NM1 - 9

PERMITS, RENEWALS, & MODS

Susana Martinez
Governor

John Bemis
Cabinet Secretary

Brett F. Woods, Ph. D.
Deputy Cabinet Secretary

Jami Bailey
Division Director
Oil Conservation Division

February 20, 2012

Jeff Davis
Agua Moss, LLC
P.O. Box 600
Farmington, NM 87499

Re: Transfer of Permit and Financial Assurance
New Operator: Agua Moss LLC
Permit: NM-01-009
RLI Surety Bond No. RLB0014210
Facility Location: SW/4 NW/4 Section 2, Township 29N, Range 12W, NMPM

Dear Mr. Davis,

The Oil Conservation Division (OCD) has reviewed Agua Moss, LLC (Agua Moss) transfer of permit and the financial assurance, dated February 14, 2012 and January 26, 2012 respectively, to demonstrate compliance with Subsection E of 19.15.36.12 NMAC. OCD hereby approves the above-referenced transfer of permit NM-01-009 from Key Energy Services, LLC to Agua Moss and the associated financial assurance.

Please be advised that should operation result in pollution of surface water, ground water or the environment, approval of this request does not relieve Agua Moss of liability. In addition, approval of this request requires Agua Moss to comply with all applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of the OCD staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Gabrielle A. Gerholt
Assistant General Counsel

GG/baj

Cc: OCD District III Office, Aztec
Key Energy Services, LLC, 1301 McKinney, Suite 1301, Houston, TX 77010

TRANSFER OF PERMIT

Pursuant to 19.15.36.12E NMAC, "Transfer of a permit. The operator shall not transfer a permit without the division's prior written approval. A request for transfer of a permit shall identify officers, directors and owners of 25 percent or greater in the transferee. Unless the director otherwise orders, public notice or hearing are not required for the transfer request's approval. If the division denies the transfer request, it shall notify the operator and the proposed transferee of the denial by certified mail, return receipt requested, and either the operator or the proposed transferee may request a hearing with 10 days after receipt of the notice. Until the division approves the transfer and the required financial assurance is in place, the division shall not release the transferor's financial assurance."

FACILITY INFORMATION:

Surface Waste Management Facility Permit(s): NM-01-009
Legal Description: SW/4 NW/4 Section 2, Township 29 North, Range 12 West, NMPM,

Location: San Juan County, New Mexico

From: Company Name: Key Energy Services, LLC
Company Address: 1301 McKinney, Suite 1301
Houston, Texas 77010

To: Company Name: Agua Moss. LLC
Company Address: PO Box 600
Farmington, NM 87499

CERTIFICATION:

Agua Moss, LLC, by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Agua Moss, LLC further acknowledges that the Division for good cause shown as necessary to protect fresh water, human health, and the environment may change such terms and conditions administratively. The undersigned also attests to the fact that he or she understands 19.15.5.11 NMAC which states "Any person who conducts any activity pursuant to a permit, administrative order or other written authorization or approval from the division shall comply with every term, condition and provision of such permit, administrative order, authorization or approval."

Accepted:

Agua Moss, LLC

Print Name: Jeff Davis Permit #: NM-01-009

Signature: _____ Date: 2/14/12

Title: Owner/Manager

Mailing Address: PO Box 600 Farmington, NM 87499

Contact Telephone Number: 505-486-1171

To whom it may concern:

This letter is to inform you of the sale from Key Energy Services, LLC ("Key") to Agua Moss, LLC ("Agua Moss"), of a Key facility in Farmington, New Mexico. The facility includes the following disposal well:

Key (SUNCO) Disposal Well #1, API No. 30-045-28653
Location: 1595 from the North line and 1005 feet from the West line
Unit Letter: E Section 2, T. 29 N., R. 12 W.
San Juan County, New Mexico

Key wishes to transfer the following to Agua Moss:

1. OCD Permit NM-01-0009 (for Commercial Surface Waste Management Facility, including landfarm and evaporation pond)

2. Class 1 Injection Well Discharge Permit for SUNCO Disposal Well #1 UIC-CL1-005; Class 1 Non-Hazardous Oil Field Waste Disposal Well

3. Administrative Order SWD Permit 457 for SUNCO Disposal Well #1

The sale was effective December 9, 2011.

Key is 100% owned by Key Energy Services, Inc. No officer, director, or owner of Key has a 25 percent or greater interest in Key. The following individuals own a 25 percent or greater interest in Agua Moss:

Jakie Moss 25%
Merrion Oil & Gas Corporation 29.2%

Agua Moss will operate the facility in compliance with the discharge permit currently in place. Agua Moss is aware that the Well Discharge Permit expires on June 1, 2012, and that an application for renewal must be submitted to OCD 120 days before the permit expires.

Regards,

Dennis Douglas
Senior Vice President
Key Energy Services, LLC

Philana Thompson
Regulatory Compliance Specialist
Agua Moss, LLC

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

January 31, 2006

Mr. Walter A. Baker II
SWD Manager
Key Energy Services, Inc.
6 Desta Dr., Suite 4400
Midland, TX 79705

RE: Name Change on NMOCD Permits
NM-01-0009 and UIC-CLI-005

Dear Mr. Baker:

In response to your letter of December 29, 2005, the names on the above permits have been changed to Yale E. Key, Inc. Thank you for the notification.

NEW MEXICO OIL CONSERVATION DIVISION

Ed Martin

Edwin E. Martin
Environmental Bureau

Copy: NMOCD, Aztec
Wayne Price, NMOCD, Santa Fe

UNLOCK YOUR POTENTIAL™

2005 DEC 30 PM 12 44

December 29, 2005

New Mexico Oil Conservation Commission
1220 S. St. Francis Dr.
Santa Fe, New Mexico 87504

Attn: Mr. Ed Martin
Environmental Engineer

Re: OCD Rule 711 Permit NM-01-0009
Discharge Plan UIC-CLI-005

Dear Mr. Martin:

Effective January 1, 2006 Key Four Corners, Inc. will merge into Yale E. Key, Inc. Both entities are subsidiaries of Key Energy Services, Inc. Yale E. Key, Inc. will be the surviving entity and it will be known as Yale E. Key, Inc. dba Key Energy Services, Inc. Permian Basin Division.

As a result of this action it is requested that the operator name on the two subject permits be changed accordingly. Enclosed you will find a Rider to Surety Bond No. RLB0004486 in the amount of $176,200 indicating the new name of the operating company.

Please advise if additional information is required. I may be contacted at the letterhead address or by calling 432-571-7490.

Sincerely,

Walter A. Baker II
SWD Manager
Key Energy Services, Inc.

cc: Mr. Denny Foust
Environmental Engineer
New Mexico OCD
1000 Rio Braxos Road
Aztec, New Mexico 87410

Enclosure

RECEIVED
JUN 0 2 2003
Environmental Bureau
Oil Conservation Division

Key Energy Services, Inc.
Four Corners Division
5651 US Highway 64
P.O. Box 900
Farmington, NM 87499

Phone: 505-327-4935
Fax: 505-327-4962

May 28, 2003

Martyne Kieling
Environmental Geologist
New Mexico OCD
1220 S. Saint Francis Dr.
Santa Fe, New Mexico 87504

Re: Facility 711 Permit NM-01-0009 and Discharge Plan UIC-CLI-005.

Dear Martyne:

This letter is to inform NMOCD officially that there has been a change of personnel at Key Energy Services Four Corners Division. These changes affect the Certification sections of both permits. The 711 permits and Injection Well permit will now be certified by Mr. H.C. Putman, New Trucking Manager for Key Energy Four Corners Division.

When I am unavailable and information is required regarding Facility matters please don't hesitate to contact Mr. Putman, his contact info is office: 505-327-0416 ext. 152 cell phone: 505-486-2100

Sincerely,

Michael Talovich
Key Energy Services
Facility Manager

Cc: Mr. D. Foust NMOCD
Mr. H.C. Putman KEY
Mr. L. Lewis KEY
File

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

February 18, 2000

CERTIFIED MAIL
RETURN RECEIPT NO. Z-559-573-258 275

Mr. Michael Talovich
Key Four Corners Inc.
Water Disposal Facility
P.O. Box 900
Farmington, NM 87499

RE: OCD Rule 711 Permit Approval NM-01-0009
Key Four Corners Inc.
Commercial Surface Waste Management Facility
SW/4 NW/4 of Section 2, Township 29 North, Range 12 West, NMPM
San Juan County, New Mexico

Dear Mr. Talovich:

The permit application for the Key Four Corners Inc. (Key) commercial surface waste management facility located in the SW/4 NW/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico is hereby approved in accordance with New Mexico Oil Conservation Division (OCD) Rule 711 under the conditions contained in the enclosed attachment. **This permit approval is conditional upon the receipt and approval by the Director of financial assurance in the amount of $176,200.** Financial assurance is required within thirty (30) days of the date of this permit approval letter. The application consists of the permit application Form C-137 dated March 3, 1998, the inspection report response letter dated March 20, 1998, the original permit application dated March 15, 1989, materials from the hearing file related to Order No. R-9485 dated April 2, 1991, Order No. R-9485-A dated July 19, 1991, Order No. R-10738 dated January 17, 1997, and Order No. R-10756 dated January 27, 1997, and materials submitted in conjunction with subsequent permit modifications dated December 4, 1992; February 16, 1993; March 22, 1993; April 12,1993; August 8, 1994 and September 5 ,1997.

The operation, monitoring and reporting shall be as specified in the enclosed attachment. All modifications and alternatives to the approved water disposal process and landfarming methods must receive prior OCD approval. Key is required to notify the Director of any facility expansion or process modification and to file the appropriate materials with the Division.

Please be advised approval of this facility permit does not relieve Key of liability should your operation result in pollution of surface water, ground water, or the environment. In addition, OCD approval does not relieve Key of responsibility for compliance with other federal, state or local laws and/or regulations.

Please be advised that all tanks exceeding 16 feet in diameter and exposed pits, ponds or lagoons must be screened, netted or otherwise rendered nonhazardous to migratory birds. In addition, OCD Rule 310 prohibits oil from being stored or retained in earthen reservoirs or open receptacles.

The facility is subject to periodic inspections by the OCD. The conditions of this permit will be reviewed by the OCD no later than five (5) years from the date of this approval and the facility will be inspected at least once a year. In addition, the closure cost estimate will be reviewed according to prices and remedial work estimates at the time of the five (5) year review. The financial assurance may be adjusted to incorporate any closure cost changes.

Enclosed are two copies of the conditions of approval. **Please sign and return one copy to the OCD Santa Fe Office within five working days of receipt of this letter.**

If you have any questions please do not hesitate to contact Martyne J. Kieling at (505) 827-7153.

Sincerely,

Lori Wrotenbery
Director

LW/mjk

xc with attachments:
Aztec OCD Office

ATTACHMENT TO OCD 711 PERMIT MODIFICATION APPROVAL
PERMIT NM-01-0009
KEY FOUR CORNERS, INC.
SURFACE WASTE MANAGEMENT FACILITY
SW/4 NW/4 of Section 2, Township 29 North, Range 12 West, NMPM,
San Juan County, New Mexico
(February 18, 2000)

FACILITY AND EVAPORATION POND OPERATION

1. The facility must be fenced and have a sign at the entrance. The sign must be legible from at least fifty (50) feet and contain the following information: a) name of the facility; b) location by section, township and range; and c) emergency phone number.

2. Disposal may occur only when an attendant is on duty. The facility must be secured when no attendant is present.

3. The facility must be maintained such that there will be no storm water runoff beyond the boundaries of the facility.

4. No produced water may be received at the facility unless the transporter has a valid Form C-133, Authorization to Move Produced Water, on file with the Division.

5. All produced water must be unloaded into tanks. The produced water must reside in the tank system long enough to allow for oil and sediment separation. Oil recovered must be stored in above-ground storage tanks. Per Division General Rule 310, oil shall not be stored or retained in earthen reservoirs or in open receptacles.

6. All existing above-ground tanks located at the facility and containing materials other than fresh water must be bermed to contain one and one-third the volume of the largest tank or all interconnected tanks, whichever is greater. All above-ground tanks must be labeled as to contents and hazards.

7. All new or replacement above-ground tanks containing materials other than fresh water must be placed on an impermeable pad and be bermed so that the area will hold one and one-third the volume of the largest tank or all interconnected tanks, whichever is greater.

8. Below-grade sumps must be cleaned and visually inspected annually. Results must be recorded and maintained for OCD review. If sump integrity has failed the OCD must be notified within 48 hours of discovery and the sump contents and contaminated soil must be removed and disposed of at an OCD-approved facility or landfarmed on site. Soil remediation must follow OCD surface impoundment closure guidelines. The permittee must submit a

report to the OCD Santa Fe and appropriate District offices that describes the investigation and remedial actions taken.

9. All new or replacement below-grade sumps and below-grade tanks at the facility must have secondary impermeable containment with a leak detection system. The leak detection system must be inspected for fluids weekly. Results must be recorded and maintained at the facility for OCD review. If fluids are present in the leak detection system they must be sampled and an the analyses compared to the fluids in the sump/tank. A report including the analyses must be furnished to the OCD Santa Fe and appropriate District offices regarding the below grade sump/tank integrity.

10. All saddle tanks and drums located at the facility and containing materials other than fresh water must be placed on an impermeable pad and curb-type containment. The containers must be labeled as to contents and hazards.

11. Any design changes to the produced water receiving, treatment and evaporation area must submitted to the OCD Santa Fe office for approval.

12. The pond must have a minimum freeboard of one and a half (1½) feet. A device must be installed in the pond to accurately measure freeboard.

13. The pond may not contain any free oil.

14. Pond inspection and maintenance must be conducted on a daily basis or immediately following a consequential rainstorm or windstorm. The OCD Santa Fe and Aztec office must be notified within 24 hours if any defect is noted. If any defect is noted repairs must be made as soon as possible. If the defect will jeopardize the integrity of the pond, additional wastes may not be placed into the pond until repairs have been completed. Records of such inspections must be made available to the OCD upon request.

15. The pond leak detection system sumps shall be inspected daily. Results must be recorded and maintained at the facility for OCD review. If fluids are found in the sump, the following steps will be immediately undertaken:

    a. the operator will notify the Aztec office within 24 hours;

    b. the fluids will be sampled and analyzed and a comparison made to the fluids in the pond to determine the source; and

    c. the fluids will be immediately and continuously removed from the sump. Such fluids may be returned to the pond.

16. If a leak is determined to exist in the primary liner, the operator will immediately undertake the following measures under the direction of the OCD:

    a. introduction of fluids into the pond will cease;

    b. enhanced evaporation will commence, provided atmospheric conditions are such that the spray systems can be operated in accordance with the provisions of this permit;

    c. fluids will be removed from the pond using evaporation, injection and transportation to another authorized facility until the fluid level is below the location of the leak in the liner;

    d. the liner will be repaired and tested and the leak detection system will be completely drained before introduction of fluids into the pond resumes; and

    e. any additional measures required by the OCD will be completed.

17. Sludge thickness in the base of the pond must be measured annually. Any sludge build-up in the bottom of the pond in excess of twelve (12) inches must be removed and may be landfarmed at the on-site landfarm or disposed of at an OCD-approved facility.

18. To protect migratory birds, all tanks exceeding 16 feet in diameter and exposed pits, ponds or lagoons must be screened, netted, covered or otherwise rendered nonhazardous to migratory birds.

19. Liquid reduction technologies that may be used to eliminate pond waters include evaporation, enhanced evaporation and injection at the facility Class I disposal well.

20. Any time the spray system is used to enhance evaporation the following requirements will apply:

    a. all spray must remain within the confines of the lined portion of the pond;

    b. the spray system will be equipped with an automatic anemometer that will automatically deactivate the spray system when the winds, sustained or in gusts, would carry the spray outside the confines of the lined portion of the pond; and

    c the spray system may be operated only when an attendant is on duty.

21. Within 24 hours of detection or complaint of any odor generation that may impact public health or welfare, the facility must notify the OCD Aztec office and begin an investigation to determine the appropriate remedial actions. Actions may include chemical treatment and/or

and/or the immediate solidification and landfarming of material. A report regarding the odor generation and remedial actions taken must be filed with the OCD Santa Fe and Aztec offices.

H_2S PREVENTION & CONTINGENCY PLAN

1. In order to prevent development of harmful concentrations of H_2S, the following procedures must be followed:

   a. All incoming loads of produced water must be tested for hydrogen sulfide (H_2S) concentrations. Any loads with measurable H_2S concentrations will be treated in a closed system. The treatment reaction must be driven to completion to eliminate all measurable H_2S prior to disposal of the water into the pond.

   b. The aeration system must be operated to provide sufficient oxygen to the pond to maintain a residual oxygen concentration of 0.5 ppm one foot off the bottom of the pond. Tests must be conducted and records made and maintained of the dissolved oxygen levels in the pond according to the following procedures:

      i. tests must be conducted at the beginning and end of each day, or at least twice per 24-hour period;

      ii. the sample for each test must be taken one foot from the bottom of the pond;

      iii. the location of tests must vary around the pond; and

      iv. if any test shows a dissolved residual oxygen level of less than 0.5 ppm, immediate steps will be undertaken to oxygenate the pond and create a residual oxygen level of at least 0.5 ppm. Remedial measures may include adding chemicals or increasing aeration.

   c. Daily tests must be conducted and records made and maintained of the pH levels in the pond, and if the pH falls below 8.0 remedial steps must be taken immediately to raise the pH.

   d. Weekly tests must be conducted and records made and retained at the facility of the dissolved sulfide concentrations in the pond.

   e. At least 1000 gallons of an H_2S treatment chemical must be stored on-site and must be replaced periodically in accordance with manufacturer's stated shelf life. Expired H_2S treatment chemicals may be disposed of in the pond.

2. Tests of ambient H_2S levels must be conducted twice per day on the downwind side of the pond along the top of the berm. Test results must be recorded and retained. The wind speed and direction must be recorded in conjunction with each test.

   a. If an H_2S reading of 1.0 ppm or greater is obtained:

      i. a second reading must be taken on the downwind berm within one hour;

      ii. the dissolved oxygen and dissolved sulfide levels of the pond must be tested immediately and the need for immediate treatment determined; and

      iii. tests for H_2S levels must be made at the fence line down wind from the pond.

   b. If two (2) consecutive H_2S readings of 1.0 ppm or greater are obtained:

      i. the operator must notify the Aztec office of the OCD immediately;

      ii. the operator must commence hourly monitoring on a 24-hour basis;

      iii. the operator must lower the pond level so that the aeration system will circulate the entire pond; and

      iv. the operator must obtain daily analyses of dissolved sulfides in the pond.

   c. If an H_2S reading of 10.0 ppm or greater at the facility fence line is obtained:

      i. the operator must immediately notify the Aztec office of the OCD and the following public safety agencies:

         New Mexico State Police;
         San Juan County Sheriff; and
         San Juan County Fire Marshall.

      ii. the operator must notify all persons residing within one-half (½) mile of the fence line and assist public safety officials with evacuation as requested.

CONCRETE MIXING IMPOUNDMENT OPERATION

1. Only solids and sludge generated at the Key surface waste management facility may be allowed in the concrete mixing impoundment.

2. All solids and sludge must be placed in the concrete mixing impoundment for solidification prior to landfarm application.

3. Adequate freeboard must be maintained to prevent any overtopping or slop over of material. No free oil or liquids may be allowed in the concrete mixing impoundment. Any liquid that accumulates in the impoundment must be removed within 24 hours.

4. Liquid removed from the impoundment must be returned to the water treatment system.

5. OCD-approved remediated soil may be mixed with the tank bottoms and sludge to stabilize the material. Material received at the impoundment must be mixed and stabilized in a timely manner not to exceed 24 hours.

6. The concrete mixing impoundment and leak detection system must be inspected weekly for containment leaks and overall integrity. Records of such inspections must be made available to the OCD upon request.

LANDFARM CONSTRUCTION

1. Total landfarm acreage may not exceed 15 acres.

2. Contaminated soils may not be placed within one hundred (100) feet of the boundary of the facility.

3. Contaminated soils may not be placed within twenty (20) feet of any pipeline crossing the landfarm. In addition, no equipment may be operated within ten (10) feet of a pipeline. All pipelines crossing the facility must have surface markers identifying the location of the pipelines.

4. The portion of the facility containing contaminated soils must be bermed to prevent runoff and runon. A perimeter berm must be constructed and maintained such that it is capable of containing precipitation from a one-hundred year flood for the specific region.

LANDFARM OPERATION

1. Only soils generated exclusively from operations at the Key surface waste management facility may be landfarmed at the Key facility landfarm.

2. All contaminated soils received at the landfarm must be spread and disked within 72 hours of receipt.

3. Soils must be spread on the surface in lifts of six inches or less.

4. Soils must be disked a minimum of one time every two weeks (biweekly) to enhance biodegradation of contaminants.

5. Moisture may be added as necessary to enhance bioremediation and to control blowing dust. There may be no ponding, pooling or run-off of water allowed. Any ponding of precipitation must be removed within twenty-four (24) hours of discovery.

6. Successive lifts of contaminated soils may not be spread until a laboratory measurement of total petroleum hydrocarbons (TPH) in the previous lift is less than 100 parts per million (ppm), the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations must be maintained at the facility. Authorization from the OCD must be obtained prior to application of successive lifts and/or removal of the remediated soils.

7. Enhanced bio-remediation through the application of microbes (bugs) and/or fertilizers requires prior approval from the OCD. Requests for application of microbes or fertilizers must include the location of the area designated for the program, the composition of additives, and the method, amount and frequency of application.

8. Any design changes to the landfarm facility must be submitted to the OCD Santa Fe office for approval and a copy must be sent to the Aztec District office.

9. Landfarm inspection and maintenance must be conducted on at least a biweekly basis and immediately following each consequential rainstorm or windstorm. The OCD Santa Fe and Aztec offices must be notified within 24 hours if any defect is noted. Repairs must be made as soon as possible. If the defect will jeopardize the integrity of the landfarm, additional wastes may not be placed into the landfarm until repairs have been completed.

TREATMENT ZONE MONITORING

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

2. The soil samples must be analyzed using EPA-approved methods for total petroleum hydrocarbons (TPH) and volatile aromatic organics (BTEX) quarterly and for major cations/anions and Water Quality Control Commission (WQCC) metals annually.

3. After soil samples are obtained, the boreholes must be filled with an impermeable material such as cement or bentonite.

REPORTING AND RECORD KEEPING

1. Analytical results from the treatment zone monitoring must be submitted to the OCD Santa Fe office **within thirty (30) days** of receipt from the laboratory.

2. Key must notify the **OCD Santa Fe and Aztec offices within 24 hours** of any fire, break, leak, spill, blowout or any other circumstance that could constitute a hazard or contamination in accordance with OCD Rule 116.

3. Key must notify the **OCD Aztec office within 24 hours** of any odor detection or complaint. A report regarding the odor generation and remedial actions taken must be filed with the OCD Santa Fe and Aztec offices.

4. Records of H_2S and wind direction, pH, dissolved oxygen, and dissolved sulfide measurements must be kept and maintained for OCD review.

5. Records of landfarm inspection and maintenance must be kept and maintained for OCD review.

6. Records of inspection and maintenance of the produced water receiving, treatment, and evaporation area and concrete mixing impoundment must be kept and maintained for OCD review.

7. Comprehensive records of all material disposed of at the facility must be maintained at the facility. The records for each load will include: 1) generator; 2) origin; 3) date received; 4) quantity; 5) certification of waste status as exempt or non-exempt with any necessary supporting documentation to certify non-hazardous status for non-exempt waste; 6) NORM status declaration; 7) transporter; 8) exact cell location; and 9) any addition of microbes, moisture, fertilizers, *etc.*

8. Analytical results of remediated soils and requests to close cells, apply successive lifts or remove remediated material must be submitted to the OCD Santa Fe office with a copy to the Aztec District office.

9. The OCD must be notified prior to the installation of any pipelines or wells or other construction within the boundaries of the facility.

WASTE ACCEPTANCE CRITERIA

1. The facility is authorized to accept only:

   a. Oilfield wastes that are exempt from RCRA Subtitle C regulations and that do not contain Naturally Occurring Radioactive Material regulated pursuant to 20 NMAC 3.1 Subpart 1403 (NORM). All loads of these wastes other than wastes returned from the well bore in the normal course of well operations, such as produced water and spent treating fluids, received at the facility shall be accompanied by a "Generator Certificate of Waste Status" signed by the generator.

   b. "Non-hazardous" non-exempt oilfield wastes that do not contain NORM. These wastes may be accepted on a case-by-case basis after a hazardous waste determination is made. Samples, if required, must be obtained from the wastes prior to removal from the generator's facility and without dilution in accordance with EPA SW-846 sampling procedures. All "non-hazardous" non-exempt wastes received at the facility must be accompanied by:

      i. An approved OCD Form C-138 "Request For Approval To Accept Solid Waste."

      ii. A "Generator Certificate of Waste Status" signed by the generator.

      iii. A verification of waste status issued by the appropriate agency, for wastes generated outside OCD jurisdiction. The agency verification is based on specific information on the subject waste submitted by the generator and demonstrating the exempt or non-hazardous classification of the waste.

   c. Non-oilfield wastes that are non-hazardous if ordered by the Department of Public Safety in a public health emergency. OCD approval must be obtained prior to accepting the wastes.

2. At no time may any OCD-permitted surface waste management facility accept wastes that are hazardous by either listing or characteristic testing.

3. No free liquids or soils with free liquids may be accepted into the landfarm portion of the facility.

4. Materials that may be accepted into the landfarm facility must pass a paint filter test by EPA Method 9095A prior to application.

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

FINANCIAL ASSURANCE

1. Financial assurance in the amount of **$176,200** in the form of a surety or cash bond or a letter of credit, which is approved by the Division, is required from Key Four Corners, Inc. for the commercial surface waste management facility.

   By March 18, 2000 Key Four Corners, Inc. must submit 25% of the financial assurance in the amount of **$ 44,050.**

   By March 18, 2001 Key Four Corners, Inc. must submit 50% of the financial assurance in the amount of **$88,100.**

   By March 18, 2002 Key Four Corners, Inc. must submit 75% of the financial assurance in the amount of **$132,150.**

   By March 18, 2003 Key Four Corners, Inc. must submit 100% of the financial assurance in the amount of **$176,200.**

2. The facility is subject to periodic inspections by the OCD. The conditions of this permit and the facility will be reviewed no later than five (5) years from the date of this approval. In addition, the closure cost estimate will be reviewed according to prices and remedial work estimates at the time of review. The financial assurance may be adjusted to incorporate any closure cost changes.

CLOSURE

1. The OCD Santa Fe and Aztec offices must be notified when operation of the facility is to be discontinued for a period in excess of six (6) months or when the facility is to be dismantled. Within six (6) months after discontinuing use or within 30 days of deciding to dismantle the facility a closure plan must be submitted to the OCD Santa Fe office for approval. The operator must complete cleanup of constructed facilities and restoration of the facility site within six (6) months of receiving the closure plan approval, unless an extension of time is granted by the Director.

2. The closure plan to be submitted must include the following procedures:

   a. No new material may be accepted.

   b. Existing landfarm soils must be remediated until they meet the OCD standards in effect at the time of closure.

   c. The treatment zone soils within each 5-acre cell must be sampled at two (2) to three (3) feet below the native ground surface and must be analyzed for total petroleum hydrocarbons (TPH), volatile aromatic organics (BTEX), major cations/anions and Water Quality Control Commission (WQCC) metals.

   d. Contaminated soils exceeding OCD closure standards for the site must be removed or remediated.

   e. The facility must be contoured, seeded with native grasses and allowed to return to its natural state. If the landowner desires to keep existing structures, berms, or fences for future alternative uses the structures, berms, or fences may be left in place.

   f. Closure is subject to OCD requirements in effect at the time of closure, and any other applicable local, state and/or federal regulations.

CERTIFICATION

Key Four Corners, Inc., by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Key Four Corners, Inc. further acknowledges that these conditions and requirements of this permit may be changed administratively by the Division for good cause shown as necessary to protect fresh water, public health and the environment.

Accepted:

KEY FOUR CORNERS, INC.

Signature _____ Title_____ Date _____

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

February 18, 2000

CERTIFIED MAIL
RETURN RECEIPT NO. Z-559-573-258

Mr. Michael Talovich
Key Four Corners Inc.
Water Disposal Facility
P.O. Box 900
Farmington, NM 87499

RE: OCD Rule 711 Permit Approval NM-01-0009
Key Four Corners Inc.
Commercial Surface Waste Management Facility
SW/4 NW/4 of Section 2, Township 29 North, Range 12 West, NMPM
San Juan County, New Mexico

Dear Mr. Talovich:

The permit application for the Key Four Corners Inc. (Key) commercial surface waste management facility located in the SW/4 NW/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico is hereby approved in accordance with New Mexico Oil Conservation Division (OCD) Rule 711 under the conditions contained in the enclosed attachment. **This permit approval is conditional upon the receipt and approval by the Director of financial assurance in the amount of $176,200.** Financial assurance is required within thirty (30) days of the date of this permit approval letter. The application consists of the permit application Form C-137 dated March 3, 1998, the inspection report response letter dated March 20, 1998, the original permit application dated March 15, 1989, materials from the hearing file related to Order No. R-9485 dated April 2, 1991, Order No. R-9485-A dated July 19, 1991, Order No. R-10738 dated January 17, 1997, and Order No. R-10756 dated January 27, 1997, and materials submitted in conjunction with subsequent permit modifications dated December 4, 1992; February 16, 1993; March 22, 1993; April 12,1993; August 8, 1994 and September 5 ,1997.

The operation, monitoring and reporting shall be as specified in the enclosed attachment. All modifications and alternatives to the approved water disposal process and landfarming methods must receive prior OCD approval. Key is required to notify the Director of any facility expansion or process modification and to file the appropriate materials with the Division.

Please be advised approval of this facility permit does not relieve Key of liability should your operation result in pollution of surface water, ground water, or the environment. In addition, OCD approval does not relieve Key of responsibility for compliance with other federal, state or local laws and/or regulations.

Please be advised that all tanks exceeding 16 feet in diameter and exposed pits, ponds or lagoons must be screened, netted or otherwise rendered nonhazardous to migratory birds. In addition, OCD Rule 310 prohibits oil from being stored or retained in earthen reservoirs or open receptacles.

The facility is subject to periodic inspections by the OCD. The conditions of this permit will be reviewed by the OCD no later than five (5) years from the date of this approval and the facility will be inspected at least once a year. In addition, the closure cost estimate will be reviewed according to prices and remedial work estimates at the time of the five (5) year review. The financial assurance may be adjusted to incorporate any closure cost changes.

Enclosed are two copies of the conditions of approval. **Please sign and return one copy to the OCD Santa Fe Office within five working days of receipt of this letter.**

If you have any questions please do not hesitate to contact Martyne J. Kieling at (505) 827-7153.

Sincerely,

Lori Wrotenbery
Director

LW/mjk

xc with attachments:
Aztec OCD Office

ATTACHMENT TO OCD 711 PERMIT MODIFICATION APPROVAL
PERMIT NM-01-0009
KEY FOUR CORNERS, INC.
SURFACE WASTE MANAGEMENT FACILITY
SW/4 NW/4 of Section 2, Township 29 North, Range 12 West, NMPM,
San Juan County, New Mexico
(February 18, 2000)

FACILITY AND EVAPORATION POND OPERATION

1. The facility must be fenced and have a sign at the entrance. The sign must be legible from at least fifty (50) feet and contain the following information: a) name of the facility; b) location by section, township and range; and c) emergency phone number.

2. Disposal may occur only when an attendant is on duty. The facility must be secured when no attendant is present.

3. The facility must be maintained such that there will be no storm water runoff beyond the boundaries of the facility.

4. No produced water may be received at the facility unless the transporter has a valid Form C-133, Authorization to Move Produced Water, on file with the Division.

5. All produced water must be unloaded into tanks. The produced water must reside in the tank system long enough to allow for oil and sediment separation. Oil recovered must be stored in above-ground storage tanks. Per Division General Rule 310, oil shall not be stored or retained in earthen reservoirs or in open receptacles.

6. All existing above-ground tanks located at the facility and containing materials other than fresh water must be bermed to contain one and one-third the volume of the largest tank or all interconnected tanks, whichever is greater. All above-ground tanks must be labeled as to contents and hazards.

7. All new or replacement above-ground tanks containing materials other than fresh water must be placed on an impermeable pad and be bermed so that the area will hold one and one-third the volume of the largest tank or all interconnected tanks, whichever is greater.

8. Below-grade sumps must be cleaned and visually inspected annually. Results must be recorded and maintained for OCD review. If sump integrity has failed the OCD must be notified within 48 hours of discovery and the sump contents and contaminated soil must be removed and disposed of at an OCD-approved facility or landfarmed on site. Soil remediation must follow OCD surface impoundment closure guidelines. The permittee must submit a

report to the OCD Santa Fe and appropriate District offices that describes the investigation and remedial actions taken.

9. All new or replacement below-grade sumps and below-grade tanks at the facility must have secondary impermeable containment with a leak detection system. The leak detection system must be inspected for fluids weekly. Results must be recorded and maintained at the facility for OCD review. If fluids are present in the leak detection system they must be sampled and an the analyses compared to the fluids in the sump/tank. A report including the analyses must be furnished to the OCD Santa Fe and appropriate District offices regarding the below grade sump/tank integrity.

10. All saddle tanks and drums located at the facility and containing materials other than fresh water must be placed on an impermeable pad and curb-type containment. The containers must be labeled as to contents and hazards.

11. Any design changes to the produced water receiving, treatment and evaporation area must submitted to the OCD Santa Fe office for approval.

12. The pond must have a minimum freeboard of one and a half (1½) feet. A device must be installed in the pond to accurately measure freeboard.

13. The pond may not contain any free oil.

14. Pond inspection and maintenance must be conducted on a daily basis or immediately following a consequential rainstorm or windstorm. The OCD Santa Fe and Aztec office must be notified within 24 hours if any defect is noted. If any defect is noted repairs must be made as soon as possible. If the defect will jeopardize the integrity of the pond, additional wastes may not be placed into the pond until repairs have been completed. Records of such inspections must be made available to the OCD upon request.

15. The pond leak detection system sumps shall be inspected daily. Results must be recorded and maintained at the facility for OCD review. If fluids are found in the sump, the following steps will be immediately undertaken:

    a. the operator will notify the Aztec office within 24 hours;

    b. the fluids will be sampled and analyzed and a comparison made to the fluids in the pond to determine the source; and

    c. the fluids will be immediately and continuously removed from the sump. Such fluids may be returned to the pond.

16. If a leak is determined to exist in the primary liner, the operator will immediately undertake the following measures under the direction of the OCD:

    a. introduction of fluids into the pond will cease;

    b. enhanced evaporation will commence, provided atmospheric conditions are such that the spray systems can be operated in accordance with the provisions of this permit;

    c. fluids will be removed from the pond using evaporation, injection and transportation to another authorized facility until the fluid level is below the location of the leak in the liner;

    d. the liner will be repaired and tested and the leak detection system will be completely drained before introduction of fluids into the pond resumes; and

    e. any additional measures required by the OCD will be completed.

17. Sludge thickness in the base of the pond must be measured annually. Any sludge build-up in the bottom of the pond in excess of twelve (12) inches must be removed and may be landfarmed at the on-site landfarm or disposed of at an OCD-approved facility.

18. To protect migratory birds, all tanks exceeding 16 feet in diameter and exposed pits, ponds or lagoons must be screened, netted, covered or otherwise rendered nonhazardous to migratory birds.

19. Liquid reduction technologies that may be used to eliminate pond waters include evaporation, enhanced evaporation and injection at the facility Class I disposal well.

20. Any time the spray system is used to enhance evaporation the following requirements will apply:

    a. all spray must remain within the confines of the lined portion of the pond;

    b. the spray system will be equipped with an automatic anemometer that will automatically deactivate the spray system when the winds, sustained or in gusts, would carry the spray outside the confines of the lined portion of the pond; and

    c the spray system may be operated only when an attendant is on duty.

21. Within 24 hours of detection or complaint of any odor generation that may impact public health or welfare, the facility must notify the OCD Aztec office and begin an investigation to determine the appropriate remedial actions. Actions may include chemical treatment and/or

and/or the immediate solidification and landfarming of material. A report regarding the odor generation and remedial actions taken must be filed with the OCD Santa Fe and Aztec offices.

H_2S PREVENTION & CONTINGENCY PLAN

1. In order to prevent development of harmful concentrations of H_2S, the following procedures must be followed:

   a. All incoming loads of produced water must be tested for hydrogen sulfide (H_2S) concentrations. Any loads with measurable H_2S concentrations will be treated in a closed system. The treatment reaction must be driven to completion to eliminate all measurable H_2S prior to disposal of the water into the pond.

   b. The aeration system must be operated to provide sufficient oxygen to the pond to maintain a residual oxygen concentration of 0.5 ppm one foot off the bottom of the pond. Tests must be conducted and records made and maintained of the dissolved oxygen levels in the pond according to the following procedures:

      i. tests must be conducted at the beginning and end of each day, or at least twice per 24-hour period;

      ii. the sample for each test must be taken one foot from the bottom of the pond;

      iii. the location of tests must vary around the pond; and

      iv. if any test shows a dissolved residual oxygen level of less than 0.5 ppm, immediate steps will be undertaken to oxygenate the pond and create a residual oxygen level of at least 0.5 ppm. Remedial measures may include adding chemicals or increasing aeration.

   c. Daily tests must be conducted and records made and maintained of the pH levels in the pond, and if the pH falls below 8.0 remedial steps must be taken immediately to raise the pH.

   d. Weekly tests must be conducted and records made and retained at the facility of the dissolved sulfide concentrations in the pond.

   e. At least 1000 gallons of an H_2S treatment chemical must be stored on-site and must be replaced periodically in accordance with manufacturer's stated shelf life. Expired H_2S treatment chemicals may be disposed of in the pond.

2. Tests of ambient H_2S levels must be conducted twice per day on the downwind side of the pond along the top of the berm. Test results must be recorded and retained. The wind speed and direction must be recorded in conjunction with each test.

   a. If an H_2S reading of 1.0 ppm or greater is obtained:

      i. a second reading must be taken on the downwind berm within one hour;

      ii. the dissolved oxygen and dissolved sulfide levels of the pond must be tested immediately and the need for immediate treatment determined; and

      iii. tests for H_2S levels must be made at the fence line down wind from the pond.

   b. If two (2) consecutive H_2S readings of 1.0 ppm or greater are obtained:

      i. the operator must notify the Aztec office of the OCD immediately;

      ii. the operator must commence hourly monitoring on a 24-hour basis;

      iii. the operator must lower the pond level so that the aeration system will circulate the entire pond; and

      iv. the operator must obtain daily analyses of dissolved sulfides in the pond.

   c. If an H_2S reading of 10.0 ppm or greater at the facility fence line is obtained:

      i. the operator must immediately notify the Aztec office of the OCD and the following public safety agencies:

         New Mexico State Police;
         San Juan County Sheriff; and
         San Juan County Fire Marshall.

      ii. the operator must notify all persons residing within one-half (½) mile of the fence line and assist public safety officials with evacuation as requested.

CONCRETE MIXING IMPOUNDMENT OPERATION

1. Only solids and sludge generated at the Key surface waste management facility may be allowed in the concrete mixing impoundment.

2. All solids and sludge must be placed in the concrete mixing impoundment for solidification prior to landfarm application.

3. Adequate freeboard must be maintained to prevent any overtopping or slop over of material. No free oil or liquids may be allowed in the concrete mixing impoundment. Any liquid that accumulates in the impoundment must be removed within 24 hours.

4. Liquid removed from the impoundment must be returned to the water treatment system.

5. OCD-approved remediated soil may be mixed with the tank bottoms and sludge to stabilize the material. Material received at the impoundment must be mixed and stabilized in a timely manner not to exceed 24 hours.

6. The concrete mixing impoundment and leak detection system must be inspected weekly for containment leaks and overall integrity. Records of such inspections must be made available to the OCD upon request.

LANDFARM CONSTRUCTION

1. Total landfarm acreage may not exceed 15 acres.

2. Contaminated soils may not be placed within one hundred (100) feet of the boundary of the facility.

3. Contaminated soils may not be placed within twenty (20) feet of any pipeline crossing the landfarm. In addition, no equipment may be operated within ten (10) feet of a pipeline. All pipelines crossing the facility must have surface markers identifying the location of the pipelines.

4. The portion of the facility containing contaminated soils must be bermed to prevent runoff and runon. A perimeter berm must be constructed and maintained such that it is capable of containing precipitation from a one-hundred year flood for the specific region.

LANDFARM OPERATION

1. Only soils generated exclusively from operations at the Key surface waste management facility may be landfarmed at the Key facility landfarm.

2. All contaminated soils received at the landfarm must be spread and disked within 72 hours of receipt.

3. Soils must be spread on the surface in lifts of six inches or less.

4. Soils must be disked a minimum of one time every two weeks (biweekly) to enhance biodegradation of contaminants.

5. Moisture may be added as necessary to enhance bioremediation and to control blowing dust. There may be no ponding, pooling or run-off of water allowed. Any ponding of precipitation must be removed within twenty-four (24) hours of discovery.

6. Successive lifts of contaminated soils may not be spread until a laboratory measurement of total petroleum hydrocarbons (TPH) in the previous lift is less than 100 parts per million (ppm), the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations must be maintained at the facility. Authorization from the OCD must be obtained prior to application of successive lifts and/or removal of the remediated soils.

7. Enhanced bio-remediation through the application of microbes (bugs) and/or fertilizers requires prior approval from the OCD. Requests for application of microbes or fertilizers must include the location of the area designated for the program, the composition of additives, and the method, amount and frequency of application.

8. Any design changes to the landfarm facility must be submitted to the OCD Santa Fe office for approval and a copy must be sent to the Aztec District office.

9. Landfarm inspection and maintenance must be conducted on at least a biweekly basis and immediately following each consequential rainstorm or windstorm. The OCD Santa Fe and Aztec offices must be notified within 24 hours if any defect is noted. Repairs must be made as soon as possible. If the defect will jeopardize the integrity of the landfarm, additional wastes may not be placed into the landfarm until repairs have been completed.

TREATMENT ZONE MONITORING

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

2. The soil samples must be analyzed using EPA-approved methods for total petroleum hydrocarbons (TPH) and volatile aromatic organics (BTEX) quarterly and for major cations/anions and Water Quality Control Commission (WQCC) metals annually.

3. After soil samples are obtained, the boreholes must be filled with an impermeable material such as cement or bentonite.

REPORTING AND RECORD KEEPING

1. Analytical results from the treatment zone monitoring must be submitted to the OCD Santa Fe office **within thirty (30) days** of receipt from the laboratory.

2. Key must notify the **OCD Santa Fe and Aztec offices within 24 hours** of any fire, break, leak, spill, blowout or any other circumstance that could constitute a hazard or contamination in accordance with OCD Rule 116.

3. Key must notify the **OCD Aztec office within 24 hours** of any odor detection or complaint. A report regarding the odor generation and remedial actions taken must be filed with the OCD Santa Fe and Aztec offices.

4. Records of H_2S and wind direction, pH, dissolved oxygen, and dissolved sulfide measurements must be kept and maintained for OCD review.

5. Records of landfarm inspection and maintenance must be kept and maintained for OCD review.

6. Records of inspection and maintenance of the produced water receiving, treatment, and evaporation area and concrete mixing impoundment must be kept and maintained for OCD review.

7. Comprehensive records of all material disposed of at the facility must be maintained at the facility. The records for each load will include: 1) generator; 2) origin; 3) date received; 4) quantity; 5) certification of waste status as exempt or non-exempt with any necessary supporting documentation to certify non-hazardous status for non-exempt waste; 6) NORM status declaration; 7) transporter; 8) exact cell location; and 9) any addition of microbes, moisture, fertilizers, *etc.*

8. Analytical results of remediated soils and requests to close cells, apply successive lifts or remove remediated material must be submitted to the OCD Santa Fe office with a copy to the Aztec District office.

9. The OCD must be notified prior to the installation of any pipelines or wells or other construction within the boundaries of the facility.

WASTE ACCEPTANCE CRITERIA

1. The facility is authorized to accept only:

   a. Oilfield wastes that are exempt from RCRA Subtitle C regulations and that do not contain Naturally Occurring Radioactive Material regulated pursuant to 20 NMAC 3.1 Subpart 1403 (NORM). All loads of these wastes other than wastes returned from the well bore in the normal course of well operations, such as produced water and spent treating fluids, received at the facility shall be accompanied by a "Generator Certificate of Waste Status" signed by the generator.

   b. "Non-hazardous" non-exempt oilfield wastes that do not contain NORM. These wastes may be accepted on a case-by-case basis after a hazardous waste determination is made. Samples, if required, must be obtained from the wastes prior to removal from the generator's facility and without dilution in accordance with EPA SW-846 sampling procedures. All "non-hazardous" non-exempt wastes received at the facility must be accompanied by:

      i. An approved OCD Form C-138 "Request For Approval To Accept Solid Waste."

      ii. A "Generator Certificate of Waste Status" signed by the generator.

      iii. A verification of waste status issued by the appropriate agency, for wastes generated outside OCD jurisdiction. The agency verification is based on specific information on the subject waste submitted by the generator and demonstrating the exempt or non-hazardous classification of the waste.

   c. Non-oilfield wastes that are non-hazardous if ordered by the Department of Public Safety in a public health emergency. OCD approval must be obtained prior to accepting the wastes.

2. At no time may any OCD-permitted surface waste management facility accept wastes that are hazardous by either listing or characteristic testing.

3. No free liquids or soils with free liquids may be accepted into the landfarm portion of the facility.

4. Materials that may be accepted into the landfarm facility must pass a paint filter test by EPA Method 9095A prior to application.

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

FINANCIAL ASSURANCE

1. Financial assurance in the amount of **$176,200** in the form of a surety or cash bond or a letter of credit, which is approved by the Division, is required from Key Four Corners, Inc. for the commercial surface waste management facility.

   By March 18, 2000 Key Four Corners, Inc. must submit 25% of the financial assurance in the amount of **$ 44,050.**

   By March 18, 2001 Key Four Corners, Inc. must submit 50% of the financial assurance in the amount of **$88,100.**

   By March 18, 2002 Key Four Corners, Inc. must submit 75% of the financial assurance in the amount of **$132,150.**

   By March 18, 2003 Key Four Corners, Inc. must submit 100% of the financial assurance in the amount of **$176,200.**

2. The facility is subject to periodic inspections by the OCD. The conditions of this permit and the facility will be reviewed no later than five (5) years from the date of this approval. In addition, the closure cost estimate will be reviewed according to prices and remedial work estimates at the time of review. The financial assurance may be adjusted to incorporate any closure cost changes.

CLOSURE

1. The OCD Santa Fe and Aztec offices must be notified when operation of the facility is to be discontinued for a period in excess of six (6) months or when the facility is to be dismantled. Within six (6) months after discontinuing use or within 30 days of deciding to dismantle the facility a closure plan must be submitted to the OCD Santa Fe office for approval. The operator must complete cleanup of constructed facilities and restoration of the facility site within six (6) months of receiving the closure plan approval, unless an extension of time is granted by the Director.

2. The closure plan to be submitted must include the following procedures:

   a. No new material may be accepted.

   b. Existing landfarm soils must be remediated until they meet the OCD standards in effect at the time of closure.

   c. The treatment zone soils within each 5-acre cell must be sampled at two (2) to three (3) feet below the native ground surface and must be analyzed for total petroleum hydrocarbons (TPH), volatile aromatic organics (BTEX), major cations/anions and Water Quality Control Commission (WQCC) metals.

   d. Contaminated soils exceeding OCD closure standards for the site must be removed or remediated.

   e. The facility must be contoured, seeded with native grasses and allowed to return to its natural state. If the landowner desires to keep existing structures, berms, or fences for future alternative uses the structures, berms, or fences may be left in place.

   f. Closure is subject to OCD requirements in effect at the time of closure, and any other applicable local, state and/or federal regulations.

CERTIFICATION

Key Four Corners, Inc., by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Key Four Corners, Inc. further acknowledges that these conditions and requirements of this permit may be changed administratively by the Division for good cause shown as necessary to protect fresh water, public health and the environment.

Accepted:

KEY FOUR CORNERS, INC.

Signature Hal Stone Title V.P. Trucking Division Date 3-17-00

Roger Anderson

Submit 4 Copies to Appropriate District Office

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

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

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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-134
Aug. 1, 1989

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

RECEIVED
OCT 15 1996
OIL CON. DIV.
DIST. 3

Permit No. _____
(For Division Use Only)

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

Operator Name: SUNCO TRUCKING COMPANY

Operator Address: P. O. BOX 443 FARMINGTON, NM 87499

Lease or Facility Name SUNCO TRUCKING WATER DISPOSAL CO. Location UNIT E 2 29-N 12-W
Ut. Ltr. Sec. Twp. Rge

Size of pit or tank: EVAPORATION POND 300' X 300'

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

_____ The pit or tank is not hazardous to migratory waterfowl. Describe completely the reason pit is non-hazardous.

THE NETTED SKIMMER POND FEEDS THE EVAP. POND AND ALL OIL IS CONTAINED IN THE SKIMMER POND AND IS THE REASON FOR ITS DESIGN, TO ENSURE THAT NO OIL REACHES THE EVAP. POND.

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

ON SITE 24 HRS A DAY IS A TRAILER MOUNTED VACUMN TANKER WITH ENOUGH HOSE TO REMOVE ANY OIL. THE RESPONSE TIME WOULD BE IMMEDIATE.

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: THE OIL THAT DOES REACH THE SKIMMER POND IS REMOVED OFTEN FROM ITS SURFACE TO ENSURE NO OIL REACHES THE EVAP. POND.

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

Signature [signature] Title DISPOSAL MGR. Date 10-15-96

Printed Name MICHAEL TALOVICH Telephone No. (505) 334-6186

FOR OIL CONSERVATION DIVISION USE

Date Facility Inspected 10/17/96

Inspected by [signature]

Approved by Denny G. Foust

Title Deputy Oil and Gas Inspector

Date 10/21/96

Submit 4 Copies
to Appropriate
District Office

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

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

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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-134
Aug. 1, 1989

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

RECEIVED
OCT 15 1996
OIL CON. DIV.
DIST. 3

Permit No. _____
(For Division Use Only)

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: SUNCO TRUCKING COMPANY

Operator Address: P. O. BOX 443 FARMINGTON, NM 87499

Lease or Facility Name SUNCO TRUCKING WATER DISPOSAL CO. Location UNIT E 2 29-N 12-W
Ut. Ltr. Sec. Twp. Rge

Size of pit or tank: 3 - 30' X 10 X 8' MUD PITS

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

_____ The pit or tank is not hazardous to migratory waterfowl. Describe completely the reason pit is non-hazardous.

ON TOP OF THE 3-PITS IS FLOOR GRATING THAT COVERS HALF THE SURFACE AREA. THE TOPS OF THESE PITS ARE CONSANTLY MANNED BY AT LEAST ONE ATTENDENT.

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

ANY OIL THAT IS ON THE SURFACES ARE OFTEN SKIMMED AND SEPARATED INTO COMPARTMENTS THEN PROCESSED INTO A CLOSED OIL TANK.

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: CONSTANT SKIMMING OF THESE AREAS IS PART OF OUR UNLOADING OPERATIONS. OIL ON THE SURFACE OF THESE PITS IS REMOVED AS SOON AS POSSIBLE.

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

Signature [signature] Title DISPOSAL MGR Date 10-15-96

Printed Name MICHAEL TALOVICH Telephone No. (505) 334-6186

FOR OIL CONSERVATION DIVISION USE

Date Facility Inspected 10/17/96

Inspected by DSF

Approved by Denny G. Foust

Title Deputy Oil and Gas Inspector

Date 10/21/96

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATIION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 11604
ORDER NO. R-10738

APPLICATION OF THE NEW MEXICO OIL CONSERVATION DIVISION (OCD) FOR A SHOW CAUSE HEARING REQUIRING SUNCO TRUCKING WATER DISPOSAL COMPANY TO APPEAR AND SHOW CAUSE WHY IT SHOULD NOT BE FINED FOR VIOLATIONS OF OCD RULE 711, SAN JUAN COUNTY NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on January 9, 1997, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 17th day of January, 1997, the Division Director, having considered the record and the recommendations of the Examiner, and being fully advised in the premises.

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) Sunco Trucking Water Disposal Company ("Sunco") is the operator of the Sunco Trucking Commercial Surface Disposal Facility (the "Facility") located in the SW/4 NW/4, Section 2, Township 29 North, Range 12 West, San Juan County, New Mexico.

(3) The Facility was permitted by the Oil Conservation Commission under Division Rule 711 by Order No. R-9485-A.

(4) On March 3, 1993, Sunco was issued a Notice of Violation (NOV) from the Division for the disposal of oil in the area authorized for disposal of shale solids only under its Rule permit, a violation of Division Rule 711 and Sunco's Rule 711 permit.

(5) On February 2, 1996, Sunco was issued a second NOV for accepting non-exempt waste for disposal, again a violation of Rule 711 and Sunco's permit. Sunco was informed in that NOV that future violations would subject Sunco to the penalties provided in the New Mexico Oil and Gas Act (Section 70-2-31) of $1,000 per day.

(6) On May 1, 1996, Sunco was issued a third NOV for failure to take Hydrogen Sulfide measurements for the three years preceding April 10, 1996, as required by Sunco's permit. In that NOV, the Division assessed a fine of $5,000.

(7) On May 20, 1996, Sunco requested a hearing on the NOV and the imposition of a fine. The hearing has been continued a number of times since then by Sunco..

(8) Sunco admits that the violations occurred resulting in all three NOV's. Sunco requests that, in lieu of the $5,000 fine, it be allowed to perform an environmental education program which Sunco estimates will cost Sunco in excess of $5,000.

IT IS THEREFORE ORDERED THAT:

(1) Sunco violated Rule 711 and its Rule 711 permit conditions on the three occasions giving rise to the March 3, 1993; February 2, 1996; and May 1, 1996 NOV's and should be assessed a fine of $5,000.

(2) In lieu of the $5,000 fine, Sunco may perform a supplemental environmental program (SEP) approved by the Division which will cost Sunco in excess of $5,000, exclusive of any financial benefit to Sunco, and will, at a minimum, consist of the following:

a. Sponsoring or conducting a waste education program for the oil and gas industry operators identifying the types and classifications of all wastes generated in the oil and gas industry, proper disposal methods, authorized disposal locations, and waste minimization techniques.

b. Sponsoring or conducting a waste education program in the appropriate classes within the local public school systems.

(3) If Sunco fails to obtain Division approval of its proposed SEP by January 31, 1997, Sunco shall pay the $5,000 fine by February 28, 1997, or if Sunco fails to perform the program by December 31, 1997, Sunco shall pay the $5,000 fine by December 31, 1997.

(4) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

SEAL

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

APPLICATION OF SUNCO TRUCKING WATER DISPOSAL COMPANY FOR APPROVAL TO MODIFY ITS RULE 711-PERMITTED SURFACE WASTE DISPOSAL FACILITY PERMIT TO INCLUDE THE CONSTRUCTION AND OPERATION OF A LANDFARM FOR THE REMEDIATION OF HYDROCARBON CONTAMINATED SOILS, SAN JUAN COUNTY NEW MEXICO

CASE NO. 11518
Order No. R-10756

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 10:00 a.m. on November 19, 1996, at Farmington, New Mexico, before Examiner Rand Carroll.

NOW, on this 27th day of January, 1997, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises.

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) Sunco Trucking Water Disposal Company ("Sunco") is the operator of the Sunco Trucking Commercial Surface Disposal Facility (the "Facility") located in the SW/4 NW/4, Section 2, Township 29 North, Range 12 West, San Juan County, New Mexico. The Facility is located approximately 7 miles east-northeast of Farmington, New Mexico.

(3) The Facility was permitted by the Oil Conservation Commission in 1991 pursuant to Division Rule 711 by Order No. R-9485-A.

(4) Sunco with this application requests approval to construct and operate a 5-acre landfarm using an enhanced bioremediation process within the 40-acre Facility which is currently permitted under Rule 711 to dispose of only produced waters. Sunco represents that the landfarm will receive contaminated soils and sludges from only the produced water disposal operation on the Facility, which are classified as "non-hazardous" oil field waste by RCRA Subtitle C exemption or by characteristic testing, to be spread on the ground in six inch lifts or less and periodically stirred to enhance the biodegradation of the contaminants.

(5) The New Mexico Oil and Gas Act, Secs. 70-2-12.B(21) and (22), NMSA (1978), authorizes the Division to regulate the disposition of non-domestic wastes resulting from various oil and gas activities and operations and to protect public health and the environment.

(6) Pursuant to that authority the Division has adopted a rule governing the operation of commercial surface disposal facilities (Rule 711, as amended) including both the existing Facility as well as the proposed landfarm within the Facility. Guidelines for Permit Application, Design, and Operation of Centralized & Commercial Landfarms have also been published by the OCD in July 1993.

(7) There were four protests filed in response to Sunco's application: (1) Gary L. Horner on behalf of Doris J. Horner (Doris J. Horner later conveyed her interest to Gary L. Horner so at the time of hearing Gary J. Horner was representing himself) who owns a strip of land immediately west of the Facility ("Horner"); (2) Carroll Vaughn of Bloomfield, New Mexico; (3) Dewey K. Foutz who owns approximately 110 acres of land approximately one-half mile west of the landfarm; and (4) Valerie Hatch who also owns about 110 acres one-half mile west of the landfarm.

(8) At the hearing held on November 19, 1996, only Gary Horner of the four protestors listed above entered an appearance and presented evidence and asked questions of Sunco's witnesses.. Five members of the Cedar Hills Clean Water Coalition (CHCWC) attended the hearing but did not enter appearances. Two of the members asked questions of witnesses but none protested the granting of the subject application.

(9) By "Letter of Protest and Comments" dated January 30, 1996, sent to and received by the OCD, Horner protested the granting of the subject landfarm application. Horner made the following comments in said Protest: (i) the landfarm location is inappropriate considering the residential development in the area; (ii) there have been problems with similar type facilities; (iii) the representations of Sunco and its agents and experts are not reliable based upon past experience; (iv) Sunco has ignored OCD permit conditions regarding the present Facility; and (v) the OCD, although given the regulatory authority to protect public health and the environment, is not doing its job in regulating the industry and should be considering the appropriateness of the landfarm and Facility for the area.

(10) In summary at the end of his Protest, Horner states that the landfarm would harm the value of Horner's property, the environment, the health, safety and welfare of area residents and would unreasonably restrict Horner's use and enjoyment of his property. Horner requests that the application (i) be denied as proposed, (ii) be denied since it may be amended to change the location, and (iii) requests that the existing Facility be removed.

(11) Protestor Vaughn in his protest letter commented that the landfarm was too close to residential development and that he thought it should be located in more remote areas near the source of the contaminated soil. Protestors Hatch and Foutz sent identical letters stating that use and value of their land and other area properties would be adversely affected by the landfarm and that the OCD should consider the adverse effects on the public health and environment as well as area properties prior to granting a permit. The concerns stated in these letters were: (i) protection of area groundwater, (ii) the potential expansion of operations being conducted at the Facility after the landfarm is permitted, (iii) adequate financial assurance (bonding) for corrective actions, and (iv) why a Discharge Plan pursuant to Water Quality Control Commission (WQCC) regulations is not required.

(12) There is significant residential development, both current and planned, in the area. This area is locally known as Crouch Mesa and is located on a high point roughly in the middle of the triangle formed by Farmington, Bloomfield and Aztec.

(13) There is a number of industrial uses of land on Crouch Mesa in the immediate vicinity of the Facility including landfarms and other waste disposal facilities and storage yards as well as the Facility itself.

(14) The OCD is charged with the duty of protecting public health and the environment from the disposition of nondomestic wastes resulting from oil and gas activities. The OCD is not charged with the duty: (i) of protecting the value of land adjacent to oil and gas activities arising from the oil and gas activities, or (ii) of determining which uses a landowner can make of his land, other than protecting the public health and environment from oil and gas activities on such land. Local governments through the use of zoning laws can restrict certain activities to areas deemed appropriate for such uses. An adjacent landowner may also pursue an action against adjacent offending uses based upon a "nuisance" theory.

(15) No evidence was introduced to show problems experienced with OCD Rule 711-permitted landfarms. Facilities cited in Protestor Horner's protest all were produced water facilities and not landfarms.

(16) Sunco has been cited by the OCD for violations of its Rule 711 permit for the Facility. Upon being advised of these violations, Sunco has taken action to correct, and has corrected, the problems giving rise to the cited violations.

(17) Protection of area groundwater will be accomplished through periodic testing and monitoring as provided in the permit conditions.

(18) Protestors did not introduce any direct evidence to support the position that the landfarm could not be permitted without creating an unreasonable risk of contaminating fresh water supplies or posing a danger to public health or the environment.

(19) A WQCC discharge plan is not required for the proposed landfarm and/or Facility because wastes resulting from oil and gas exploration and production activities are explicitly exempted from WQCC jurisdiction. OCD Rule 711 operates as the equivalent of a WQCC discharge plan.

(20) Currently, the wastes Sunco proposes to remediate/dispose of at its landfarm are being trucked across County Road 3500 and remediated/disposed of at the Tierra Environmental Corporation landfarm, which is permitted under OCD Rule 711, which is located within one-half mile of the proposed Sunco landfarm and much closer to residential development than the proposed Sunco landfarm.

(21) The OCD shall have the authority to modify the conditions of this permit should new information or technological improvements indicate that changes would improve the operation of the Facility and better protect the public health and the environment.

(22) Approval of the application does not relieve Sunco of liability should operation of the landfarm result in pollution of surface or groundwater or the environment actionable under other laws and/or regulations.

(23) All modifications and alterations to approved landfarming methods must receive prior OCD approval. Sunco is required to notify the OCD of any expansion or process modification and to file the appropriate documents with the OCD.

(24) The current bond for the closure of the Facility in the amount of $25,000 will cover both facilities because the landfarm is wholly contained within an OCD permitted and bonded facility. The bonding level will be re-evaluated within one calendar year to adjust the amount to the estimated cost of closure pursuant to OCD Rule 711.

(25) With no evidence being introduced to indicate otherwise, the conditions imposed on the Sunco landfarm should be the same as those imposed on the Tierra landfarm, which was permitted under Rule 711 and is located within one-half mile of the Sunco landfarm. The Tierra landfarm is considerably larger (54 acres currently) and closer to residential development than the Sunco landfarm. No evidence was introduced to indicate that the Tierra landfarm was receiving complaints about its operations or that it was being operated in a manner causing harm to the public health or the environment.

(26) The 5 acres comprising the landfarm site at the Facility are located considerably more than 100 feet from, and are well within, the boundary line and fence line of the property owned by Sunco and/or Sunco's owner, George Coleman.

(27) Approval of this application will allow Sunco to dispose of the subject waste in the same manner as it is currently being disposed of, but will allow Sunco to do it itself rather than disposing of it at the Tierra facility.

EXHIBIT A
CASE NO. 11518
ORDER NO. R-10756

LANDFARM OPERATION

1. Only soils generated exclusively from operations at the Sunco disposal facility will be allowed for landfarming.

2. All contaminated soils received at the landfarm will be spread and disked within 72 hours of receipt.

3. Soils will be spread on the surface in six inch lifts or less.

4. Soils will be tilled a minimum of one time every two weeks (bi-weekly) to enhance biodegradation of contaminates. Methods suggested by the U.S. Soil Conservation Service should be utilized in the tilling of the soils which will reduce to the most possible degree the occurrence of natural wind erosion.

5. Moisture shall be added to all contaminated soils received at the facility. The soils within each individual cell will be characterized using the Soil Survey of San Juan County, New Mexico, prepared by the United States Department of Agriculture, Soil Conservation Service, for the purpose of pre-determining amounts of moisture to be added to those particular soils, to (1) prevent emissions from volatile organic compounds, (2) enhance natural and artificial biodegradation, and (3) suppress erosion of contaminated soils from natural wind action.

6. There will be no ponding, pooling or run-off of water allowed. Any ponding of precipitation will be removed within seventy-two (72) hours of discovery.

7. Successive lifts of contaminated soils will not be spread until a laboratory measurement of Total Petroleum Hydrocarbons (TPH) in the previous lift is less than 100 parts per million (ppm), and the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and the benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations will be maintained at the facility. Authorization from the OCD will be obtained prior to application of successive lifts.

8. Only solids which are non-hazardous by RCRA Subtitle C exemption or by characteristic testing will be accepted at the landfarm. Solids from operations not currently exempt under RCRA Subtitle C or mixed exempt/non-exempt solids will be tested for appropriate hazardous constituents. Test results must be submitted to the OCD along with a request to receive the non-exempt solids, and a written OCD approval (case specific) must be obtained prior to disposal. Any non-oilfield wastes which are RCRA Subtitle C exempt or are non-hazardous by characteristic testing will only be accepted on a case-by-case basis and with prior OCD approval.

(28) Approval of this application, with the conditions imposed, should protect the public health and the environment.

(29) All conditions of the Rule 711 permit granted to the Facility by OCD Order No. R-9485-A shall remain in effect.

IT IS THEREFORE ORDERED THAT:

(1) The application of Sunco Trucking Water Disposal Company to construct and operate a landfarm within the site of its existing Facility in the SW/4 NW/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico for the purpose of treating and remediating hydrocarbon-contaminated soils, which are exempt from RCRA Subtitle C regulations, using an enhanced bioremediation process, is hereby approved subject to conditions.

(2) The permit conditions contained in Exhibit "A" attached hereto shall be the permit conditions for the landfarm within the Facility

(3) The Director shall have the authority to revise the permit conditions at any time he determines such changes are in the interest of protecting public health and the environment.

(4) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

S E A L

9. Comprehensive records of all material disposed of at the landfarm will be maintained at the facility. The records for each load will include: 1) the origin, 2) analysis for hazardous constituents if required, 3) transporter, and 4) exact cell location and method of remediation.

10. Bio-remediation through the application of microbes will only be permitted in the designated 5-acre area. The microbes will be mixed with water and applied to the contaminated soils. There will be no ponding, pooling or run-off of water allowed during the application phase or afterwards. Any change in the composition (i.e. chemical additives), process or location of the bio-remediation program must receive prior OCD approval.

11. No free liquids or soils with free liquids will be accepted at the landfarm.

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

13. The facility will have a sign at the entrance. The sign will be legible from at least fifty (50) feet and contain the following information: (a) name of the facility, (b) location by section, township and range, and (c) emergency phone number.

14. An adequate berm will be constructed and maintained to prevent run-off and run-on for that portion of the facility containing contaminated soils.

TREATMENT ZONE MONITORING

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

2. The soil samples will be analyzed for total petroleum hydrocarbons (TPH) using an OCD-approved field method. If TPH is detected, then a laboratory analysis will be conducted for Volatile Aromatic Organics (BTEX) using approved EPA methods. Immediate remedial measures will be taken and no additional contaminated soils will be placed in the cell until testing indicates that the TPH is below 100 ppm, BTEX is below 50 ppm and benzene, if any, is below 10 ppm.

3. After obtaining the soil samples the boreholes will be filled with an impermeable material such as bentonite cement.

4. Any cells that have moisture added to them will be analyzed on a quarterly basis following the requirements above.

5. Annually, samples obtained from the treatment zones will be collected and a laboratory analysis conducted using approved EPA methods in accordance with the procedures outlined in item 1. The samples will be analyzed for TPH, BTEX, general chemistry, and heavy metals.

6. One (1) background soil sample will be taken from the center portion of the landfarm two (2) feet below the native ground surface prior to operation. The sample will be analyzed for TPH, BTEX, general chemistry and heavy metals using approved EPA methods and for TPH using an OCD-approved field method.

OTHER MONITORING

1. An OCD-approved device capable of measuring emissions of volatile organic compunds (VOC) will be kept at the facility at all times. A measurement of VOCs will be taken a minimum of four (4) times per working day, which will include one measurement upon opening and one measurement upon closing of the facility. Monitoring of VOCs will be recorded and include the date, time, location, and level measured. Records will be retained at the facility and made available for OCD inspection.

2. A particulate collector or similar device shall be kept in place and operational at the prevailing downwind side of the landfarm. The collector shall be examined daily and records will include time, date, location and level of particulate measured. Records will be maintained at the facility and made available for OCD inspection.

REPORTING

1. Analytical results from the treatment zone monitoring will be submitted to the OCD in Santa Fe within thirty (30) days in written form from Sunco with appropriate laboratory analysis included as may be required. Reports will be filed for both the field and laboratory analyses.

2. The OCD will be notified of any break, spill, blow out, or fire or any other circumstance that could constitute a hazard or contamination in accordance with OCD Rule 116.

TRANSFERABILITY

1. Authority for operation of the landfarm facility shall be transferable only upon written application and approval by the Division Director.

CLOSURE

1. When the landfarm is to be closed no new material will be accepted. Existing soils will be remediated until they meet the OCD standards in effect at the time of closure. The area will then be reseeded with natural grasses and allowed to return to its natural state. Closure will be pursuant to all OCD requirements in effect at the time of closure.

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

August 26, 1996

CERTIFIED MAIL
RETURN RECEIPT NO. P-288-258-829

Mr. George Coleman
Coleman Oil and Gas, Inc.
c/o Sunco Trucking Water Disposal Company
P.O. Box 443
Farmington, New Mexico 87499

RE: Permit Modification
Sunco Trucking Water Disposal Company
Unit E, Sec. 2, Twn. 29N, Rng. 12W
San Juan County, New Mexico

Dear Mr. Coleman:

The disposal permit of Sunco Trucking Water Disposal Company (Sunco) surface waste management facility located in Unit Letter E, Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico, **is hereby modified** under the conditions contained in the enclosed attachment. The permit is being modified by the New Mexico Oil Conservation Division (OCD) pursuant to OCD Orders R-9485, R-9485-A, and OCD Rule 711. The modification will allow Sunco to accept non-exempt non-hazardous waste for disposal in the permitted Class I disposal well (UIC-CLI-005). Enclosed are two copies of the conditions of approval. **Please sign and return one copy to the OCD Santa Fe Office within five working days of receipt of this letter.**

Please be advised that approval of this plan does not relieve Sunco of liability should operations result in pollution of surface or ground waters, or the environment.

If you have any questions, please call Mark Ashley at (505) 827-7155.

Sincerely,

William J. LeMay
Director

WJL/mwa
Attachment
xc: OCD Aztec Office

ATTACHMENT TO DISPOSAL PERMIT MODIFICATION
SUNCO TRUCKING WATER DISPOSAL COMPANY
SURFACE WASTE MANAGEMENT FACILITY

FACILITY OPERATION

1. Sunco Commitments: Sunco will abide by all conditions of OCD Orders R-9485, R-9485-A, OCD Rule 711, and this modification.

2. Disposal: Disposal will occur only when an attendant is present. The facility will be secured when no attendant is present.

3. Transportation: No produced water will be received at the facility unless the transporter has a valid Form C-133 (Authorization to Move Produced Water) on file with the Division

4. Wastes Accepted for Disposal: Fluids accepted for disposal will be limited to oilfield waste fluids exempt from Resource Conservation and Recovery Act (RCRA) Subtitle C regulations, and oilfield waste fluids non-exempt and non-hazardous by characteristic testing. Fluids shall not be accepted if introduction of the fluid will cause the pond freeboard to be less than that approved. The following documentation for accepting wastes will be required:

   A. Exempt Oilfield Wastes: As a condition of acceptance of the materials shipped, a generator, or his authorized agent, shall sign a certificate which represents and warrants that the wastes are: generated from oil and gas exploration and production operations; exempt from RCRA Subtitle C regulations; and not mixed with non-exempt wastes. The permittee shall have the option to accept on monthly, weekly, or per load basis a load certificate in a form of its choice. While the acceptance of such exempt oilfield activities does not require prior approval of the Division, both the generator and the permittee shall maintain and make said certificates available for inspection by the Division for compliance and enforcement purposes.

   B. Non-exempt, Non-hazardous Wastes: Prior to acceptance, a "Request For Approval To Accept Solid Waste", New Mexico Oil Conservation Division Form C-138, accompanied by acceptable documentation to determine that the waste is non-hazardous shall be submitted to the appropriate District office. Acceptance will be on a case-by-case basis after approval from the Division's Santa Fe office.

C. Non-Oilfield Wastes: Non-oilfield wastes may be accepted in an emergency if ordered by the Department of Public Safety. Prior to acceptance, a "Request For Approval To Accept Solid Waste", New Mexico Oil Conservation Division Form C-138, accompanied by the Department of Public Safety order will be submitted to the appropriate District office and the Division's Santa Fe office.

5. H_2S in Fluids: All fluids accepted for disposal shall be tested for hydrogen sulfide concentrations. All fluids with measurable hydrogen sulfide concentrations shall be treated in a closed system prior to introduction of liquids to any open tank or pond. The treatment reaction shall be driven to completion to eliminate all measurable hydrogen sulfide.

6. Oil in Ponds: No oil shall be allowed in the pond(s).

7. Training: Operating personnel shall be trained in the operation, calibration, maintenance and safety requirements of all test equipment used at the facility.

8. Treating Chemicals: At least 1000 gallons of a treatment chemical shall be stored on site and shall not be retained for a period in excess of the manufacturer's stated shelf life. Expired chemicals may be disposed of in the pond.

9. Accumulated Sludge: Prior to disposal, any accumulated sludge generated in the disposal facility shall be analyzed for hazardous constituents prior to disposal pursuant to requirements determined by the OCD.

10. Inoperative Systems: If any of the required systems become inoperative, the Aztec district office of the Division will be notified immediately.

11. Record Keeping: Comprehensive records of all materials received at the facility will be maintained at the facility for the life of the facility. The records for each load will include: a) the origin, b) date received, c) quantity, d) exempt or non-exempt status and analyses for hazardous constituents if required, and e) transporter. Records will be maintained at the facility for the life of the facility.

12. Drum Storage: All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums should be stored on their sides with the bungs in place and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets must also be stored on an impermeable pad with curbing.

13. Process Areas: All process and maintenance areas which show evidence that leaks and spills are reaching the ground surface must be either paved and curbed or have some type of spill collection device incorporated into the design.

14. Above Ground Tanks: All above ground tanks which contain fluids other than fresh water must be bermed to contain a volume of one-third more than the total volume of the largest tank or of all interconnected tanks. All new facilities associated with the well or modifications to existing facilities associated with the well must place the tank on an impermeable type pad within the berm.

15. Above Ground Saddle Tanks: Above ground saddle tanks must have impermeable pad and curb type containment unless they contain fresh water or fluids that are gases at atmospheric temperature and pressure.

16. Labeling: All tanks, drum, and other containers should be clearly labeled to identify their contents and other emergency information necessary if the tank were to rupture, spill, or ignite.

17. Below Grade Tanks/Sumps: All below grade tanks, sumps, and pits must be approved by the OCD prior to installation or upon modification and must incorporate secondary containment and leak-detection into the design. All pre-existing sumps and below-grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing to 3 pounds per square inch above normal operating pressure and/or visual inspection of cleaned out tanks and/or sumps.

18. Underground Process/Wastewater Lines: All underground process/wastewater, and brine transfer pipelines must be tested to demonstrate their mechanical integrity at present and then every 5 years there after. Permittees may propose various methods for testing such as pressure testing to 3 pounds per square inch above normal operating pressure or other means acceptable to the OCD.

19. Housekeeping: All systems designed for spill collection/prevention, and leak detection will be inspected daily to ensure proper operation and to prevent overtopping or system failure.

20. Spill Reporting: All spills/releases shall be reported pursuant to OCD Rule 116. and WQCC 1203. to the OCD Aztec District Office.

21. Transfer of Permit: The OCD will be notified prior to any transfer of ownership, control, or possession of the well. A written commitment to comply with the terms and conditions of the previously approved discharge plan and a bond must be submitted by the purchaser and approved by the OCD prior to transfer.

22. OCD Inspections: Additional requirements may be placed on the facilities based upon results from OCD inspections.

MONITORING REQUIREMENTS

1. H_2S Prevention and Contingency Plan

   A. In order to prevent development of harmful concentrations of hydrogen sulfide, the following procedures shall be followed:

      1. Daily tests shall be conducted and records made and maintained of the pH in each pond, and if the pH falls below 7.0, remedial steps shall be taken immediately to raise the pH.

      2. Weekly tests shall be conducted and records made and retained at the facility of the dissolved sulfide concentrations in the ponds.

      3. Tests shall be conducted, and records made and retained at the facility of such tests, to determine the dissolved oxygen levels in each pond:

         a. Tests shall be conducted at the beginning and end of each day, or at least twice per 24-hour period.

         b. The sample for each test shall be taken one foot from the bottom of the pond.

         c. The location of each test shall vary around the pond.

         d. If any test shows a dissolved residual oxygen level of less than 0.5 ppm, immediate steps shall be undertaken to raise the oxygen level to at least 0.5 ppm, which measures may include adding bleach or increased aeration.

   B. In order to prevent any harm by hydrogen sulfide gas, Tests of ambient H_2S levels shall be conducted, and records made and retained. Such tests shall be made at varying locations around the berm of the pond and shall be conducted twice per day. The wind speed and direction shall be recorded in conjunction with each test.

      1. If an H_2S reading of 0.1 ppm or greater is obtained:

a. A second reading shall be taken on the downwind berm within one hour;

b. The dissolved oxygen and dissolved sulfide levels of the pond shall be tested immediately and the need for immediate treatment determined;

c. Tests for H_2S levels shall be made at the fence line, downwind from the problem pond.

2. If two consecutive H_2S readings of 0.1 ppm or greater are obtained:

a. The operator shall notify the Aztec office of the OCD immediately;

b. The operator shall commence hourly monitoring on a 24 hour basis;

c. The operator will obtain daily analysis of dissolved sulfides in the pond.

3. If an H_2S reading of 10.0 ppm or greater at the facility fence line is obtained:

a. The operator will immediately notify the OCD and the following public safety agencies:

State Police
County Sheriff
County Fire Marshall;

b. The operator will initiate notification of all persons residing within one-half (½) mile of the fence line and assist public safety officials with evacuation as requested.

2. Spill/Leak Prevention and Reporting Procedures (Contingency Plan)

A. Leak detection system sumps shall be inspected daily, and records of such inspections shall be made and retained and kept on file at the facility for OCD inspection at any time. If fluids are found in the sump the following steps will be immediately undertaken:

1. The operator shall notify the Aztec District office within 24 hours;

2. The fluids will be sampled and analyzed to determine the source; and

3. The fluids will be immediately and continuously removed from the sump. Such fluids may be returned to the pond.

B. If a leak is determined to exist in the primary liner, the operator will immediately undertake the following contingency measures under the direction of the OCD:

1. Introduction of fluids into the pond will cease.

2. Enhanced evaporation will commence, provided atmosphere conditions are such that the spray systems can be operated in accordance with the provisions of this permit.

3. Fluids will be removed from the pond utilizing evaporation and transportation to another authorized facility, until the fluid level is below the location of the leak in the liner.

4. The liner will be repaired and tested and the leak detection system will be completely drained before resuming introduction of fluids into the pond.

5. Any additional measures required by the OCD.

CLOSURE

The operator will notify the OCD of cessation of operations. Upon cessation of operations for six consecutive months, the operator will complete cleanup of constructed facilities and restoration of the facility site within the following six months, unless an extension is granted by the Director of the OCD. When the facility is to be closed no new fluids will be accepted. Existing fluids will be disposed of according to OCD procedures. Closure will be pursuant to all OCD requirements in affect at the time of closure, and any other applicable state or federal regulations.

CERTIFICATION

Sunco Trucking Water Disposal Company, by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Sunco Trucking Water Disposal Company further acknowledges that these conditions and requirements of this permit modification may be changed administratively by the Division for good cause shown as necessary to protect fresh water, human health and the environment.

Accepted:

SUNCO TRUCKING WATER DISPOSAL COMPANY

by_____
Title

ATTACHMENT TO DISPOSAL PERMIT MODIFICATION
SUNCO TRUCKING WATER DISPOSAL COMPANY
SURFACE WASTE MANAGEMENT FACILITY

FACILITY OPERATION

1. Sunco Commitments: Sunco will abide by all conditions of OCD Orders R-9485, R-9485-A, OCD Rule 711, and this modification.

2. Disposal: Disposal will occur only when an attendant is present. The facility will be secured when no attendant is present.

3. Transportation: No produced water will be received at the facility unless the transporter has a valid Form C-133 (Authorization to Move Produced Water) on file with the Division

4. Wastes Accepted for Disposal: Fluids accepted for disposal will be limited to oilfield waste fluids exempt from Resource Conservation and Recovery Act (RCRA) Subtitle C regulations, and oilfield waste fluids non-exempt and non-hazardous by characteristic testing. Fluids shall not be accepted if introduction of the fluid will cause the pond freeboard to be less than that approved. The following documentation for accepting wastes will be required:

   A. Exempt Oilfield Wastes: As a condition of acceptance of the materials shipped, a generator, or his authorized agent, shall sign a certificate which represents and warrants that the wastes are: generated from oil and gas exploration and production operations; exempt from RCRA Subtitle C regulations; and not mixed with non-exempt wastes. The permittee shall have the option to accept on monthly, weekly, or per load basis a load certificate in a form of its choice. While the acceptance of such exempt oilfield activities does not require prior approval of the Division, both the generator and the permittee shall maintain and make said certificates available for inspection by the Division for compliance and enforcement purposes.

   B. Non-exempt, Non-hazardous Wastes: Prior to acceptance, a "Request For Approval To Accept Solid Waste", New Mexico Oil Conservation Division Form C-138, accompanied by acceptable documentation to determine that the waste is non-hazardous shall be submitted to the appropriate District office. Acceptance will be on a case-by-case basis after approval from the Division's Santa Fe office.

C. Non-Oilfield Wastes: Non-oilfield wastes may be accepted in an emergency if ordered by the Department of Public Safety. Prior to acceptance, a "Request For Approval To Accept Solid Waste", New Mexico Oil Conservation Division Form C-138, accompanied by the Department of Public Safety order will be submitted to the appropriate District office and the Division's Santa Fe office.

5. H_2S in Fluids: All fluids accepted for disposal shall be tested for hydrogen sulfide concentrations. All fluids with measurable hydrogen sulfide concentrations shall be treated in a closed system prior to introduction of liquids to any open tank or pond. The treatment reaction shall be driven to completion to eliminate all measurable hydrogen sulfide.

6. Oil in Ponds: No oil shall be allowed in the pond(s).

7. Training: Operating personnel shall be trained in the operation, calibration, maintenance and safety requirements of all test equipment used at the facility.

8. Treating Chemicals: At least 1000 gallons of a treatment chemical shall be stored on site and shall not be retained for a period in excess of the manufacturer's stated shelf life. Expired chemicals may be disposed of in the pond.

9. Accumulated Sludge: Prior to disposal, any accumulated sludge generated in the disposal facility shall be analyzed for hazardous constituents prior to disposal pursuant to requirements determined by the OCD.

10. Inoperative Systems: If any of the required systems become inoperative, the Aztec district office of the Division will be notified immediately.

11. Record Keeping: Comprehensive records of all materials received at the facility will be maintained at the facility for the life of the facility. The records for each load will include: a) the origin, b) date received, c) quantity, d) exempt or non-exempt status and analyses for hazardous constituents if required, and e) transporter. Records will be maintained at the facility for the life of the facility.

12. Drum Storage: All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums should be stored on their sides with the bungs in place and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets must also be stored on an impermeable pad with curbing.

13. Process Areas: All process and maintenance areas which show evidence that leaks and spills are reaching the ground surface must be either paved and curbed or have some type of spill collection device incorporated into the design.

14. Above Ground Tanks: All above ground tanks which contain fluids other than fresh water must be bermed to contain a volume of one-third more than the total volume of the largest tank or of all interconnected tanks. All new facilities associated with the well or modifications to existing facilities associated with the well must place the tank on an impermeable type pad within the berm.

15. Above Ground Saddle Tanks: Above ground saddle tanks must have impermeable pad and curb type containment unless they contain fresh water or fluids that are gases at atmospheric temperature and pressure.

16. Labeling: All tanks, drum, and other containers should be clearly labeled to identify their contents and other emergency information necessary if the tank were to rupture, spill, or ignite.

17. Below Grade Tanks/Sumps: All below grade tanks, sumps, and pits must be approved by the OCD prior to installation or upon modification and must incorporate secondary containment and leak-detection into the design. All pre-existing sumps and below-grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing to 3 pounds per square inch above normal operating pressure and/or visual inspection of cleaned out tanks and/or sumps.

18. Underground Process/Wastewater Lines: All underground process/wastewater, and brine transfer pipelines must be tested to demonstrate their mechanical integrity at present and then every 5 years there after. Permittees may propose various methods for testing such as pressure testing to 3 pounds per square inch above normal operating pressure or other means acceptable to the OCD.

19. Housekeeping: All systems designed for spill collection/prevention, and leak detection will be inspected daily to ensure proper operation and to prevent overtopping or system failure.

20. Spill Reporting: All spills/releases shall be reported pursuant to OCD Rule 116. and WQCC 1203. to the OCD Aztec District Office.

21. Transfer of Permit: The OCD will be notified prior to any transfer of ownership, control, or possession of the well. A written commitment to comply with the terms and conditions of the previously approved discharge plan and a bond must be submitted by the purchaser and approved by the OCD prior to transfer.

22. OCD Inspections: Additional requirements may be placed on the facilities based upon results from OCD inspections.

MONITORING REQUIREMENTS

1. H_2S Prevention and Contingency Plan

A. In order to prevent development of harmful concentrations of hydrogen sulfide, the following procedures shall be followed:

1. Daily tests shall be conducted and records made and maintained of the pH in each pond, and if the pH falls below 7.0, remedial steps shall be taken immediately to raise the pH.

2. Weekly tests shall be conducted and records made and retained at the facility of the dissolved sulfide concentrations in the ponds.

3. Tests shall be conducted, and records made and retained at the facility of such tests, to determine the dissolved oxygen levels in each pond:

a. Tests shall be conducted at the beginning and end of each day, or at least twice per 24-hour period.

b. The sample for each test shall be taken one foot from the bottom of the pond.

c. The location of each test shall vary around the pond.

d. If any test shows a dissolved residual oxygen level of less than 0.5 ppm, immediate steps shall be undertaken to raise the oxygen level to at least 0.5 ppm, which measures may include adding bleach or increased aeration.

B. In order to prevent any harm by hydrogen sulfide gas, Tests of ambient H_2S levels shall be conducted, and records made and retained. Such tests shall be made at varying locations around the berm of the pond and shall be conducted twice per day. The wind speed and direction shall be recorded in conjunction with each test.

1. If an H_2S reading of 0.1 ppm or greater is obtained:

a. A second reading shall be taken on the downwind berm within one hour;

b. The dissolved oxygen and dissolved sulfide levels of the pond shall be tested immediately and the need for immediate treatment determined;

c. Tests for H_2S levels shall be made at the fence line, downwind from the problem pond.

2. If two consecutive H_2S readings of 0.1 ppm or greater are obtained:

a. The operator shall notify the Aztec office of the OCD immediately;

b. The operator shall commence hourly monitoring on a 24 hour basis;

c. The operator will obtain daily analysis of dissolved sulfides in the pond.

3. If an H_2S reading of 10.0 ppm or greater at the facility fence line is obtained:

a. The operator will immediately notify the OCD and the following public safety agencies:

State Police
County Sheriff
County Fire Marshall;

b. The operator will initiate notification of all persons residing within one-half (½) mile of the fence line and assist public safety officials with evacuation as requested.

2. Spill/Leak Prevention and Reporting Procedures (Contingency Plan)

A. Leak detection system sumps shall be inspected daily, and records of such inspections shall be made and retained and kept on file at the facility for OCD inspection at any time. If fluids are found in the sump the following steps will be immediately undertaken:

1. The operator shall notify the Aztec District office within 24 hours;

2. The fluids will be sampled and analyzed to determine the source; and

3. The fluids will be immediately and continuously removed from the sump. Such fluids may be returned to the pond.

B. If a leak is determined to exist in the primary liner, the operator will immediately undertake the following contingency measures under the direction of the OCD:

1. Introduction of fluids into the pond will cease.

2. Enhanced evaporation will commence, provided atmosphere conditions are such that the spray systems can be operated in accordance with the provisions of this permit.

3. Fluids will be removed from the pond utilizing evaporation and transportation to another authorized facility, until the fluid level is below the location of the leak in the liner.

4. The liner will be repaired and tested and the leak detection system will be completely drained before resuming introduction of fluids into the pond.

5. Any additional measures required by the OCD.

CLOSURE

The operator will notify the OCD of cessation of operations. Upon cessation of operations for six consecutive months, the operator will complete cleanup of constructed facilities and restoration of the facility site within the following six months, unless an extension is granted by the Director of the OCD. When the facility is to be closed no new fluids will be accepted. Existing fluids will be disposed of according to OCD procedures. Closure will be pursuant to all OCD requirements in affect at the time of closure, and any other applicable state or federal regulations.

CERTIFICATION

Sunco Trucking Water Disposal Company, by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Sunco Trucking Water Disposal Company further acknowledges that these conditions and requirements of this permit modification may be changed administratively by the Division for good cause shown as necessary to protect fresh water, human health and the environment.

Accepted:

SUNCO TRUCKING WATER DISPOSAL COMPANY

by George E. Coleman
Title Chairman

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE 9955 (DE NOVO)
Order No. R-9485-A

APPLICATION OF SUNCO TRUCKING WATER
DISPOSAL FOR A PERMIT TO CONSTRUCT AND
OPERATE A COMMERCIAL WASTEWATER EVAPORATION
POND, SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on June 12, 1991, at Santa Fe, New Mexico, before the Oil Conservation Commission, hereinafter referred to as the "Commission."

NOW, on this 19th day of July, 1991, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) Sunco Trucking Water Disposal Company ("Applicant") seeks an order for a permit pursuant to Rule 711 of the Oil Conservation Division's ("Division") Rules and Regulations to construct a commercial surface disposal facility to dispose of "nonhazardous" wastewater resulting from oil and gas drilling and production operations.

(3) Said facility is to be located in the SW/4 NW/4 (Unit E) of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico.

(4) On June 13, 15, and 22, 1990, the Division held a hearing of Case 9955 for a permit for Applicant to construct and operate a commercial wastewater evaporation pond.

(5) On April 2, 1991 the Division entered Order No. R-9485 approving such permit under certain conditions.

(6) Harold and Doris Horner ("Protestor") are owners of land near the proposed facility and protested the granting of the permit and requested this De Novo hearing.

(7) The entire record of the Examiner hearing was entered into the Commission hearing record.

(8) Protestor objected to the proposed facility because of the possibility that hydrogen sulfide gas could be generated and that the contamination of ground water could occur. Protestor was also concerned that the Division did not require submission of certified engineering plans for the operational system prior to permit approval.

(9) The Division presented an expert witness who testified that hydrogen sulfide build-up could be prevented by supplying sufficient oxygen to the pond to maintain a residual oxygen level of at least 0.5 parts per million (ppm). The witness testified that performance criteria, not design criteria, should be ordered, to allow for flexibility of technology and site specific requirements. The design of the facility was characterized as utilizing the best currently available affordable technology to prevent the formation or release of hydrogen sulfide gas.

(10) If the facility is constructed with a double synthetic lining and adequate leak detection on a properly constructed base, and if a proper leak response program which will require prompt detection and repair is maintained, it is highly unlikely that fluids will contact the soil with no danger of contacting fresh water sources.

(11) Applicant's witness testified that wastewater delivered to the facility can be tested and treated in a closed system if hydrogen sulfide is found to be present. This treatment must be carried to completion in the truck to prevent introduction of the gas into the pond.

(12) Protestor appeared at the hearing through Counsel and cross-examined Applicant's witness and the OCD witness, but did not present any direct evidence to support their position that the facility could not be permitted without creating an unreasonable risk of contaminating fresh water supplies or presenting a danger to human health and the environment.

(13) The findings and order of the Division are well founded upon all the evidence before the Commission and should be adopted by the Commission subject to modifications ordered herein.

IT IS THEREFORE ORDERED THAT:

(1) Division Order No. R-9485 is hereby affirmed and adopted as the order of the Commission with the exception of the changes ordered below:

(2) Decretory Paragraph No. (1) of said order be and the same is hereby amended to read in its entirety as follows:

> "The applicant, Sunco Trucking Water Disposal Company, is hereby authorized to construct and operate a commercial surface wastewater disposal facility at a site in the SW/4 NW/4 (Unit E), Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico, for the purpose of collection, disposal, evaporation or storage of produced water, completion fluids and other non-hazardous oil field related waste, subject to the permit conditions.
>
> PROVIDED HOWEVER THAT, the proposed disposal facility shall be constructed and operated in accordance with the permit conditions attached hereto as Exhibit "A" (herein amended) which are incorporated herein and made a part of this order, and in accordance with such additional conditions and requirements as may be directed by the Division Director from time to time, and shall be operated and maintained in such a manner as to preclude spills and fires, and to protect surface waters, ground waters, human health, livestock and the environment.
>
> PROVIDED FURTHER THAT, Protestor is afforded the opportunity to review and comment on all engineering designs for the aeration, circulation and enhanced evaporation spray systems. The period for Protestor's review and comments shall not exceed ten working days from the receipt of the designs; such review and comments shall be certified by a registered professional engineer."

(3) Decretory Paragraph No. (3) be and the same is hereby amended to read in its entirety as follows:

> "(3) Engineering designs for aeration systems shall be certified by a registered professional engineer and submitted to and approved by the Director prior to construction."

(4) Decretory Paragraph No. (4) be and the same is hereby amended to read in its entirety as follows:

"(4) Engineering designs for the enhanced evaporation spray systems shall be certified by a registered professional engineer and submitted to and approved by the Director prior to construction."

(5) Decretory Paragraph (6) be and the same is hereby amended to read in its entirety as follows:

"(6) As-built drawings, certified by a registered professional engineer, shall be submitted to and approved by the Director prior to initiating operations."

(6) Decretory Paragraph No. (7) be and the same is hereby amended to read in its entirety as follows:

"(7) The Director of the Division shall be authorized to administratively grant, pursuant to Rule 711, approval for the expansion or modification of the proposed disposal facility."

(7) Decretory Paragraph (12) be and the same is hereby amended to read in its entirety as follows:

"(12) Each aeration system shall be designed such that the oxygen requirements and residuals can be provided without the use of any additional system."

(8) Decretory Paragraph No. (13) be and the same is hereby amended to read in its entirety as follows:

"(13) Each aeration system shall be designed to allow for expansion if the actual oxygen demand exceeds the oxygen demand used in the design calculations."

(9) Decretory Paragraph No. (15) be and the same is hereby amended to read in its entirety as follows:

"(15) The Division shall have the authority to administratively change any condition of this permit to protect fresh water, human health and the environment. Applicant may request a hearing upon any change which materially affects the operation of the facility, unless the change is a response to an emergency situation impacting human health and the environment."

(10) A new Exhibit "A" as attached hereto and incorporated herein is adopted and substituted for the Exhibit "A" attached to Order No. R-9485. The revised Exhibit "A" shall include the following changes:

a. Exhibit "A" Section VII.B.2.a. is amended to read:

The ponds shall have a minimum freeboard of eighteen (18) inches. If overtopping occurs at any time, the freeboard shall be increased to prevent a reoccurrence.

b. Exhibit "A" Section VII.B.2.d. is amended to read:

An aeration system shall be constructed to prevent anaerobic conditions from forming in a pond. Such system shall be able to provide sufficient oxygen in the pond to maintain a residual oxygen concentration of 0.5 parts per million (ppm) at one foot off the pit bottom without the use of any other system. The system shall be designed to permit expansion if actual oxygen demand exceeds the oxygen demand used in design calculations. Such plans and specifications, certified by a registered professional engineer, must be submitted to the Division for approval prior to actual construction.

c. Exhibit "A" Section VII.B.2.e. is amended to read:

Upon completion of construction, "as-built" completion diagrams of the ponds and aeration systems certified by a registered professional engineer shall be submitted and approved by the Director prior to operation.

d. Exhibit "A" Section VIII.B is amended to read:

If a leak is determined to exist in the primary liner, the operator will immediately undertake the following contingency measures under the direction of the OCD:

e. Exhibit "A" Section VIII.B.5. is amended to read:

Additional measures may be required by the OCD.

(11) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JAMI BAILEY, Member

WILLIAM W. WEISS, Member

WILLIAM J. LEMAY, Chairman and Secretary

S E A L

dr/

NEW MEXICO OIL CONSERVATION DIVISION

CASE 9955 De Novo, ORDER R-9485-A
Exhibit A

SURFACE DISPOSAL FACILITY PERMIT
INITIAL CONDITIONS FOR APPROVAL
SUNCO TRUCKING WATER DISPOSAL COMPANY

I. Type of Operation

The major purpose of the facility shall be to dispose of salt water produced in connection with the production of oil and gas by evaporating such water in open pits using enhanced evaporation techniques as necessary and under those conditions which make such use safe.

Water shall be tested for hydrogen sulfide (H_2S) and treated, if necessary, in a closed system prior to introduction into a pond. Ponds shall be properly aerated to maintain oxygen levels as required by this permit. Contingency plans have been developed for H_2S buildup and for leaks as set forth herein.

II. Operator

The owner of the facility is:

Sunco Trucking Water Disposal Company
708 South Tucker Ave.
Farmington, NM 87401

III. Location of Disposal Pit

The facility shall be located at a site in the SW/4 NW/4 (Unit E), Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico. Said facility shall be constructed in accordance with the site plan submitted to the Division at hearing subject to any modifications directed or approved by the Division.

IV. Expansion Request

This is an application for a new facility to be constructed upon issuance of this permit.

V. Land Ownership

The land upon which the facility is to be constructed is owned in fee by Sunco Trucking Water Disposal Company.

VI. Storage/Disposal Facilities Description

A. The facility shall accept for disposal produced water, completion fluids and non-hazardous oilfield related waste for disposal.

B. Fluids shall be received in an open skim tank, subject to the requirements for treatment set forth herein. Oil and other hydrocarbons shall be skimmed off and placed in closed storage tanks until sold. Treated and skimmed water shall be placed in open, synthetically double lined ponds with approved leak detection system for evaporation. The skim tank, oil storage tanks and ponds are to be located as shown on the site plan submitted at the hearing, subject to any modifications or changes required or approved by the Division.

VII. Engineering Design

A. The subject facility shall be constructed in accordance with the engineering designs presented at the hearing as applicant's exhibits no. 1, 2A, 2B, 3, 4 & 6 and in accordance with the following conditions and requirements set forth herein.

B. General Construction Requirements

1. Location

This approval is for the specific site and location identified. The location of any pit or pond shall not be changed from the submitted site plan without specific authorization from the Division.

2. Design and Construction

a. The ponds shall have a minimum freeboard of eighteen (18) inches. If overtopping occurs at any time, the freeboard shall be increased to prevent a

reoccurrence. Liner markings or some other device shall be installed to accurately measure freeboard.

b. The pond shall be constructed so that the inside grade of the levee is no steeper than 2:1. Levees shall have an outside grade no steeper than 3:1.

c. The top of the levees shall be level and shall be at least eighteen inches (18") wide.

d. An aeration system shall be constructed to prevent anaerobic conditions from forming in a pond. Such system shall be able to provide sufficient oxygen in the pond to maintain a residual oxygen concentration of 0.5 parts per million (ppm) at one foot of the bottom of the pit without the use of any spray system. The system shall be designed to permit expansion if actual oxygen demand exceeds the oxygen demand used in design calculations. Such plans and specifications, certified by a registered professional engineer, must be submitted to the Division for approval prior to actual construction.

e. Upon completion of construction "as-built" completion diagrams of the ponds and aeration systems certified by a registered professional engineer shall be submitted and approved by the Director prior to commencement of operation.

3. Synthetically Lined Evaporation Ponds

a. Materials -- Synthetic materials used for lining the evaporation ponds shall be impermeable flexible HDPE membrane as submitted in applicant's hearing exhibit no. 1, and no substitution of different material shall be made without prior approval of the Division.

b. Leak Detection System

(1) A leak detection system of an approved design shall be installed between the primary and secondary liner. The Aztec district office of the Division shall be notified at least 48 hours in advance of the scheduled installation of the primary liner to afford the opportunity for a

Division representative to inspect the leak detection system.

(2) A network of slotted or perforated drainage pipes shall be installed between the primary and secondary liners. The main collector pipes shall be not less than four (4) inch diameter and the laterals shall be not less than two (2) inch diameter pipe. The network shall be of sufficient density so that no point in the pond bed is more than twenty feet (20') from such drainage pipe or lateral thereof. The material placed between the pipes and laterals shall be sufficiently permeable to allow transport of the fluids to the drainage pipe. The slope for all drainage lines and laterals shall be at least six inches (6") per fifty feet (50'). The slope of the pond bed shall also conform to these values to assure fluid flow towards the leak detection system. The drainage pipe shall convey any fluids to a corrosion-proof sump located outside the perimeter of the pond.

c. Preparation of Pond Bed for Installation of Liners

(1) The bed of the pond and inside grade of the levee shall be smooth and compacted, free of holes, rocks, stumps, clods, or any other debris which may rupture the liner. If necessary to prevent rocks from damaging the liner, the pond bed shall be covered with a compacted layer of sand or other suitable materials.

(2) A trench shall be excavated on the top of the levee the entire perimeter of the pond for the purpose of anchoring flexible liners. This trench shall be located a minimum of nine inches (9") from the slope break and shall be a minimum of twelve inches (12") deep.

(3) The liner shall rest smoothly on the pond bed and the inner face of the levees, and shall be of sufficient size to extend down to the bottom of the anchor trench and come back out a minimum of two inches (2") from the trench on the side furthest from the pond. Wrinkles or folds shall

be placed at each corner of the pond in accordance with manufacturer's specifications to allow for contraction and expansion of the membrane due to temperature variations.

(4) The liners shall be properly vented in accordance with the design submitted as Applicant's Exhibit 2B.

(5) An anchor of used pipe or other similar material shall be placed over the liner in the anchor trench and the trench back-filled. The anchor trench shall extend the entire perimeter of the pond.

(6) The sand, gravel or geotextile membranae layers placed on top of the secondary liner shall be done in such a manner that the risk of tearing the liner is minimized.

(7) At any point of discharge into the pond(s), no fluid force shall be directed toward the liner.

4. Spray Evaporation Systems

a. Sprayer systems shall be included to enhance natural evaporation.

b. Engineering designs for the sprayer system must be submitted for approval prior to installation. An anemometer with automatic shutdown systems shall be installed which will automatically deactivate the spray systems when wind-born spray drift can be carried outside the confines of the ponds.

c. Spray systems shall be operated such that all spray remains within the confines of the lined portion of the ponds. The spray system shall be operated only when an attendant is on duty at the facility.

5. Skimmer Tanks

a. Required Use
Skimmer tanks shall be used to separate any oil from the water prior to allowing the water to discharge into the evaporation pond.

b. Design Criteria

The skimmer tank shall be designed to allow for oil/water separation only; oil shall be removed in a timely manner and stored in tanks. Per Division General Rule 310, oil shall not be stored or retained in earthen reservoirs or in open receptacles.

(1) The material of construction and/or design shall provide for corrosion resistance.

(2) Siphons or other suitable means shall be employed to draw water from oil/water interface for transfer to the evaporation pond. The siphon shall be located as far as possible from the inlet to the skimmer tank.

(3) The skimmer tank shall at all times be kept free of appreciable oil buildup to prevent oil flow into the evaporation pond.

6. Fences, Signs and Netting

a. A fence shall be constructed and maintained in good condition around the facility perimeter. Adequate space will be provided between the fence and levees for passage of maintenance vehicles. The fence shall be constructed so as to prevent livestock and people from entering the facility area. Fences shall not be constructed on levees.

b. A sign not less than 12" x 24" with lettering of not less than two inches (2") shall be posted in a conspicuous place on the fence surrounding the facility. The sign shall be maintained in legible condition and shall identify the operator of the disposal system, the location of the facility by quarter-quarter section,

township, and range; and emergency telephone numbers.

c. To protect migratory birds, all tanks exceeding 16 feet in diameter, and exposed pits and ponds shall be screened, netted or covered. Upon written application by the operator, an exception to screening, netting or covering of a facility may be granted by the district supervisor upon a showing that an alternative method will protect migratory birds or that the facility is not hazardous to migratory birds.

VIII. Spill/Leak Prevention and Reporting Procedures (Contingency Plan)

A. Leak detection system sumps shall be inspected daily, and records of such inspections shall be made and retained and kept on file at the facility for OCD inspection at any time. If fluids are found in the sump the following steps will be immediately undertaken:

1. The operator shall notify the Division Aztec District Office within twenty-four (24) hours;

2. the fluids will be sampled and analyzed to determine the source; and

3. the fluids will be immediately and continuously removed from the sump. Such fluids may be returned to the pond.

B. If a leak is determined to exist in the primary liner, the operator will immediately undertake the following contingency measures under the dircetion of the OCD:

1. Introduction of fluids into the pond will cease.

2. Enhanced evaporation will commence, provided atmosphere conditions are such that the spray systems can be operated in accordance with the provisions of this permit.

3. Fluids will be removed from the pond utilizing evaporation and transportation to another authorized facility, until the fluid level is below the location of the leak in the liner.

4. The liner will be repaired and tested and the leak detection system will be completely drained before resuming introduction of fluids into the pond.

5. Any additional measures required by the OCD.

IX. Operation and Maintenance

A. **Requirements for receipt of fluid.**

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

2. No produced water shall be received at the facility unless the transporter has a valid Form C-133 (Authorization to Move Produced Water) on file with the Division.

3. Only liquids that are non-hazardous by U.S. Environmental Protection Agency under Resource Conservation Recovery Act (RCRA) Subtitle C exemption or by characteristic testing will be accepted at the facility. Liquids and solids from operations not currently exempt under RCRA Subtitle C will be tested for appropriate hazardous constituents prior to disposal.

4. All liquids accepted for disposal shall be tested for hydrogen sulfide concentrations. All liquids with measurable hydrogen sulfide concentrations shall be treated in a closed system prior to introduction of liquids to any open tank or pond. The treatment reaction shall be driven to completion to eliminate all measurable hydrogen sulfide.

5. The operator shall keep and make available for inspection records for each calendar month on the source, location, volume and type of waste (produced water, spent acids, completion fluids, drilling mud, etc.), analysis for hazardous constituents (if required), date of disposal, and hauling company that disposes of fluids or material in the facility. Records of H_2S measurements and treatment volumes shall be maintained in the same manner. Such records shall be maintained for a period of two (2) years from the date of disposal.

6. The operator shall file forms C-117-A, C-118, and C-120-A as required by OCD rules.

7. Fluids shall not be accepted if introduction of the fluid will cause the pond freeboard to be less than that approved herein.

B. **Pond Maintenance.**

1. Outside walls of all levees shall be maintained in such a manner to prevent erosion. Inspections of the outside walls of the levees shall be made weekly and after any rainfall of consequence.

2. No oil shall be allowed in the pond(s).

C. **General Operational Requirements.**

1. Operating personnel shall be trained in the operation, calibration, maintenance and safety requirements of all test equipment used at the facility.

2. At least 1000 gallons of a treatment chemical shall be stored on-site and shall not be retained for a period in excess of the manufacturer's stated shelf life. Expired chemicals may be disposed of in the pond.

3. Prior to disposal, any accumulated sludge generated in the disposal facility shall be analyzed for composition and disposal pursuant to requirements determined by the OCD.

4. If any of the required systems become inoperative, the Aztec district office of the Division will be notified immediately.

X. Closure Plan

A. When the facility is to be closed, the operator shall provide for removal of all fluids and/or wastes, back-filling, grading and mounding of pits, cleanup of any contaminated soils. Wastes shall be disposed of in accordance with statutes, rules and regulations in effect at the time of closure.

B. OCD shall be notified when operation of the facility is discontinued for a period in excess of six months or when the facility is to be dismantled.

XI. Flood Protection

A. The facility will be constructed such that there will be no storm water runoff from the boundaries of the facility.

B. The operator will immediately notify the Aztec district office of the Division of any flooding or washouts.

XII. H_2S Prevention and Contingency Plan

A. In order to prevent development of harmful concentrations of hydrogen sulfide, the following procedures shall be followed:

1. Daily tests shall be conducted and records made and maintained of the pH in each pond, and if the pH falls below 7.0, remedial steps shall be taken immediately to raise the pH.

2. Weekly tests shall be conducted and records made and retained at the facility of the dissolved sulfide concentrations in the ponds.

3. Tests shall be conducted, and records made and retained at the facility of such tests, to determine the dissolved oxygen levels in each pond:

a. Tests shall be conducted at the beginning and end of each day, or at least twice per 24-hour period.

b. The sample for each test shall be taken one foot from the bottom of the pond.

c. The location of each test shall vary around the pond.

d. If any test shows a dissolved residual oxygen level of less than 0.5 ppm, immediate steps shall be undertaken to raise the oxygen level to at least 0.5 ppm, which measures may include adding bleach or increased aeration.

B. In order to prevent any harm by hydrogen sulfide gas, Tests of ambient H_2S levels shall be conducted, and records made and retained. Such tests shall be made at varying locations around the berm of the pond and shall be conducted twice per day. The wind speed and direction shall be recorded in conjunction with each test.

1. If an H_2S reading of 0.1 ppm or greater is obtained:

   a. A second reading shall be taken on the downwind berm within one hour;

   b. The dissolved oxygen and dissolved sulfide levels of the pond shall be tested immediately and the need for immediate treatment determined;

   c. Tests for H_2S levels shall be made at the fence line, downwind from the problem pond.

2. If two consecutive H_2S readings of 0.1 ppm or greater are obtained:

   a. The operator shall notify the Aztec office of the OCD immediately;

   b. The operator shall commence hourly monitoring on a 24-hour basis;

   c. The operator will obtain daily analysis of dissolved sulfides in the pond.

3. If an H_2S reading of 10.0 ppm or greater at the facility fence line is obtained:

   a. The operator will immediately notify the OCD and the following public safety agencies:

      - State Police
      - County Sheriff
      - County Fire Marshall;

   b. The operator will initiate notification of all persons residing within one-half ($\frac{1}{2}$) mile of the fence line and assist public safety officials with evacuation as requested.

XIII. Additional Information

The operator shall notify the Division of any additional information change in conditions which may be relevant to this permit

XIV. Certification

Sunco Trucking Water Disposal Company, by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Sunco Trucking Water Disposal Company further acknowledges that this permit shall not become effective until Bond satisfactory to the Division is posted and that these conditions and requirements of this permit may be changed administratively by the Division for good cause shown as necessary to protect fresh water, human health and the environment.

Accepted:

SUNCO TRUCKING WATER DISPOSAL COMPANY

by_____
Title

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 9955
ORDER NO. R-9485

APPLICATION OF SUNCO TRUCKING WATER
DISPOSAL COMPANY FOR A PERMIT TO CONSTRUCT
AND OPERATE A COMMERCIAL WASTEWATER
EVAPORATION POND, SAN JUAN COUNTY, NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on June 13, 1990, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 2nd day of April, 1991, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) Sunco Trucking Water Disposal Company ("Applicant") has applied to the Division for a permit pursuant to Rule 711 of the Division's Rules and Regulations to construct a commercial surface disposal facility to dispose of nonhazardous wastewater resulting from oil and gas drilling and production operations.

(3) Said facility is to be located in the SW/4 NW/4 (Unit E) of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico.

(4) Harold and Doris Horner ("Protester") are owners of land near the proposed facility and protested the granting of the permit and requested this hearing on the application.

(5) Applicant proposes to build a synthetically double-lined evaporation pond with leak detection, aeration systems and evaporation enhancing spray systems to dispose of produced salt water and drilling fluids which have been tested and treated for hydrogen sulfide.

(6) Applicant appeared at the hearing and presented testimony about the design and operational standards and established a prima facie showing that the facility could be designed and operated so as to protect fresh water supplies and not constitute an unreasonable harm to human health and the environment if standards for such operation are met and followed.

(7) Protester appeared at the hearing through Counsel and cross-examined Applicant's witnesses but did not present any direct evidence to support their position that the facility could not be permitted without creating an unreasonable risk of contaminating fresh water supplies or presenting a danger to human health and the environment.

(8) There is a need for additional disposal facilities in the San Juan Basin to provide for environmentally safe and cost effective means of disposing of water produced in connection with oil and gas operations, and approval of a properly designed facility will help to prevent illegal dumping of water in a manner which would endanger the environment.

(9) The proposed facility is located on a mesa and not in a watercourse, lakebed, sinkhole or other depression. The location is safely above the high water level of the Animas River and any other watercourse in the vicinity.

(10) Evidence presented by the applicant shows that the design of the evaporation pits is adequate to contain all fluids with sufficient surface area.

(11) The design of the proposed ponds has been approved by the State Engineer.

(12) The geology of the proposed site and the distance to any fresh water is such that even if there were a catastrophic

failure if the liner and the full pond were to empty, there is virtually no probability that any fresh water would be contaminated.

(13) If the facility is constructed with a double synthetic lining and adequate leak detection on properly constructed base, and if a proper leak response program which will require prompt detection and repair is maintained, it is highly unlikely that fluids will contact the soil with no danger of contacting fresh water sources.

(14) The applicant proposed that the leak detection system be constructed with two inch collector and 1 inch lateral pipes, but that is not large enough to prevent blockage with accumulated sands and other solids, and the system should use four inch collectors and two inch main pipes.

(15) Intervenor objected to the location of the proposed facility because it is an area which may be used for residential purposes. The Division has no authority to disapprove a facility because the land use is incompatible with surrounding uses, but those uses may be a factor in establishing design and operational requirements to protect human health and the environment.

(16) Intervenor questioned applicant's witnesses and argued that the risk of hydrogen sulfide build-up and potential danger to nearby residents was a significant hazard for which the permit should be denied.

(17) Applicant presented an engineering witness who testified that H_2S build-up could be avoided by preventing anaerobic conditions from developing in the pond by supplying sufficient oxygen to the pond through the aeration system to maintain a residual oxygen level of at least 5 parts per million (ppm).

(18) The size of the aeration system necessary to maintain the necessary residual oxygen level is dependent upon the total oxygen demand of the pond, which can be reduced by insuring that no H_2S water is introduced into the pond and by chemically treating the water if the oxygen demand increases or H_2S is detected. A chemical engineer with the Division's Environmental Bureau confirmed that testimony.

(19) The applicant testified that wastewater delivered to the facility can be tested and treated in a closed system if H_2S is found to be present to prevent its introduction into the pond.

(20) The oxygen level of the pond can be measured regularly and additional aeration and chemical treatment with bleach can be used to eliminate anaerobic conditions before dangerous H_2S build-up occurs.

(21) The operator should be required to keep 1000 gallons of fresh bleach on location at all times in case of need, and stored bleach which has reached the manufacturer's shelf life should be disposed of in the pond.

(22) Air quality monitoring around the berm of the pond can detect the presence of H_2S gas at levels above 0.1 ppm, and remedial measures can be undertaken to eliminate the source before higher concentrations occur.

(23) The applicant should be required to have an emergency notification and contingency plan to be implemented in the unlikely event of H_2S levels reaching a level of 10 ppm at the fence line.

(24) The applicant's operational personnel should be fully trained at all times in the use of H_2S monitoring equipment and in the proper methods for reducing H_2S levels in the pond.

(25) The applicant proposes using a sprayer system to enhance evaporation from the pond.

(26) An enhanced sprayer is a reasonable method to enhance evaporation, but the design for such system should be approved by the Division before installation. It should have an anemometer with automatic shutdown system(s) to prevent spray drift from being blown beyond the confines of the ponds, and it should not be operated without an attendant on duty.

(27) Protester offered the judgment of the District Court of San Juan County in the case of Payne v. Basin Disposal, CV-87-569-1102 in support of their position that the permit should not be approved. The Division takes administrative notice of that decision.

(28) The judgment identified in finding (27) is limited to the facts of that case, and Protester did not offer into evidence any of the relevant facts of that case to support its argument.

(29) The applicant must post the reclamation bond as required by Division Rules and Regulations before beginning construction on the facility.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Sunco Trucking Water Disposal Company, is hereby authorized to construct and operate a commercial surface wastewater disposal facility at a site in the SW/4 NW/4 (Unit E), Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico, for the purpose of collection, disposal, evaporation or storage of produced water, completion fluids and other non-hazardous oilfield related waste. subject to the permit conditions.

PROVIDED HOWEVER THAT, the proposed disposal facility shall be constructed and operated in accordance with the permit conditions attached hereto as Exhibit "A" which are incorporated herein and made a part of this order, and in accordance with such additional conditions and requirements as may be directed by the Division Director from time to time, and shall be operated and maintained in such a manner as to preclude spills and fires, and to protect surface waters, ground waters, human health, livestock and the environment.

(2) Prior to constructing said facility, the applicant shall submit, to the Santa Fe office of the Division, a surety or cash bond in the amount of $25,000 in a form approved by the Division.

(3) Engineering designs for aeration systems shall be submitted to the Director for approval prior to construction.

(4) Engineering designs for the enhanced evaporation spray systems shall be submitted to the Director for approval prior to construction.

(5) The Aztec office of the Oil Conservation Division shall be notified at least 48 hours prior to the installation of

the primary liner to afford the opportunity for the Division to inspect the leak detection system.

(6) As-built drawings, certified by a registered professional engineer, shall be submitted to the OCD prior to initiating operations.

(7) The Director of the Division shall be authorized to administratively grant approval for the expansion or modification of the proposed disposal facility.

(8) Authority for operation of the treating plant and disposal facility shall be transferrable only upon written application and approval by the Division Director.

(9) Authority for operation of the treating plant and disposal facility shall be suspended or rescinded whenever such suspension or rescission should appear necessary to protect human health or property, to protect fresh water supplies from contamination, to prevent waste, or for non-compliance with the terms and conditions of this order or Division Rules and Regulations.

(10) The leak-detection system between the primary and secondary liner shall be constructed with two (2)-inch laterals and four (4)-inch collector pipes.

(11) The aeration systems shall be designed to provide sufficient oxygen to the pond to maintain a residual oxygen concentration of 0.5 ppm (parts per million).

(12) The aeration systems shall be designed such that the oxygen requirements and residuals are provided without the use of the spray system.

(13) The aeration systems shall be designed to allow for expansion if the actual oxygen demand exceeds the oxygen demand uses in the design calculations.

(14) The permit granted by this order shall become effective only upon acceptance and certification by the applicant.

(15) The Division shall have the authority to administratively change any condition of this permit to protect fresh water, human health and the environment. Applicant may request a hearing upon any change which material affects the

operation of the facility.

(16) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

NEW MEXICO OIL CONSERVATION DIVISION

CASE 9955, ORDER R-9485
Exhibit A

SURFACE DISPOSAL FACILITY PERMIT
INITIAL CONDITIONS FOR APPROVAL
SUNCO TRUCKING WATER DISPOSAL COMPANY

I. Type of Operation

The major purpose of the facility shall be to dispose of salt water produced in connection with the production of oil and gas by evaporating such water in open pits using enhanced evaporation techniques as necessary and under those conditions which make such use safe.

Water shall be tested for hydrogen sulfide (H_2S) and treated, if necessary, in a closed system prior to introduction into a pond. Ponds shall be properly aerated to maintain oxygen levels as required by this permit. Contingency plans have been developed for H_2S buildup and for leaks as set forth herein.

II. Operator

The owner of the facility is:

Sunco Trucking Water Disposal Company
708 South Tucker Ave.
Farmington, NM 87401

III. Location of Disposal Pit

The facility shall be located at a site in the SW/4 NW/4 (Unit E), Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico. Said facility shall be constructed in accordance with the site plan submitted to the Division at hearing subject to any modifications directed or approved by the Division.

IV. Expansion Request

This is an application for a new facility to be constructed upon issuance of this permit.

V. Land Ownership

The land upon which the facility is to be constructed is owned in fee by Sunco Trucking Water Disposal Company.

VI. Storage/Disposal Facilities Description

A. The facility shall accept for disposal produced water, completion fluids and non-hazardous oilfield related waste for disposal

B. Fluids shall be received in an open skim tank, subject to the requirements for treatment set forth herein. Oil and other hydrocarbons shall be skimmed off and placed in closed storage tanks until sold. Treated and skimmed water shall be placed in open, synthetically double lined ponds with approved leak detection system for evaporation. The skim tank, oil storage tanks and ponds are to be located as shown on the site plan submitted at the hearing, subject to any modifications or changes required or approved by the Division.

VII. Engineering Design

A. The subject facility shall be constructed in accordance with the engineering designs presented at the hearing as applicant's exhibits no. 1, 2A, 2B, 3, 4 & 6 and in accordance with the following conditions and requirements set forth herein.

B. General Construction Requirements

1. Location

This approval is for the specific site and location identified. The location of any pit or pond shall not be changed from the submitted site plan without specific authorization from the Division.

2. Design and Construction

a. The ponds shall have a minimum freeboard of eighteen (18) inches. If overtopping occurs at any time, the freeboard shall be lowered to prevent a reoccurrence.

Liner markings or some other device shall be installed to accurately measure freeboard.

b. The pond shall be constructed so that the inside grade of the levee is no steeper than 2:1. Levees shall have an outside grade no steeper than 3:1.

c. The top of the levees shall be level and shall be at least eighteen inches (18") wide.

d. An aeration system shall be constructed to prevent anaerobic conditions from forming in a pond. Such system shall be able to provide sufficient oxygen in the pond to maintain a residual oxygen concentration of 0.5 parts per million (ppm) without the use of any spray system. The system shall be designed to permit expansion if actual oxygen demand exceeds the oxygen demand used in design calculations. Such plans and specifications, certified by a registered professional engineer, must be submitted to the Division for approval prior to actual construction.

e. Upon completion of construction "as-built" completion diagrams of the ponds and aeration systems certified by a registered professional engineer shall be submitted.

3. Synthetically Lined Evaporation Ponds

a. Materials -- Synthetic materials used for lining the evaporation ponds shall be impermeable flexible HDPE membrane as submitted in applicant's hearing exhibit no. 1, and no substitution of different material shall be made without prior approval of the Division.

b. Leak Detection System

(1) A leak detection system of an approved design shall be installed between the primary and secondary liner. The Aztec district office of the Division shall be notified at least 48 hours in advance of the scheduled installation of the primary liner to afford the opportunity for a Division representative to inspect the leak detection system.

(2) A network of slotted or perforated drainage pipes shall be installed between the primary and secondary liners. The main collector pipes shall be not less than four (4) inch diameter and the laterals shall be not less than two (2) inch diameter pipe. The network shall be of sufficient density so that no point in the pond bed is more than twenty feet (20') from such drainage pipe or lateral thereof. The material placed between the pipes and laterals shall be sufficiently permeable to allow transport of the fluids to the drainage pipe. The slope for all drainage lines and laterals shall be at least six inches (6") per fifty feet (50'). The slope of the pond bed shall also conform to these values to assure fluid flow towards the leak detection system. The drainage pipe shall convey any fluids to a corrosion-proof sump located outside the perimeter of the pond.

c. Preparation of Pond Bed for Installation of Liners

(1) The bed of the pond and inside grade of the levee shall be smooth and compacted, free of holes, rocks, stumps, clods, or any other debris which may rupture the liner. If necessary to prevent rocks from damaging the liner, the pond bed shall be covered with a compacted layer of sand or other suitable materials.

(2) A trench shall be excavated on the top of the levee the entire perimeter of the pond for the purpose of anchoring flexible liners. This trench shall be located a minimum of nine inches (9") from the slope break and shall be a minimum of twelve inches (12") deep.

(3) The liner shall rest smoothly on the pond bed and the inner face of the levees, and shall be of sufficient size to extend down to the bottom of the anchor trench and come back out a minimum of two inches (2") from the trench on the side furthest from the pond. Wrinkles or folds shall be placed at each corner of the pond in accordance with manufacturer's specifications to allow for contraction and expansion of the membrane due to temperature variations.

(4) The liners shall be properly vented in accordance with the design submitted as Applicant's Exhibit 2B.

(5) An anchor of used pipe or other similar material shall be placed over the liner in the anchor trench and the trench back-filled. The anchor trench shall extend the entire perimeter of the pond.

(6) The sand, gravel or geotextile membranae layers placed on top of the secondary liner shall be done in such a manner that the risk of tearing the liner is minimized.

(7) At any point of discharge into the pond(s), no fluid force shall be directed toward the liner.

4. Spray Evaporation Systems

a. Sprayer systems shall be included to enhance natural evaporation.

b. Engineering designs for the sprayer system must be submitted for approval prior to installation. An anemometer with automatic shutdown systems shall be installed which will automatically deactivate the spray systems when wind-born spray drift can be carried outside the confines of the ponds.

c. Spray systems shall be operated such that all spray remains within the confines of the lined portion of the ponds. The spray system shall be operated only when an attendant is on duty at the facility.

5. Skimmer Tanks

a. Required Use
Skimmer tanks shall be used to separate any oil from the water prior to allowing the water to discharge into the evaporation pond.

b. Design Criteria

The skimmer tank shall be designed to allow for oil/water separation only; oil shall be removed in a timely manner and stored in tanks. Per Division General Rule 310, oil shall not be stored or retained in earthen reservoirs or in open receptacles.

(1) The material of construction and/or design shall provide for corrosion resistance.

(2) Siphons or other suitable means shall be employed to draw water from oil/water interface for transfer to the evaporation pond. The siphon shall be located as far as possible from the inlet to the skimmer tank.

(3) The skimmer tank shall at all times be kept free of appreciable oil buildup to prevent oil flow into the evaporation pond.

6. Fences, Signs and Netting

a. A fence shall be constructed and maintained in good condition around the facility perimeter. Adequate space will be provided between the fence and levees for passage of maintenance vehicles. The fence shall be constructed so as to prevent livestock and people from entering the facility area. Fences shall not be constructed on levees.

b. A sign not less than 12" x 24" with lettering of not less than two inches (2") shall be posted in a conspicuous place on the fence surrounding the facility. The sign shall be maintained in legible condition and shall identify the operator of the disposal system, the location of the facility by quarter-quarter section, township, and range; and emergency telephone numbers.

c. To protect migratory birds, all tanks exceeding 16 feet in diameter, and exposed pits and ponds shall be screened, netted or covered. Upon written application by the operator, an exception to screening, netting or covering of a facility may be granted by the district supervisor upon a showing that an alternative method will protect migratory birds or that the facility is not hazardous to migratory birds.

VIII. Spill/Leak Prevention and Reporting Procedures (Contingency Plan)

A. Leak detection system sumps shall be inspected daily, and records of such inspections shall be made and retained and kept on file at the facility for OCD inspection at any time. If fluids are found in the sump the following steps will be immediately undertaken:

1. The operator shall notify the Division Aztec District Office within twenty-four (24) hours;

2. the fluids will be sampled and analyzed to determine the source; and

3. the fluids will be immediately and continuously removed from the sump. Such fluids may be returned to the pond.

B. If a leak is determined to exist in the primary liner, the operator will immediately undertake the following contingency measures:

1. Introduction of fluids into the pond will cease.

2. Enhanced evaporation will commence, provided atmosphere conditions are such that the spray systems can be operated in accordance with the provisions of this permit.

3. Fluids will be removed from the pond utilizing evaporation and transportation to another authorized facility, until the fluid level is below the location of the leak in the liner.

4. The liner will be repaired and tested and the leak detection system will be completely drained before resuming introduction of fluids into the pond.

IX. Operation and Maintenance

A. **Requirements for receipt of fluid.**

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

2. No produced water shall be received at the facility unless the transporter has a valid Form C-133 (Authorization to Move Produced Water) on file with the Division.

3. Only liquids that are non-hazardous by U.S. Environmental Protection Agency under Resource Conservation Recovery Act (RCRA) Subtitle C exemption or by characteristic testing will be accepted at the facility. Liquids and solids from operations not currently exempt under RCRA Subtitle C will be tested for appropriate hazardous constituents prior to disposal.

4. All liquids accepted for disposal shall be tested for hydrogen sulfide concentrations. All liquids with measurable hydrogen sulfide concentrations shall be treated in a closed system prior to introduction of liquids to any open tank or pond. The treatment reaction shall be driven to completion to eliminate all measurable hydrogen sulfide.

5. The operator shall keep and make available for inspection records for each calendar month on the source, location, volume and type of waste (produced water, spent acids, completion fluids, drilling mud, etc.), analysis for hazardous constituents (if required), date of disposal, and hauling company that disposes of fluids or material in the facility. Records of H_2S measurements and treatment volumes shall be maintained in the same manner. Such records shall be maintained for a period of two (2) years from the date of disposal.

6. The operator shall file forms C-117-A, C-118, and C-120-A as required by OCD rules.

7. Fluids shall not be accepted if introduction of the fluid will cause the pond freeboard to be less than that approved herein.

B. **Pond Maintenance.**

1. Outside walls of all levees shall be maintained in such a manner to prevent erosion. Inspections of the outside walls of the levees shall be made weekly and after any rainfall of consequence.

2. No oil shall be allowed in the pond(s).

C. **General Operational Requirements.**

1. Operating personnel shall be trained in the operation, calibration, maintenance and safety requirements of all test equipment used at the facility.

2. At least 1000 gallons of a treatment chemical shall be stored on-site and shall not be retained for a period in excess of the manufacturer's stated shelf life. Expired chemicals may be disposed of in the pond.

3. Prior to disposal, any accumulated sludge generated in the disposal facility shall be analyzed for composition and disposal pursuant to requirements determined by the OCD.

4. If any of the required systems become inoperative, the Aztec district office of the Division will be notified immediately.

X. Closure Plan

A. When the facility is to be closed, the operator shall provide for removal of all fluids and/or wastes, back-filling, grading and mounding of pits, cleanup of any contaminated soils. Wastes shall be disposed of in accordance with statutes, rules and regulations in effect at the time of closure.

B. OCD shall be notified when operation of the facility is discontinued for a period in excess of six months or when the facility is to be dismantled.

XI. Flood Protection

A. The facility will be constructed such that there will be no storm water runoff from the boundaries of the facility.

B. The operator will immediately notify the Aztec district office of the Division of any flooding or washouts.

XII. H_2S Prevention and Contingency Plan

A. In order to prevent development of harmful concentrations of hydrogen sulfide, the following procedures shall be followed:

1. Daily tests shall be conducted and records made and maintained of the pH in each pond, and if the pH falls below 7.0, remedial steps shall be taken immediately to raise the pH.

2. Weekly tests shall be conducted and records made and retained at the facility of the dissolved sulfide concentrations in the ponds.

3. Tests shall be conducted, and records made and retained at the facility of such tests, to determine the dissolved oxygen levels in each pond:

a. Tests shall be conducted at the beginning and end of each day, or at least twice per 24-hour period.

b. The sample for each test shall be taken one foot from the bottom of the pond.

c. The location of each test shall vary around the pond.

d. If any test shows a dissolved residual oxygen level of less than 0.5 ppm, immediate steps shall be undertaken to raise the oxygen level to at least 0.5 ppm, which measures may include adding bleach or increased aeration.

B. In order to prevent any harm by hydrogen sulfide gas, Tests of ambient H_2S levels shall be conducted, and records made and retained. Such tests shall be made at varying locations around the berm of the pond and shall be conducted twice per day. The wind speed and direction shall be recorded in conjunction with each test.

1. If an H_2S reading of 0.1 ppm or greater is obtained:

a. A second reading shall be taken on the downwind berm within one hour;

b. The dissolved oxygen and dissolved sulfide levels of the pond shall be tested immediately and the need for immediate treatment determined;

c. Tests for H_2S levels shall be made at the fence line, downwind from the problem pond.

2. If two consecutive H_2S readings of 0.1 ppm or greater are obtained:

   a. The operator shall notify the Aztec office of the OCD immediately;

   b. The operator shall commence hourly monitoring on a 24-hour basis;

   c. The operator will obtain daily analysis of dissolved sulfides in the pond.

3. If an H_2S reading of 10.0 ppm or greater at the facility fence line is obtained:

   a. The operator will immediately notify the OCD and the following public safety agencies:

      State Police
      County Sheriff
      County Fire Marshall;

   b. The operator will initiate notification of all persons residing within one-half ($\frac{1}{2}$) mile of the fence line and assist public safety officials with evacuation as requested.

XIII. Additional Information

The operator shall notify the Division of any additional information change in conditions which may be relevant to this permit.

XIV. Certification

Sunco Trucking Water Disposal Company, by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Sunco Trucking Water Disposal Company further acknowledges that this permit shall not become effective until Bond satisfactory to the Division is posted and that these conditions and requirements of this permit may be changed administratively by the Division for good cause shown as necessary to protect fresh water, human health and the environment.

Accepted:

SUNCO TRUCKING WATER DISPOSAL COMPANY

by _____
Title