ON WELLS**  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS)

1. Type of Well:  
Oil Well  Gas Well  Other Emergency pit and Below-grade Redwood Tank

7. Lease Name or Unit Agreement Name:  
Eunice-Monument-Eumont Salt Water Disposal System, SWD Facility L-21

2. Name of Operator  
RICE OPERATING COMPANY

8. Well No.  
L-21

3. Address of Operator  
122 West Taylor, Hobbs, NM 88240

9. Pool name or Wildcat

4. Well Location  
Unit letter L : 1520 feet from the SOUTH line and 440 feet from the WEST line  
Section 21 Township 21 South Range 36 East NMPM, Lea County, NM

10. Elevation (Show whether DF, RKB, RT, GR, etc.)  
3589' above sea level

Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

**NOTICE OF INTENTION TO:**

**SUBSEQUENT REPORT OF:**

PERFORM REMEDIAL WORK      PLUG AND ABANDON      REMEDIAL WORK      ALTERING CASING

TEMPORARILY ABANDON      CHANGE PLANS      COMMENCE DRILLING OPNS.      PLUG AND ABANDONMENT

PULL OR ALTER CASING      CASING TEST AND CEMENT JOB

OTHER: Remove below-grade redwood tanks and close emergency pit      OTHER: \_\_\_\_\_

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103.

Proposed work according to generic closure plans for below grade redwood tanks and permitted pits:

Delineate site for contamination, remove redwood tanks, close emergency overflow pit (Pit Permit # H-73) and clean-up location pursuant to NMOCDD guidelines. Replace redwood tanks with fiberglass tanks within an engineered secondary-containment. Work began in January, 2000 under approved generic closure plan (attached). All major events will be coordinated to allow 48 hrs notice to OCD.

Information from the State Engineer's Office in Roswell estimated depth to ground water at 175-247' and indicate closest water well to be in Unit "G" of Section 29, T21S-R36E, which is more than 5000' from the facility at Well L-21. Topographic maps show no indication of surface water bodies within 1000' of the L-21 facility. A site review indicated no water sources at all within 1000' feet of the facility.

Depth to ground water: >100' = 0; No water source within 1000' = 0; >1000' to surface water body = 0      **Site Assessment=0**

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Carolyn Doran Haynes TITLE OPERATIONS ENGINEER DATE 2-23-00

Type or print name CAROLYN DORAN HAYNES Telephone No. 505-393-9174

(This space for State use)

APPROVED

BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Conditions of approval, if any:

# **RICE** Operating Company

122 West Taylor • Hobbs, New Mexico 88240  
Phone: (505)393-9174 • Fax: (505) 397-1471

**CERTIFIED MAIL  
RETURN RECEIPT NO. Z 577 009 531**

February 23, 2000

Mr. Wayne Price  
NM Energy, Minerals, and Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
2040 S. Pacheco  
Santa Fe, NM 87505

RE: REDWOOD TANK AND EMERGENCY OVERFLOW PIT (Permit No. H-73)  
CLOSURE PLAN FOR EME SWD FACILITY L-21  
Unit Letter L, Sec. 21, T21S, R36E  
Lea County, NM

Mr. Price:

Rice Operating Company requests closure plan approval for the emergency overflow pit, Pit Permit # H-73 and the below-grade redwood tanks at the Eunice-Monument-Eumont (EME) Salt Water Disposal Site SWD Well L-21, located in Unit L, Sec. 21, T21S, R36E, Lea County, NM.

ROC is the service provider (operator) for the EME Salt Water Disposal System and has no ownership of any portion of pipeline, well or facility. The EME System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. Closure projects require System Partner AFE approval and work begins as funds are received.

The Closure Project AFE for the SWD L-21 Facility has been approved by the System Partners and work was started in January 2000.

The L-21 facility is included in the Rice Operating Company (ROC) generic closure plan for emergency pits and below-grade redwood tanks and is the third facility to apply under the generic plan. Rather than repair the below-grade redwood tanks, the EME SWD System will replace them with aboveground fiberglass tanks (including an emergency overflow tank) set within secondary containment (poly-liner). The emergency overflow pit will be closed. ROC expects to simultaneously close the pit and tanks pursuant to NMOCD guidelines and the ROC generic plan (awaiting February 23, 2000 revision approval). The enclosed C-103 form addresses this intention and defines the site-specific assessment for OCD guidelines. Supporting documentation is also enclosed.

This facility is currently operating with a temporary tank system and the below-grade redwood tanks have been dismantled and removed. The tank materials have been properly disposed and will be included in the manifests of the Final Closure Report.

ROC will schedule all major events with a 48-hour advance notice to the NMOCD. Ms. Donna Williams has visited this site and Whole Earth Environmental will be the on-site manager of the excavation project. The Final Closure Report will follow at the end of the project.

Thank you for your consideration of this closure plan request.

RICE OPERATING COMPANY



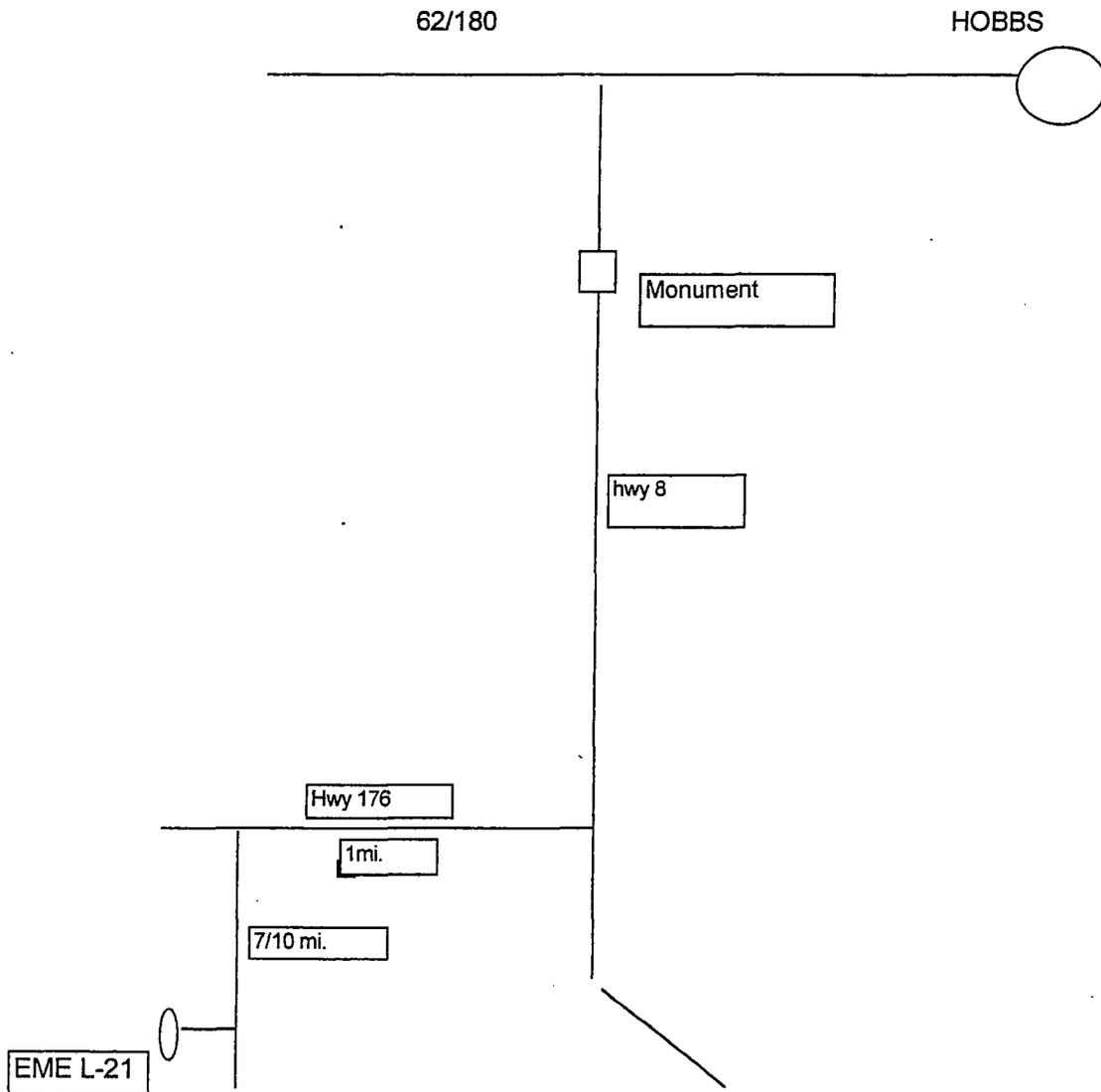
Carolyn Doran Haynes  
Operations Engineer

Enclosures

Cc: KH, file, Ms. Donna Williams,  
NMOCD, District I Office  
1625 N. French Drive  
Hobbs, NM 88240

System: EME  
Well: L-21  
Legals: 21-21S-36E

South of Monument on Hwy 8 to the junction of Hwy 176. Turn west on Hwy 176 and go 1 mile. Turn left through cattle guard and go 7/10 mile south. Turn right into location.



# NEW MEXICO STATE LAND OFFICE

## SALT WATER DISPOSAL EASEMENT

SALT WATER DISPOSAL  
EASEMENT NO. **SWD-063**

THIS AGREEMENT, dated this 10<sup>th</sup> day of June, 1998, made and entered into between the State of New Mexico, acting by and through the undersigned, its Commissioner of Public Lands, hereinafter called the grantor, and Rice Engineering, 122 West Taylor, Hobbs, New Mexico 88240, hereinafter called the grantee,

WITNESSETH:

That, whereas, the said grantee has filed in the Land Office an application for salt water disposal easement and has tendered the sum of \$500.00, together with the sum of \$30.00 application fee;

NOW, THEREFORE, in consideration of the foregoing tender, receipt of which is acknowledged, and the covenants herein, grantor does grant to the grantee a salt water disposal easement for the sole and only purpose of underground disposal of salt water produced in connection with oil and gas operations, together with the right to make such reasonable use of the land as may be necessary to dispose of said salt water. Said easement shall cover the following described lands:

<u>INSTITUTION</u>	<u>SECTION</u>	<u>TOWNSHIP</u>	<u>RANGE</u>	<u>SUBDIVISION</u>	<u>ACRES</u>
C.S.	21	21S	36E	Portion Within NW <sup>1</sup> SW <sup>1</sup>	2.5

TO HAVE AND TO HOLD said lands and privileges hereunder for a term of Two years from the date first above written, subject to all terms and conditions hereinafter set forth:

1. Grantee shall pay the grantor the sum of \$500.00 annually, in advance.
2. With the consent of the grantor and payment of a fee of \$30.00, the grantee may surrender or relinquish this salt water disposal easement to the grantor; provided, however, that this surrender clause shall become absolutely inoperative immediately and concurrently with the filing of any suit in any court or law or equity by the grantor or grantee or any assignee to enforce any of the terms of this salt water disposal easement.
3. The grantee, with the prior written consent of the grantor, may assign his salt water disposal easement in whole only. Upon approval of the assignment, in writing, by the grantor, the grantee shall stand relieved from all obligations to the grantor with respect to the lands embraced in the assignment, and the grantor shall likewise be relieved from all obligations to the assignor as to such tracts, and the assignee shall succeed to all of the rights and privileges of the assignor with respect to such tracts and shall be held to have assumed all of the duties and obligations of the assignor to the grantor as to such tracts.
4. The grantor may cancel this salt water disposal easement for non-payment of annual consideration or for violation of any of the terms and covenants hereof; provided, however, that before any such cancellation shall be made, the grantor must mail to the grantee or assignee, by registered mail, addressed to the post office address of such grantee or assignee, shown by the records, a thirty-day notice of intention to cancel said salt water disposal easement, specifying the default for which the salt water disposal easement is subject to cancellation. No proof of receipt of notice shall be necessary and thirty days after such mailing, the grantor may enter cancellation unless the grantee shall have sooner remedied the default.

5. The grantee shall furnish copies of records and such reports and plats of his operations, including any and all data relating to geological formations as the grantor may reasonably deem necessary to his administration of the lands.

6. Grantee may make or place such improvements and equipment upon the land as may reasonably be necessary to dispose of salt water, and upon termination of this salt water disposal easement for any reason, grantee may remove such improvements and equipment as can be removed without material injury to the premises; provided, however, that all sums due the grantor have been paid and that such removal is accomplished within one year of the termination date or before such earlier date as the grantor may set upon thirty days written notice to the grantee. All improvements and equipment remaining upon the premises after the removal date, as set in accordance with this paragraph, shall be forfeited to the grantor without compensation. All pipelines constructed hereunder shall be buried below plow depth.

7. This salt water disposal easement is made subject to all the provisions and requirements applicable thereto which are to be found in various acts of the legislature of New Mexico and the rules of the Commissioner of Public Lands of the State of New Mexico, the same as though they were fully set forth herein, and said laws and rules, so far as applicable to this salt water disposal easement, are to be taken as a part hereof.

8. All the obligations, covenants, agreements, rights and privileges of this salt water disposal easement shall extend to and be binding and inure to the benefit of the lawful and recognized assigns or successors in interest of the parties hereto.

9. Grantee shall post with grantor a bond or undertaking in an amount required by grantor in favor of the owner of improvements lawfully located upon the lands herein to secure payment of damage, if any, done to such improvements by reason of grantee's operations.

10. Payment of all sums due hereunder shall be made at the office of the Commissioner of Public Lands, 310 Old Santa Fe Trail, P. O. Box 1148, Santa Fe, New Mexico 87504-1148.

11. Grantee, including his heirs, assigns, agents, and contractors shall at their own expense fully comply with all laws, regulations, rules, ordinances, and requirements of the city, county, state, federal authorities and agencies, in all matters and things affecting the premises and operations thereon which may be enacted or promulgated under the governmental police powers pertaining to public health and welfare, including but not limited to conservation, sanitation, aesthetics, pollution, cultural properties, fire, and ecology. Such agencies are not to be deemed third party beneficiaries hereunder; however, this clause is enforceable by the grantor as herein provided or as otherwise permitted by law.

12. Grantee shall save and hold harmless, indemnify and defend the State of New Mexico, the Commissioner of Public Lands, and his agent or agents, in their official and individual capacities, of and from any and all liability claims, losses, or damages arising out of or alleged to arise out of or indirectly connected with the operations of grantee hereunder, off or on the herein above described lands, or the presence on said lands of any agent, contractor or sub-contractor of grantee.

AFFIRMATION OF GEOLOGIC, ENGINEERING & HYDROLOGIC INVESTIGATION: I hereby affirm that the available geologic and engineering data have been examined and no evidence has been found of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

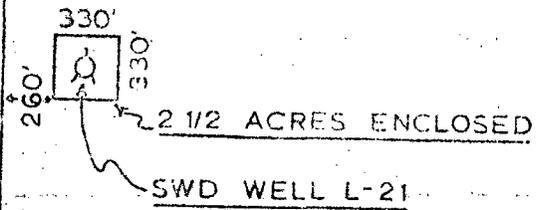


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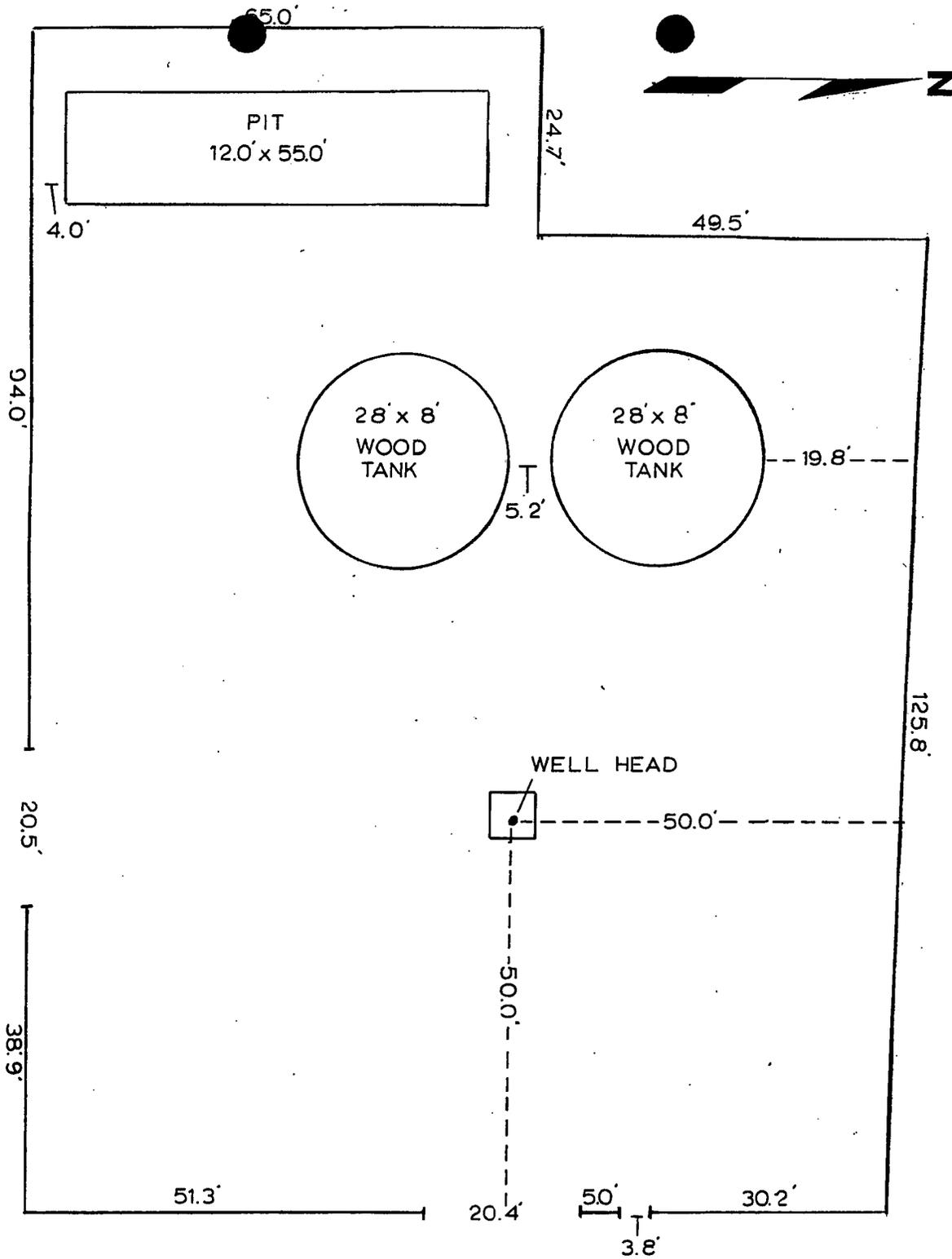


1390'

SW CORNER  
OF SECTION

LEA COUNTY, NEW MEXICO

DWN	AMM	6-66	BUSINESS LEASE	SCALE
			EME SWD WELL L-21	1"= 1000'
			Rice Engineering & Operating, Inc.	DWG NO.
			Bobbs, New Mexico	



DWN	KDP	1-73	EME SWD WELL L-21 SCHEMATIC OF LOCATION	SCALE 1" = 20'
				Rice Engineering & Operating, Inc. Hobbs, New Mexico



District I - (505) 393-6161  
P. O. Box 1900  
Hobbs, NM 88241-1900  
District II - (505) 748-1283  
811 S. First  
Artesia, NM 88210  
District III - (505) 334-6178  
1000 Rio Bensoe Road  
Aztec, NM 87410  
District IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Originated 6/27/97

Submit Original  
Plus 1 Copy  
to Santa Fe

PIT INVENTORY FORM

Operator: RICE OPERATING COMPANY

Address: 122 West Taylor  
Hobbs, New Mexico 88240  
(505) 393-9174

Phone Number: \_\_\_\_\_

Previous Operator(s): None

Is the pit permitted: Yes  No

Unit Letter: L Section: 21 Township: 21S Range: 36E

County: Lea County

Location Name: Funice-Monument-Fumont Salt Water Disposal Well L-21

Number of wells to the pit: System Terminal Tanks (Varies)

Are the wells to the pit operated by one operator  or multiple operators

Total daily volume (in barrels) to the pit: 1,500

Pit Type: 2-Below ground redwood terminal tanks  
(Emergency, Production, Workover, Reserve/Drilling (greater than 6 months old), Flare, Blowdown, Separator, Dehydrator, Line Drip, BS&W/Tank Bottoms, Compressor, Piggings, Washdown, or other)

What types of wastes are accepted in the pit (Exempt, Non-exempt, Both, None): Exempt (production water)

Pit age (years): 35

Is the pit lined  or unlined

Type of liner (None, Synthetic, Clay): Redwood tank resting on concrete pad

Is leak detection present: Yes  No  Observation boxes around tanks

Is the pit netted: Yes  No  Covered with redwood top

Pit dimensions (LxWxD): two-28'diax8'Ht

CERTIFICATION

I hereby certify that the information submitted is true and correct to the best of my knowledge and belief.

Name: Roger Hall Title: Operations Engineer

Signature: Roger Hall Date: 10/31/97

District I - (505) 393-6161  
P. O. Box 1980  
Hobbs, NM 88241-1980  
District II - (505) 748-1283  
811 S. First  
Artesia, NM 88210  
District III - (505) 334-6178  
1000 Rio Brazos Road  
Aztec, NM 87410  
District IV - (505) 827-7131

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Originated 6/27/97

Submit Original  
Plus 1 Copy  
to Santa Fe

PIT INVENTORY FORM

Operator: RICE OPERATING COMPANY

Address: 122 WEST TAYLOR  
Hobbs, New Mexico 88240

Phone Number: (505) 393-9174

Previous Operator(s): None

Is the pit permitted: Yes  No

Unit Letter: L Section: 21 Township: 21S Range: 36E

County: Lea County

Location Name: EME Salt Water Disposal System Well L-21

Number of wells to the pit: 1

Are the wells to the pit operated by one operator  or multiple operators

Total daily volume (in barrels) to the pit: None

Pit Type: Emergency

(Emergency, Production, Workover, Reserve/Drilling (greater than 6 months old), Flare, Blowdown, Separator, Dehydrator, Line Drip, BS&W/Tank Bottoms, Compressor, Pigging, Washdown, or other)

What types of wastes are accepted in the pit (Exempt, Non-exempt, Both, None): Exempt (production water)

Pit age (years): 35

Is the pit lined  or unlined

Type of liner (None, Synthetic, Clay): None

Is leak detection present: Yes  No

Is the pit netted: Yes  No

Pit dimensions (LxWxD): 51'x17'x2½'

CERTIFICATION

I hereby certify that the information submitted is true and correct to the best of my knowledge and belief.

Name: Roger Hall Title: Operations Engineer

Signature: Roger Hall Date: 10/28/97

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

### OIL CONSERVATION DIVISION

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

Permit No. H-73  
(For Division Use Only)

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

## APPLICATION FOR EXCEPTION TO DIVISION ORDER R-8952 FOR PROTECTION OF MIGRATORY BIRDS Rule 8(b), Rule 105(b), Rule 312(h), Rule 313, or Rule 711(f)

Operator Name: Rice Engineering Corporation

Operator Address: 122 W. Taylor, Hobbs, New Mexico 88240

Lease or Facility Name E-M-E SWD System Well L-21 Location L 21 21S 36E  
Size of pit or tank: 51'x17'x2½' deep, approx. 400 bbls. Ut. Ltr. Sec. Twp. Rge

Operator requests exception from the requirement to screen, net or cover the pit or tank at the above-described facility.

X The pit or tank is not hazardous to migratory waterfowl. Describe completely the reason pit is non-hazardous.  
The pit is used only in emergencies such as major well remedial work.  
Normally kept empty.

1) If any oil or hydrocarbons should reach this facility give method and time required for removal:

Method: Vacuum truck

Time: Within 24 hrs. of discovery

2) If any oil or hydrocarbons reach the above-described facility the operator is required to notify the appropriate District Office of the OCD with 24 hours.

Operator proposes the following alternate protective measures: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CERTIFICATION BY OPERATOR:** I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature S. A. Haktanir Title Division Manager Date July 25, 1990

Printed Name S. A. Haktanir Telephone No. 393-9174

-----  
**FOR OIL CONSERVATION DIVISION USE**

Date Facility Inspected 8/2/90  
Inspected by R. A. [Signature]

Approved by [Signature]  
Title DIL & G.S. [Signature]  
Date SEP 05 1990

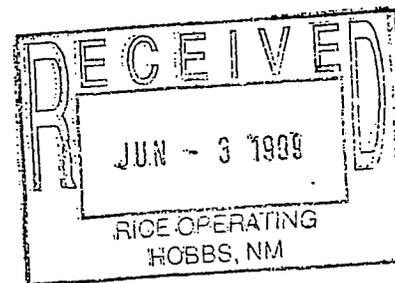


NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

June 1, 1999

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. Z 357 870 131**



Carolyn Doran Haynes  
Rice Operating Company  
122 West Taylor  
Hobbs, NM 88240

**Re: Closure Work Plan for Existing Pits and Below-Grade Redwood Tanks (Generic Closure Work Plan) for Rice Operating Company's saltwater disposal system facilities.**

Dear Ms. Haynes:

The New Mexico Oil Conservation Division (NMOCD) has reviewed Rice Operating Company's (ROC) closure work plans dated March 22, 1999 and revisions to the plans dated April 23, 1999 for the saltwater disposal system facilities. **The NMOCD Hereby approves the plans subject to the following conditions:**

1. ROC shall complete all monitor well(s) as follows:
  - a. At least 15 feet of well screen shall be placed across the water table interface with 5 feet of the well screen above the water table and 10 feet of the well screen below the water table.
  - b. An appropriately sized gravel pack shall 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.
  - c. A 2-3 foot bentonite plug shall be placed above the gravel pack.
  - d. The remainder of the hole shall be grouted to the surface with cement containing 3-5% bentonite.
  - e. A concrete pad shall be placed at the surface around the well. The well shall be installed with a suitable protective locking device.
  - f. The well(s) shall be developed after construction using EPA approved procedures.

**REVISED**

4-23-99

2-23-00

**Closure Plan for Permitted Emergency Pits***as directed by NMOCD*

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Remove and properly dispose of visibly contaminated soil pursuant to NMOCD guidelines.
3. Procure soil samples from surface and 3' below excavation bottom and excavation sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 6.
  - B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 4.
4. Delineate any portion of excavation that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 5.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
5. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing
6. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
7. Procure random 5-point composite bottom sample and random 4-point composite side sample for laboratory TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 9.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 8.
8. Evaluate site for risk assessment: delineate to assess depth and horizontal extent of impact corresponding to NMOCD guidelines for site assessment value; excavate bottom and sides as practical to minimize risk; install compacted clay liner to meet or exceed 95% of a Proctor Test ASTM-D-698 with permeability (hydraulic conductivity) equal or less than  $1 \times 10^{-7}$  cm/sec for containment/isolation of impact.
9. Discuss results/risk assessment with NMOCD for verbal approval to proceed with backfill.
10. Apply to NMOCD for closure of permitted emergency pit site per NMOCD guidelines and site results.

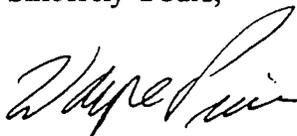
Ms: Haynes  
June 1, 1999  
Page 3

- e. Summary tables of all soil and/or ground water quality sampling results and copies of all laboratory analytical data sheets and associated QA/QC data collected.
- f. The quantity and disposition of all wastes generated.

Please be advised that NMOCD approval of this plan does not relieve ROC of liability should their investigations and/or operations fail to adequately investigate and/or remediate contamination that poses a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve ROC of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you require any further information or assistance please do not hesitate to write or call me at (505-827-7155).

Sincerely Yours,



Wayne Price-Pet. Engr. Spec.  
Environmental Bureau

cc: OCD Hobbs Office

# RICE Operating Company

122 West Taylor • Hobbs, NM 88240  
Phone: (505) 393-9174 • Fax: (505) 397-1471

April 23, 1999

Mr. Wayne Price  
NM Energy, Minerals and Natural Resources Department  
Oil Conservation Division, Environmental Bureau  
2040 S. Pacheco  
Santa Fe, NM 87505

Re: Revision of Closure Work Plan for Existing Pits and Below-Grade Redwood Tanks

Mr. Price:

Enclosed are the revised Closure Plans for Below Grade Redwood Tanks and for Permitted Emergency Pits. The revisions concern changes in items #3B, #8 and #10 for the Below Grade Redwood tanks and items #4B, #6 and #8 for the Permitted Emergency Pits, as directed by our telephone conversation of April 22, 1999, and your subsequent e-mail.

It is important to reiterate that **all activities** pertaining to closure of emergency pits and replacement of the redwood tanks will be conducted **pursuant to NMOCD guidelines**. All site assessments, work plans, time schedules, sample and test plans, impacted soil removal, replacement tankage and facilities, etc., will be specifically fitted to the particular site applying for closure but will generally follow these generic plans. NMOCD will be notified in advance of significant occasions and will be consulted throughout the closure process for concurrence of plan alterations, assessment and analytical interpretations, etc.

Also enclosed are preliminary generic drafts of the open, below-ground-level replacement tank facility that you requested. The elevation of the collection vessel is vital to the system's gravity-flow capability, and in most cases, the replacement tank facility must remain at the same lower-than-surface elevation as the redwood tanks. Each site will be assessed for elevation limitations and the replacement facility will be designed accordingly. Rice Operating Company proposes to contain new tanks and piping within a concrete, sealed and frequently inspected (for integrity) vault-like enclosure, thus insuring future impact minimization to the environment and the public.

Thank you,



Carolyn Doran Haynes  
Operations Engineer

Enclosures

Cc KH; JC; file; Ms. Donna Williams, OCD District I, Hobbs, NM

# RICE Operating Company

122 West Taylor • Hobbs, NM 88240  
Phone: (505) 393-9174 • Fax: (505) 397-1471

March 22, 1999

Mr. Wayne Price  
NM Energy, Minerals and Natural Resources Department  
Oil Conservation Division, Environmental Bureau  
2040 S. Pacheco  
Santa Fe, NM 87505

Re: Closure Work Plan for Existing Pits and Below-Grade Redwood Tanks

Mr. Price:

Enclosed are copies of emergency pit permits and below grade redwood tank installations for our operations in Lea County, New Mexico, that were previously submitted to NMOCD in October, 1997. This documentation serves as a list of facilities operated by Rice Operating Company (ROC) that contain or have contained pits or below grade tanks.

Closure plans for two locations, F-29 and H-35, are in process with the OCD now. The generic "Closure Plan for Below Grade Redwood Tanks" detailed below will accommodate the systematic closure of existing ROC operated below-grade redwood tanks. The existing emergency pits will be closed pursuant to the generic "Closure Plan for Permitted Emergency Pits", also detailed below. It is expected that at facilities containing both, the below-grade redwood tank (s) and the emergency pit will be closed at the same time, but under separate closure plans and closure reports.

Rice Operating Company is the service provider (operator) for these salt-water disposal systems in SE NM. Rice Operating has no ownership of any of the pipelines, wells, or facilities. Each system is owned by a consortium of oil producers and they are called "System Partners," and the System Partners provide all operating capital on a percentage ownership/usage basis. Each location will independently require System Partner AFE approval and advance billing for the closure funds. Only after funds are received can closure work begin.

Thank you,

Carolyn Doran Haynes  
Operations Engineer

**COPY**

Cc KH; JC; file; Ms. Donna Williams, OCD District I, Hobbs, NM

**Closure Plan for Below Grade Redwood Tank**

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Procure soil samples from 3' below bottom of tanks (9-11' below grade) at tank sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 4.
  - B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 3.
3. Delineate any portion of tank site that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 4.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
4. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing.
5. Move onto SWD facility site with temporary tank system. Re-route fluid flow from below grade redwood tanks into the temporary tank system. Plumb to SWD well.
6. Empty and clean redwood tanks, properly disposing of any BS & W. Excavate sides of redwood tanks to allow for working space to manipulate tank support banding. Remove redwood tanks reserving boards for proper disposal.
7. Excavate ramp into redwood tank hole. Remove and properly dispose of concrete base.
8. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
9. Procure random 5-point composite bottom sample from 3' below tank bottom and random 4-point composite side sample for lab TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 11.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 10.
10. Evaluate site for risk assessment: propose to excavate hole bottom and sides as practical to minimize risk; install 40-mil polyethylene liner on sanded bottom, graded to direct moisture accumulation away from the impacted area; cover and compact bottom with 2' sand fill.
11. Apply to NMOCD for closure of redwood tank site per NMOCD guidelines and site results.
12. After approval is received, proceed with installation of new fiberglass or steel tanks and appropriate plumbing changes within engineered secondary containment system.

## Closure Plan for Permitted Emergency Pits

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Remove and properly dispose of visibly contaminated soil pursuant to NMOCD guidelines.
3. Procure soil samples from surface and 3' below excavation bottom and excavation sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 6.
  - B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 4.
4. Delineate any portion of excavation that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 5.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for Chloride and BETX levels. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
5. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing
6. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
7. Procure random 5-point composite bottom sample and random 4-point composite side sample for laboratory TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 9.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 8.
8. Evaluate site for risk assessment. Excavate bottom and sides to a depth and width that is deemed practical by soil analytical results. Install a 40-mil polyethylene liner on bottom, graded to provide water run-off away from the contamination left in place below the liner; cover and compact over the liner with 1-2' of sand fill.
9. Apply to NMOCD for closure of permitted emergency pit site per NMOCD guidelines and site results.
10. After approval is received, proceed with backfill and grading of pit site with clean soil and/or appropriately blended soil compatible with the on-site soil.

**REVISED**

4-23-99

2-23-00

**Closure Plan for Below Grade Redwood Tank**

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Procure soil samples from 3' below bottom of tanks (9-11' below grade) at tank sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 4.
  - B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 3.
3. Delineate any portion of tank site that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 4.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
4. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing.
5. Move onto SWD facility site with temporary tank system. Re-route fluid flow from below grade redwood tanks into the temporary tank system. Plumb to SWD well.
6. Empty and clean redwood tanks, properly disposing of any BS & W. Excavate sides of redwood tanks to allow for working space to manipulate tank support banding. Remove redwood tanks reserving boards for proper disposal.
7. Excavate ramp into redwood tank hole. Remove and properly dispose of concrete base if impacted. If concrete is not impacted, use as fill (below plow depth) in excavation area.
8. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
9. Procure random 5-point composite bottom sample from 3' below tank bottom and random 4-point composite side sample for lab TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 11.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 10.
10. Evaluate site for risk assessment: delineate to assess depth and horizontal extent of impact corresponding to NMOCD guidelines for site assessment value; excavate bottom and sides as practical to minimize risk; install compacted clay liner to meet or exceed 95% of a Proctor Test ASTM-D-698 with permeability (hydraulic conductivity) equal or less than  $1 \times 10^{-7}$  cm/sec for containment/isolation of impact.
11. Discuss results/risk assessment with NMOCD for verbal approval to proceed with backfill/installation of new tanks and plumbing within engineered secondary containment system.
12. Apply to NMOCD for closure of redwood tank site per NMOCD guidelines and site results.

2. No less than 48 hours after the well(s) are developed, ground water from all monitor well(s) shall be purged, sampled and analyzed for concentrations of benzene, toluene, ethyl benzene, xylene, polycyclic aromatic hydrocarbons (PAH's), total dissolved solids (T.S.) and New Mexico Water Quality Control Commission (WQCC) metals and major cations and anions using EPA approved methods and quality assurance/quality control (QA/QC) procedures.
3. ROC shall notify OCD pursuant to Rule 116 upon discovery of groundwater contamination.
4. All final soil samples submitted for laboratory analyses shall be sampled for BTEX (8021), TPH (418.1 or 8015 GRO & DRO) and Chlorides.
5. ROC will notify the OCD Santa Fe office and the OCD District office at least 48 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and/or split samples during OCD's normal business hours.
6. ROC is required to sample and provide to NMOCD the analytical test results for each side wall and bottom of any excavated areas. The samples taken shall be tested for BTEX (8021), TPH and Chlorides. Composite samples will be allowed if there are no obvious hot spots. TPH methods can be EPA 418.1, or 8015 if both GRO and DRO are ran. All sampling and testing shall be pursuant to approved EPA methods and procedures.
7. All wastes generated during the investigation shall be disposed of at an OCD approved site.
8. ROC shall submit a report of the investigations to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office. ROC must receive NMOCD approval before commencing backfilling, liner or new equipment installations. The report shall include the following:
  - a. A description of all investigations, remediation and monitoring activities which have occurred including conclusions, recommendations, risk assessments and request for implementation of any future work and/or closure.
  - b. A geologic/lithologic log and well completion diagram for all soil borings and/or monitor well(s).
  - c. Vertical and horizontal Isopleth maps for remaining contaminants of concern which were observed during the investigations.