CURTIS & DEAN
ATTORNEYS AT LAW
506 WEST ARRINGTON • P. O. DRAWER 1259
FARMINGTON, NEW MEXICO 87499

SCOTT M. CURTIS
JOHN A. DEAN, JR.

PHONE: 327-6031
AREA CODE 505

June 6, 1990

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
ATTN: Roger C. Anderson
Post Office Box 2088
State Land Office Building
Santa Fe, New Mexico 87504

RE: Sunco Trucking Water Disposal Commercial Waste Water Disposal Application; OCD Case 9955

Dear Mr. Anderson:

Pursuant to Rule 1208 of the Rules And Regulations of the Oil Conservation Division, I hereby enter my appearance on behalf of Sunco Trucking in the above referenced matter and request service of a copy of all pleadings, pleas or motions filed by the adverse parties herein.

Sincerely,

John A. Dean, Jr./ljg

JOHN A. DEAN, JR.

:ljg

cc: Sunco Trucking Company
Gary L. Horner, Esq.

SUNCO TRUCKING COMPANY

June 22, 1989

New Mexico Oil Conservation Division
310 Old Santa Fe Trail, Room 206
Santa Fe, NM 87503

Attn: Dave Boyer

Subject: Commercial Disposal Ponds
Section 2-T29N-R12W
San Juan County, NM

Dear Dave,

In addition to the attached application please find copies of the return mail receipts and a tabulation of the property owners within one half mile of the facility. A sample notification letter is attached as well.

The file sheet has been sent to the State Engineers Office for review and corrections, if necessary. Sunco Trucking Water Disposal request the permitting and notification processes, on behalf of O.C.D., begin at your convenience.

If you have any questions, please contact Robert C. Frank. He will be the contact person for this project. If I may be of any further assistance, please advise.

Very truly yours,

Robert C Frank Jr.

Charles Badsgard

RECEIVED

JUL - 2 1989

OIL CONSERVATION DIV.
SANTA FE

OOB

Applicant's List of Exhibits

1. Application dated May 19, 1989.
2. a. first sheet of diagram
   b. second sheet of diagram details of leak detection system etc
3. Sunco letter of August 18, 1989.
4. Sunco letter of April 17, 1990.
5. Sunco letter of May 18, 1990.
6. OCD (Roger Anderson) letter of July 20, 1989.
7. OCD (Roger Anderson) letter of November 3, 1989.
8. OCD (Roger Anderson) letter of May 2, 1990.
9. Affidavut of Compliance with Rule 1207
10. Proof of notice of filing of application

Work copy

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

May 19, 1989

New Mexico Oil Conservation Division
310 Old Santa Fe Trail Room 206
Santa Fe, NM 87503

Attn: Dave Boyer

Subject: Administrative Approval
Commercial Evaporation Ponds
NW 1/4, Sec. 2-T29N-R12W
San Juan County, New Mexico

Dear Mr. Boyer:

Sunco Trucking Water Disposal (STWD) requests administrative approval for a lined commercial evaporation pond. The revised August 1988 Guidelines for Permit Application, Design and Construction of Waste Storage/Disposal Pits will be used, as presented and as applicable, for the format of this application.

I. General Information

A. Owner: Sunco Trucking Water Disposal
708 S. Tucker Ave.
Farmington, NM 87401
(505) 327-0416

B. Contact Person: Robert C. Frank
P.O. Box 308
Farmington, NM 87499
(505) 325-8729

1 ask for better topo, and
2 county San Juan? yes
3 access road location (site plan)

C. Location: SW 1/4, NW 1/4 Sec. 2-T29N-R12W
Attached please find a topo map and site plan for the proposed facility. The access will be gained from County Road 3500. The location of skimmer pit and unloading/holding tanks is indicated on the site plan.

D. The major purpose of this facility is for the disposal, by evaporation of produced water from the San Juan Basin. The water will be trucked into location and unloaded into above ground tanks with the oil collected and stored for future treating and sale and the water drained off the bottom into a skimmer pond. The skimmer pond will serve as a back up to the tanks. The second and third ponds will be built as market conditions dictate. Each pond will be equipped with an aeration system and a spray system. The aeration system will be operable from start up and the sprayers will be utilized as market conditions dictate.

make sure sprayer system designed so prevent frost

E. Three copies of the application have been provided.

F. "I hereby certify that I am familiar with the information contained in and submitted with this application and that such information is true, accurate and complete to the best of my knowledge and belief.

George E Coleman

Signature

JUNE 16, 1989

Date

GEORGE E. COLEMAN

Printed Name

PRESIDENT

Title

II. General Description

A. Proposed Operations

1. The facility will be built pursuant to the attached diagram. The facility will be equipped with one unloading tank, two storage tanks, one skimmer pit and three large evaporation ponds. Ponds number two and three will be built as market conditions dictate. At this time the only fluids to be accepted are produced water from oil and gas operations.

2. A. Surface impoundments:

Produced Water will be the only effluent stored. Below please find a tabulation of the pond specifications.

	Area (ft. ^{2})	Volume *(bbls)	Depth (ft.)	Slope (Inside & Outside)
Skimmer Pond	1,963	2,300	11'	3:1
Pond 1	90,000	195,000	15'	3:1
Pond 2	90,000	195,000	15'	3:1
Pond 3	90,000	195,000	15'	3:1
Total	271,963	587,300		

The subsurface consists of a sandy loam material. The subgrade will be prepared, placed in 6" to 9" lifts and compacted to 95% of proctor and + 4% of optimum moisture. The actual values will be determined by an independent laboratory testing firm.

The secondary liner will be made of 30 mil or greater PVC. The primary liner will be made of 30 mil or greater CPER or equivalent. The primary line is resistant to sunlight, hydro-carbons, fungus, algae, bacteria and salt water. The secondary liner is resistant to hydrocarbons, fungus, algae, bacteria and salt water. Each liner will be laid in the ponds by rolls and then seamed together. The leak detection system will consist of 1" perforated laterals draining to a central 2" line which will drain to a sump outside of the berm.

The freeboard will be 1.5' leaving the pond a maximum height of 13.5' of water. There will be no runoff or runon as the ponds will be self contained and the drainage diverted away from the ponds. The ponds are on a gentle slope with no major drainage problems.

B. There are no drying beds anticipated at this time. If the need arises the OCD will be notified prior to any such work being implemented.

C. Nothing anticipated.

3. A. Ancillary Equipment

The ponds will be equipped with a commerical aeration system. The aeration systems will placed in bottom of * ponds and will consist of three rock diffusers. The loc of the diffusers will be equidistant (as close as practi

from each other. They will be anchored to the pond bottom by bricks and or sand tubes. A second aeration system will be placed in the pond bottom as well. This system will consist of a network of perforated 1" and 2" PVC pipe. The system will be able to circulate either a liquid or gaseous medium. Further details will be forwarded as it becomes available.

The ponds will be equipped with sprayers. The sprayers will be located on a floating island. The island will be anchored to the sides of the pond. The island will consist of at least four nozzles and eight jets. The exact configuration is not known at this time. The sprayers will be supplied by a centrifugal pump with a capacity of at least 14 BWPM. The power supply for the pump will be either a natural gas or electric motor.

At this time no other ancillary equipment is anticipated.

B. Spill/Lead Prevention and Procedure

1. In as much as the ponds will be double lined, and with the ponds sloped to a sump there will be no other containment or clean up apparatus necessary. If a leak is detected the leak detection system will be pumped into one of the other ponds and the pond that is leaking will be lowered until such depth as the water depth is below the leak. The liner repaired and the pond placed back into operation.

   If there is only one pond at the time the leak is detected, and weather permitting, the pond will be artificially evaporated until the water depth is below the leak. The leak detection sump will be recycled to the main pond. If at this time market conditions warrant a second pond will be built and the leaking pond will be repaired.

   The OCD will be notified within 2 working days of any leaks.

2. The leak detection system will be the only means in which leaks are to be detected. The sumps will be inspected at least weekly. If leaks are detected the procedure outlined above in B.1 will be followed.

C. Closure Plan

1. At that point in time when the facility is to be closed the ponds will be evaporated and left to dry for one year. After the drying period the salts will be marketed if an economical market exists or they will be buried on site, in the original plastic. The ponds berms will be backfilled in to cover the pond and the area recontoured as near as practical to the original contours. The area will then be reseeded.

III. Site Characteristics

A. Hydrologic Features

1. The nearest running water is the Animas River which is approximately 1-1/2 miles North. The State Engineers Office in Albuquerque, NM was consulted as to the location of the nearest water well. There is a well reported in the SE4, SE4 of Section 34-T30N-R12W. The well encountered water at 25'. The total depth of the well is 107'. A copy of the well record is attached. The well is used for household and livestock watering purposes. A field inspection of the reported quarter section revealed that the well is either abandoned or mis-located in the records.
2. This information is not available as there is no ground water reported within 1 mile of the facility.
3. The flow direction of ground water most likely to be affected by any leak is Northwesterly based upon topography.
4. A water sample can not be obtained as mentioned above therefore no analysis is available.

B. Geologic Description of Pit Site

1. The pit site rests on a paleoerosional surface as evidenced by the attached drillers log. Nine test holes were drilled to determine the soil mechanics. The soil type ranges from a clay/sand mixture to silt/sand mixture and cobbles/boulders.
2. The name and depth of the most shallow aquifer is unknown.
3. Not available
4. Not available.

C. Flood Protection

1. The flooding potential at the pit site with respect to major precipitation and/or run off is minimal at best as the pond will be maintained with at least a 1-1/2' freeboard. The facility is located on top of a broad ridge well out of any established water courses. In any event drainage away from the ponds will be accomplished by diversion ditches cut on the uphill side of the facility.
2. The pond is well out of the 100 year flood plain.
3. The outside of the site will be checked after each major rainfall. The OCD will be notified of any significant erosion.

IV. In as much as these ponds are to be synthetically lined no further information is necessary at this time.

V. General Construction Requirements

A. Those ponds are out of any water courses.

B. The natural evaporative capacity for each pond is approximately 175 BWPD. This is based on a net evaporation rate of 48"/year and 90,000 ft^2 surface area. As mentioned earlier

sprayers will be installed as market conditions warrant. The anticipated enhanced evaporation rate is 1050 BWPD per pond. The holding capacity of each pond is approximately 195,000 barrels of water. Being that this is a commercial operation with a relatively infinite market the pond can not be sized to known produced water volumes. As mentioned earlier market conditions will dictate the operations of this facility.

Wave caculations for a pond with this small of a fetch is difficult. Interpolation of a graph supplied by the US Army Corp. of Engineers indicates that a unidirectional 40 mph sustained wind along the maximum fetch of 424' will generate a 6" wave. Sustained winds of this magnitude in this area are not common. The likelihood of a sustained wind along the maximum fetch are remote at best. The wave run up is estimated at 3". The total wave action on the dike is 9". The average yearly rainfall for this area is 12". With the rainfall occuring over the entire year, we feel that an 18" freeboard is adequate.

3. Both the inside and outside slopes of all ponds will be 3:1.

4. The traveling surface of the level top will be twelve feet.

5. The ponds will be equipped with a commercial aeration system consisting of three rock diffusers and an air compressor. The second system will be a network of perforated PVC pipe laid in the bottom of the pond. The second system will be able to circulate either a liquid or gaseous medium.

C. Synthetically Lined Evaporation Pits.

1. Materials

a. The liners will be flexible

b. Not applicable

c. The liners will be at least 30 mils thick

d. Both the primary liner and secondary liner will be resistant to hydrocarbons, salts, acidic and alkaline solutions, fungus, bacteria and rot. In addition the primary liner will be resistant to ultraviolet light.

D. The ponds will be equipped with a leak detection system.

2. a. The OCD office in Aztec will be notified at least 24 hours in advance of the primary liner installation.

b. A drainage and sump leak detection system will be used.

c. Not applicable

d. The leak detection system will consist of 1" perforated PVC laterals draining at a 2% grade to a 2" PVC main line. The 2" PVC main line will drain at 1% to a corrosion proof sump which will be located outside of the berm. No point in the pond bottom will be greater than 20' from a detection line.

3. a. The bed of the pit and the inside and outside grades of the levee will be smooth, compacted to 95% of proctor, free of holes, rocks, stumps, clods or other debris which could rupture the liner. The onsite characteristics should allow for the liners to be placed directly on the finished berm.

b. An anchor trench will be excavated 6" wide, 12" deep and set back from the slope break. — minimum 9" from slope break

4. a. The OCD office in Aztec will be notified at least 24 hours prior to secondary liner installation.
   b. The liner will be installed and the joints sealed pursuant to the manufacturers specifications.
   c. The liner will rest smoothly on the pit bed and inner face of the levey and shall be of sufficient size to extend to the bottom of the anchor trench and back out a minimum of two inches from the trench on the side furthest from the pond. Folds in the liner will be located in the pit corners to compensate for temperature fluctuations good
   d. Two gas vents will be installed on each side of each pond. The liner will be resting on a sandy loam material which should be adequate for venting purposes. A sieve test will be run on the material to be certain no more than 5% of the material will pass through a 200 sieve. The vents will be located approximately 9" down from the berm, break. below secondary liner
   e. Used casing on equivelant will be used to anchor the liner in the liner trench.
   f. Not applicable (Sun resistant) — manufacturing specs
   g. All sand or gravel placement will be completed so as to not jeopardize the liner on which it is placed.
   h. All siphons and discharge lines will be directed away from the liner. (Drain line plans btwn ponds?) to prevent fluid force against liner ??

E. Clay lined Pits
Not applicable

capped and slotted 8" PVC down slopes OK of pits

F. Skimmer Ponds/Tanks
   1. Skimmer tanks and a skimmer pond will be used. Water will be drained from the bottom of the tanks into the skimmer pond. Water will be gravity siphoned from the skimmer pond to the main evaporation pits.
   2. As mentioned above water will be drained from the tanks and subsequently the oil will be stored in tank(s) for future treatment and sale.
      a. The skimmer pit will be built as the main ponds including two liners and a leak detection system.
      b. The skimmer tank will be corrosion resistant and open to the air on one side for leak detection purposes
      c. The siphon will be located as far from the skimmer tank as possible
      d. The skimmer pond will be kept clean of appreciable oil. The entry into the siphon will be at least 2' below the horizontal member of the siphon. The vertical siphon top will be set above the top of the skimmer pond.
      e. Not applicable

Bermed to retain 1/3 more volume

looks like 60.5' OK

G. Fences and Signs
   1. A fence will be constructed around the entire facility. The fence will be of sufficient strength to keep livestock out of the facility. The fence will be closed and locked at all times when the pond is not manned.

all of levees? OK

2. A sign at least 12" X 24" with 2" lettering will be placed at the facility entrance and will identify the owner/operator, location and emergency phone numbers.

H.

1. The leak detection sumps will be checked for leaks weekly
2. The outside of the berms will be maintained so as to prevent erosion. After each rain the pond perimeters will be walked to inspect for wash outs.

I. Contingency Plan

As mentioned earlier if a leak is detected the OCD will be notified within one working day. The sump will be continually pumped into the pit that is leaking or into a seperate pit. The pond that is leaking will be drained so that the water is below the liner tear and the liner repaired. The pit will be placed back into operation.

Each load will be tested for H_2S. If H_2S is detected that load will be isolated and the operator will determine if the water is to be removed or if STWD will treat the load. If STWD treats the load sufficient chlorine will be added so that residual chlorine is present prior to the water being drained into the skimmer pond.

The ponds will be maintained in an aerobic state. H_2S should not be a problem as each pond has three systems in which to keep the pond aerobic.

Drillers Log

Hole 1 SE Corner Pond 1

Depth	Description
0-2	Red brown clay/sand; 50/50, topsoil
3-6	Tan Silt, powderey, 25% Clay
6-9	Med. Brown Silt, 15% Clay grading to siltstone, medium hard.
9-10	Light gray sandstone, Med grain, Subround, 30% Clay, Poor sorting

Hole 2 SW Corner Pond 1

Depth	Description
0-3	Red brown clay/sand; 50/50, Topsoil
3-4	Light brown clay, 40% very fine grain sand
4-6	Light grey silt/sand with 20% Clay
6-9	Light grey-tan sandstone, meduim grain subround, poor sorting, 20-30% clay hard

Hole 3 NW Corner Pond 1

Depth	Description
0-2	Red brown clay, 5-10% silt
2-3	Red brown clay, 10% sand, 15% silt
3-4	Light grey to tan silt, 10% sand medium hard grading to siltstone.
4-10	Light grey-tan sand, fine grain, 15% silt, 10% clay medium hard.
10-26.5	Tan sand, medium grain to sub coarse grain, subangular to subround, poor sorting, very friable 0-20% silt

Drillers Log Continued

Hole 4 — 60'NE of SW Corner of Pond 2

Depth	Description
0-2	Red brown clay, 10% sand
2-7	Tan sand, unconsolidated, 15-20% silt, very fine grain, fair sorting
7-8	Light grey silt, 25-35% Sand, 35% Clay
8-12	Tan sandstone, fine to meduim grain, fair sorting, subround 25% silt, 10% clay, moderately friable. Auger refusal at 12!

Hole 5 — SE Corner of Pond 2

Depth	Description
0-1	Red brown clay, 10% sand
1-6	Light grey sand interbedded with red brwon clay, 50/50, mod cement with anhydrite. Sand is very fine grain and well rounded.
6-7.5	Buff colored sand, very fine grain, well rounded, well sorted, 50% silt
7.5-8	Tan sand, coarse grain, angular. Very fiable, moderately cemented fair sorting
8-10	Tan Sand, very fine grain, fair rounding, 25% silt, 25% Anhydrite
10-10.5	Tan sand and clay 50/50
10.5-13	Light brown sandstone, very fine grain, fair sorting, well rounded, 10% clay, hard

Hole 6 — SE Corner Pond 3

Depth	Description
0-4	Red brown clay, 10% sand
4-8	Tan Silt
8-12	Tan sand, very fine grain, subround, well sorted, 15% silt
12-18	As above, fine grain, subangular
18-20	Grey brown clay, 10% silt, powdery

Hole 7 — NW Corner Pond 2

Depth	Description
0-4	Red brown clay, 10% sand occassional gravel
4-9	Light grey to buff silt, 20% sand, Anhydrite
9-13	As above, tan
13-17	Tan Sand, very fine grain, subround. fair sorting, 15% silt
17-20	Grey brown clay, 10% silt, Powdery

Drillers Log Continued

Hole 7 NW Corner Pond 2

Depth	Description
0-4	Red brown clay, 10% sand occassional gravel
4-9	Light grey to buff silt, 20% sand, Anhydrite
9-13	As above, tan
13-17	Tan Sand, very fine grain, subround. fair sorting, 15% silt
17-20	Grey brwon clay, 10% silt, Powdery

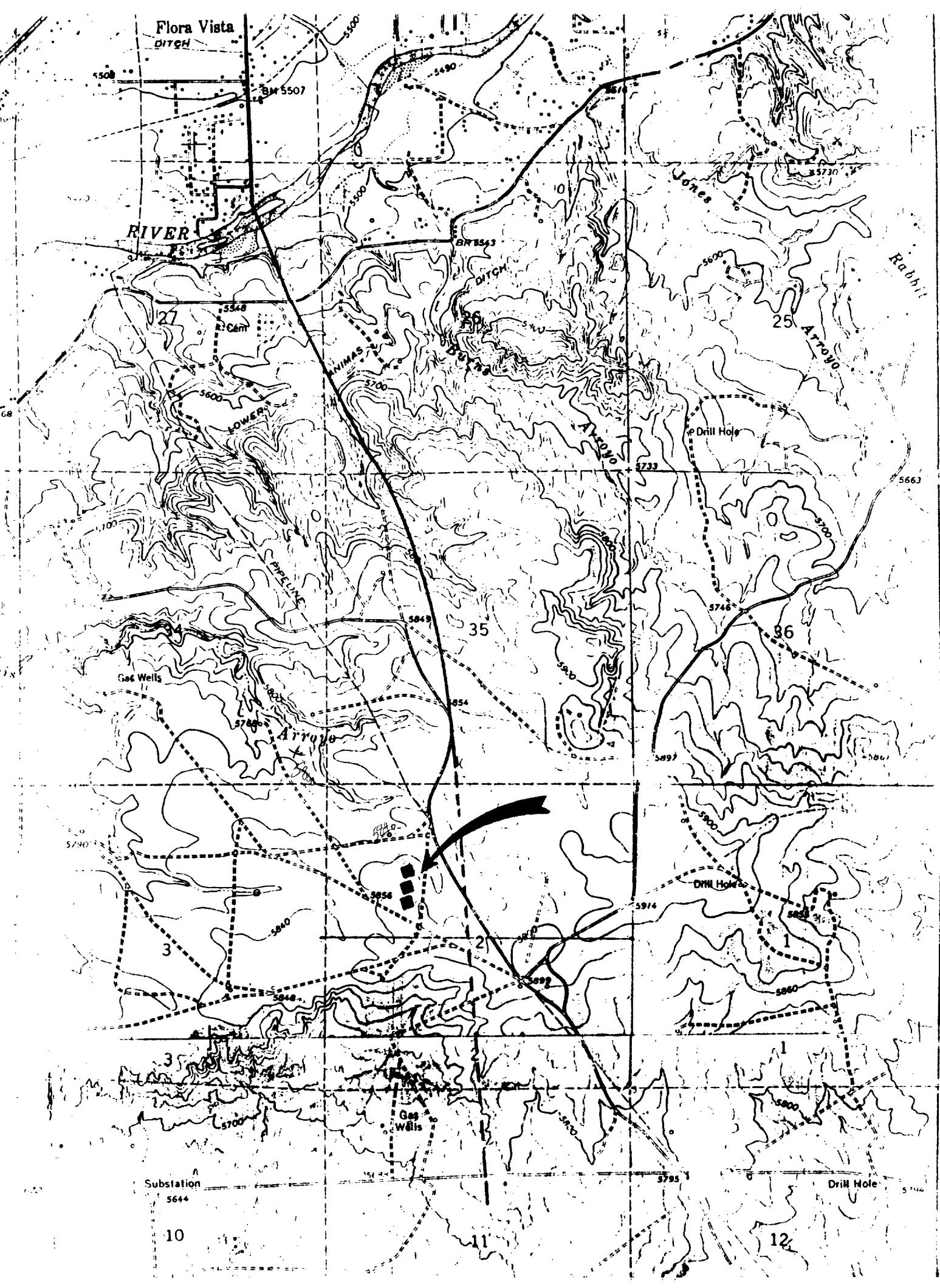
Hole 8 NW Corner Pond 3

Depth	Description
0-2.5	Red brown clay, 15% sand
2.5-4	Tan sand mottled with red brown clay, 35%.
4.5-5.5	Buff silt, sand 40%, anhydrite 10%
5.5-8	Tan sand fine to medium grain, well sorted, fair rounding, 20% silt, trace anhydrite, occassional gravel 10%
8-12	Tan sand medium to coarse grain, subangular, poor sorting, 20% gravel, 10% silt
12-15	Grey brown clay, mottled with light grey sand and red brown clay
15-17	Cobbles/Boulders. Auger refusal at 17'

Hole 9 NE Corner Pond 3

Depth	Description
0-2	Dark Red brown clay, 10% sand
3-4	Red brown silt, 10% sand, 30% clay
4-12.5	Tan Sand, Fine grain, subround well sorted, 10-30% Clay, trace anhydrite
12.5-13	Brown Grey clay, mottled with light grey clay
13-15	Light grey clay
15-18	Cobbles/Boulders. Auger refusal at 18"

end


Flora Vista
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Gas Wells
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HC # 71909
$2.00 SF

READ INSTRUCTIONS ON BACK

Revised March 1972

APPLICATION TO APPROPRIATE UNDERGROUND WATERS IN ACCORDANCE WITH SECTION 75-11-1 NEW MEXICO STATUTES

77 AUG 11 P 1:55

STATE ENGINEER OFFICE
DISTRICT I
ALBUQUERQUE, N. MEX.

1. Name and Address of Applicant:

SCOTT TRUST

P. O. BOX "O"

AZTEC, NEW MEXICO 87410

File No. SJ-428

2. Describe well location under one of the following subheadings:

a. _____ ¼ SE ¼ SE ¼ of Sec. 34 Twp. 30 Rge. 12 N. M. P. M., in San Juan County.

b. Tract No. _____ of Map No. _____ of the _____

c. Lot No. _____ of Block No. _____ of the _____ Subdivision, recorded in _____ County.

d. X = _____ feet, Y = _____ feet, N. M. Coordinate System _____ Zone in the _____ Grant.

e. Give street address or route and box No. of property upon which well is to be located, or location by direction and distance from known landmarks _____

3. Approximate depth (if known) _____ feet; outside diameter of casing under 7 in inches.

Name of driller (if known) John C. Hargis Jr.

4. Use of water (check appropriate box or boxes):

- [X] Household, non-commercial trees, lawn and garden not to exceed 1 acre.
- [X] Livestock watering.
- [ ] Drinking and sanitary purposes and the irrigation of non-commercial trees, shrubs and lawns in conjunction with a commercial operation.
- [ ] Prospecting, mining or drilling operations to discover or develop natural resources.
- [ ] Construction of public works, highways and roads.

If any of the last three were marked, give name and nature of business under Remarks. (Item 5)

STATE ENGINEER OFFIC
SANTA FE, N.M. 87501
AM 11 54

5. Remarks: _____

I, Sandy Scott, affirm that the foregoing statements are true to the best of my knowledge and belief and that development shall not commence until approval of the permit has been obtained.

Scott Trust, Applicant

By: Sandy Scott

Date: July 31, 1977

ACTION OF STATE ENGINEER

This application is approved for the use indicated, subject to all general conditions and to the specific conditions numbered 4 on the reverse side hereof. This permit will automatically expire unless this well is drilled or driven and the well record filed on or before 8/31/78.

S. E. Reynolds, State Engineer

By: J. K. Cousens

J. K. Cousens, Engineer, Water Rights Div.

Date: Aug. 9, 1977

File No. SJ-428

GENERAL CONDITIONS OF APPROVAL

A. The maximum amount of water that may be appropriated under this permit is 3 acre feet in any calendar year.

B. The well shall be drilled only by a driller licensed in the State of New Mexico in accordance with Section 75-11-13 New Mexico Statutes Annotated. A licensed driller shall not be required for the construction of a driven well; provided, that the casing shall not exceed two and three-eights (2 3/8) inches outside diameter (Section 75-11-13).

C. Driller's log must be filed in the office of the State Engineer within 10 days after the well is drilled or driven. Failure to file the log within that time shall result in automatic cancellation of the permit. Log forms will be provided by the State Engineer upon request.

D. The casing shall not exceed 7 inches outside diameter except under specific conditions in which reasons satisfactory to the State Engineer are shown.

E. If the well under this permit is used at any time to serve more than one household, livestock in a commercial feed lot operation, or any other commercial purpose, the permittee shall comply with Specific Conditon of Approval number 5(b).

F. In the event this well is combined with other wells permitted under Section 75-11-1 New Mexico Statutes Annotated, the total outdoor use shall not exceed the irrigation of one acre of non-commercial trees, lawn, and garden, or the equivalent outside consumptive use, and the total appropriation for household and outdoor use from the entire water distribution system shall not exceed 3 acre feet per annum.

SPECIFIC CONDITIONS OF APPROVAL

(Applicable only when so indicated on the other side of this form.)

1. Depth of the well shall not exceed the thickness of the (a) the valley fill or (b) Ogallala formation.
2. The well shall be constructed to artesian well specifications and the State Engineer Office shall be notified before casing is landed or cemented.
3. Appropriation and use of water under this permit shall not exceed a period of one year from the date of approval.
4. Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.
5. A totalizing meter shall be installed before the first branch of the discharge line from the well and the installation shall be acceptable to the State Engineer; the State Engineer shall be advised of the make, model, serial number, date of installation, and initial reading of the meter prior to appropriation of water and pumping records shall be submitted to the District Supervisor (a) for each calendar month, on or before the 30th day of the following month (b) on or before the 10th of January, April, July and October of each year for the three preceding calendar months (c) for each calendar year on or before the 30th day of January of the following year.
6. The well shall be plugged upon completion of the permitted use and a plugging report shall be filed in the office of the State Engineer within 10 days.
7. Final approval for the use of the well shall be dependent upon a leakage test made by the State Engineer Office.
8. Use shall be limited strictly to household and/or drinking and sanitary purposes; water shall be conveyed from the well to the place of use in closed conduit and the effluent returned to the underground so that it will not appear on the surface. No irrigation of lawns, garden, trees or use in any type of pool or pond is authorized under this permit.

INSTRUCTIONS

The application shall be made in the name of the actual user of the well for the purpose specified in the application.

The application shall be executed in triplicate and forwarded with a $1.00 filing fee to the appropriate office of the State Engineer.

A separate application must be filed for each well to be drilled or used.

If well to be used is an existing well, an explanation (and file number, if possible) should be given under Remarks. (Item 5.)

Applications for appropriation, well logs and request for information in the following basins should be addressed to the State Engineer at the office indicated;

Bluewater, Estancia, Rio Grande, and Sandia Basins
District No. 1, 505 Marquette NW, Room 1023, Albuquerque, New Mexico 87101

Capitan, Carlsbad, Fort Sumner, Hondo, Jal, Lea, Penasco, Portales, Roswell, and Upper Pecos Basins
District No. 2, Box 1717, Roswell, New Mexico 88201

Animas, Gila-San Francisco, Hot Springs, Las Animas Creek, Lordsburg, Mimbres, Nutt-Hockett, Playas, San Simon, and Virden Valley Basins
District No. 3, Box 844, Deming, New Mexico 88030

Canadian River Basin
State Engineer Office, State Capitol, Bataan Memorial Bldg., Santa Fe, New Mexico 87501

'77 SEP 23 PM 1 23 Revised June 1972

STATE ENGINEER OFFICE

WELL RECORD

STATE ENGINEER OFFIC
SANTA FE, N.M. 87501

Section 1. GENERAL INFORMATION

(A) Owner of well Scott Thust Owner's Well No. #2
Street or Post Office Address P.O. Box (6)
City and State Aztec ,New Mexico 87410

Well was drilled under Permit No. S.J. 428 and is located in the:

a. ____ ¼ ____ ¼ SE ¼ SE ¼ of Section 34 Township 30 Range 12 N.M.P.M.

b. Tract No. ____ of Map No. ____ of the ____

c. Lot No. ____ of Block No. ____ of the ____
Subdivision, recorded in ____ County.

d. X= ____ feet, Y= ____ feet, N.M. Coordinate System ____ Zone in the ____ Grant.

(B) Drilling Contractor John C .Hargis License No. WD.724

Address RT.1 Box 260-B Aztec New Mexico

Drilling Began 20 Sept. Completed 21 Sept. Type tools Cable/? Size of hole 8' in.

Elevation of land surface or ____ at well is ____ ft. Total depth of well 107 ft.

Completed well is ☒ shallow ☐ artesian. Depth to water upon completion of well 25 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
25	30	5	Dark Blue Water Sand	5
90	107	17	Blue Water Sand	5- 6

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	Perforations To
8'	24	Weld	0	10- 5	10-5	None	Surface	
5'	Plastic		0	107	107		60	100

77 SEP 28 P 1:34
STATE ENGINEER OFFICE
ALBUQUERQUE, N. MEX.

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement

Section 5. PLUGGING RECORD

Plugging Contractor ____
Address ____
Plugging Method ____
Date Well Plugged ____
Plugging approved by:
____
State Engineer Representative

No.	Depth in Feet Top	Depth in Feet Bottom	Cubic Feet of Cement
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received 9/23/77

Quad ____ FWL ____ FSL ____

File No. SJ-428 Use Dom. Location No. 30N.12W.34 440
San Juan Co.

Section 6. LOG OF HOLE

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color and Type of Material Encountered
0	25	25	Boulders @ Brown Sand
25	30	5	Drrk Blue Water Sand
30	90	60	Sandy Shale
90	107	17	Dark Blue Water Sand
			Gravel Pack 107' Of Hole

Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

John C. Hargis
Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

'77 SEP 23 PM 1 23 Revised June 1972

STATE ENGINEER OFFICE

WELL RECORD

STATE ENGINEER OFFIC
SANTA FE, N.M. 87501

Section 1. GENERAL INFORMATION

(A) Owner of well Scott Trust Owner's Well No. #2
Street or Post Office Address P.O. Box (0)
City and State Aztec ,New Mexico 87410

Well was drilled under Permit No. S.J. 428 and is located in the:

a. ____ ¼ ____ ¼ SE ¼ SE ¼ of Section 34 Township 30 Range 12 N.M.P.M.

b. Tract No. ____ of Map No. ____ of the ____

c. Lot No. ____ of Block No. ____ of the ____
Subdivision, recorded in ____ County.

d. X= ____ feet, Y= ____ feet, N.M. Coordinate System ____ Zone in the ____ Grant.

(B) Drilling Contractor John C .Hargis License No. WD.724

Address RT.1 Box 260-B Aztec New Mexico

Drilling Began 20 Sept. Completed 21 Sept. Type tools Cable/? Size of hole 8' in.

Elevation of land surface or ____ at well is ____ ft. Total depth of well 107 ft.

Completed well is [#] shallow [ ] artesian. Depth to water upon completion of well 25 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
25	30	5	Dark Blue Water Sand	5
90	107	17	Blue Water Sand	5- 6

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	Perforations To
8'	24	Weld	0	10- 5	10-5	None	Surface	
5'	Plastic		0	107	107		60	100

77 SEP 28 P 1:34
STATE ENGINEER OFFICE
ALBUQUERQUE, N. MEX.

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement

Section 5. PLUGGING RECORD

Plugging Contractor ____
Address ____
Plugging Method ____
Date Well Plugged ____
Plugging approved by:
____
State Engineer Representative

No.	Depth in Feet Top	Depth in Feet Bottom	Cubic Feet of Cement
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received 9/23/77

Quad ____ FWL ____ FSL ____

File No. SJ-428 Use Dom. Location No. 30N.12W.34 440

San Juan Co.

Section 6. LOG OF HOLE

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color and Type of Material Encountered
0	25	25	Boulders @ Brown Sand
25	30	5	Drrk Blue Water Sand
30	90	60	Sandy Shale
90	107	17	Dark Blue Water Sand
			Gravel Pack 107' Of Hole

Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

John C. Hargis
Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

SUNCO TRUCKING COMPANY
WATER AND OILFIELD HEAVY HAULING P.O. BOX 443, FARMINGTON, NM 87499 (505) 327-0416

June 13, 1989

Lawerence H. Woodard and Arloa R. Woodard, Trustees
P. O. Box 12356, Station F
Albuquerque, New Mexico 87105

New Mexico Oil and Gas Conservation Division requires anyone permitting an application for the design and construction of a waste storage/disposal pit to notify all property owners within a one half mile radius of proposed construction site.

Sunco Trucking Company is notifying said property owners that the design and construction of a waste storage/disposal pit is being applied for in (SW¼NW¼), Section 2, Township 29 North, Range 12 West.

If you have any questions, please contact the New Mexico Oil & Gas Conservation Division.

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:	4. Article Number
DEWEY K. FOUTZ P. O. BOX 1356 PAGOSA SPRINGS, COLORADO 81147	P 718 636 977
	Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address X D K Foutz	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature — Agent X	
7. Date of Delivery 6/19/89	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:	4. Article Number
MORNINGSTAR CORPORATION P. O. DRAWER 9 FARMINGTON, NEW MEXICO 87499	P 718 636 973
	Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address X	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature — Agent X Sandra McMahon	
7. Date of Delivery	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:	4. Article Number
BLM LAND 1235 LA PLATA HIGHWAY FARMINGTON, NEW MEXICO 87401	P 718 636 974
	Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address X L. Crow	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature — Agent X	
7. Date of Delivery 6/19/89	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:	4. Article Number
JOHN S. SCOTT 5301 MARCY PLACE FARMINGTON, NEW MEXICO 87401	P 718 636 979
	Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address X John Scott	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature — Agent X	
7. Date of Delivery 6-15-89	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEI

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
LAWERENCE WOODARD AND ARLOA WOODARD
P. O. BOX 12356, STATION F
ALBUQUERQUE, NEW MEXICO 87105

4. Article Number
P 718 636 972

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X Patricia Thurston

6. Signature — Agent
X

7. Date of Delivery JUN 14 1989

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
MARIDES FOUTZ WYNN & VALARIE FOUTZ HATCH
5108 SCHMITT ROAD
FARMINGTON, NEW MEXICO 87401

4. Article Number
P 718 636 978

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X Celeste K. Johnson

6. Signature — Agent
X WW

7. Date of Delivery
6/14/89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
H.W. HORNER AND DORIS J. HORNER
4111 SKYLINE DRIVE
FARMINGTON, NEW MEXICO 87401

4. Article Number
P 718 636 975

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X Doris J. Horner

6. Signature — Agent
X

7. Date of Delivery
6-16-89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SAN JUAN COUNTY ABSTRACT & TITLE COMPANY

THE FOLLOWING TRACTS WITHIN APPROXIMATELY ONE-HALF (½) MILE OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER (SW¼NW¼) OF SECTION TWO (2), IN TOWNSHIP TWENTY-NINE (29) NORTH OF RANGE TWELVE (12) WEST, N.M.P.M., SAN JUAN COUNTY NEW MEXICO

TRACT 1:
GEORGE E. COLEMAN and BARBARA M. COLEMAN
Drawer 3337
Farmington, New Mexico 87499

The SW¼NW¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 1099 Page 4

TRACT 2:
GEORGE E. COLEMAN and BARBARA M. COLEMAN
Drawer 3337
Farmington, New Mexico 87499

The N½NW¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 1099 Page 4

TRACT 3:
LAWRENCE H. WOODARD and ARLOA R. WOODARD, Trustees
P.O. Box 12356, Station F
Albuquerque, New Mexico 87105

The S½NE¼ and the NW¼NE¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 1012 Page 302

TRACT 4:
MORNINGSTAR CORPORATION
P.O. Drawer 9
Farmington, New Mexico 87499

The SE¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 939 Page 410
Book 1088 Page 153

TRACT 5:
NO PATENT OF RECORD
BLM LAND

The SW¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M.

1235 La Plata Hiway Farmington 87401

TRACT 6:
H. W. HORNER and DORIS J. HORNER
4111 Skyline Drive
Farmington, New Mexico 87401

The approximate East 865 feet of the E½E½ of Section 3, in Township 29 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 904 Page 351

TRACT 7:
DEWEY K. FOUTZ
P.O. Box 1356
Pagosa Springs, Colorado 81147

The approximate West 877.89 feet of the East 1742.89 feet of the E½E½ of Section 3, in Township 29 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 1090 Page 218

TRACT 8:
MARIDES FOUTZ WYNN and VALARIE FOUTZ HATCH
5108 Schmitt Road
Farmington, New Mexico 87401

The W½E½ of Section 3, in Township 29 North of Range 12 West, except that as described in Tract 7 above.
(Copy of deed attached) Book 879 Page 247

-SEE CONTINUATION-

TRACT 9:
JOHN S. SCOTT
5301 Marcy Place
Farmington, New Mexico 87401

The E½SE¼ of Section 34, in Township 30 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 914 Page 540

TO June 1, 1989, 4:30 P.M.

SAN JUAN COUNTY ABSTRACT & TITLE COMPANY

By _____
President

OFT/gw
Enclosures

Sunco T[illegible]king Water Disposal
708 S. Tucker Ave.
Farmington, NM 87401

May 19, 1989

New Mexico Oil Conservation Division
310 Old Santa Fe Trail Room 206
Santa Fe, NM 87503

9955

Attn: Dave Boyer

Subject: Administrative Approval
Commercial Evaporation Ponds
NW 1/4, Sec. 2-T29N-R12W
San Juan County, New Mexico

Dear Mr. Boyer:

Sunco Trucking Water Disposal (STWD) requests administrative approval for a lined commercial evaporation pond. The revised August 1988 Guidelines for Permit Application, Design and Construction of Waste Storage/Disposal Pits will be used, as presented and as applicable, for the format of this application.

I. General Information

A. Owner: Sunco Trucking Water Disposal
708 S. Tucker Ave.
Farmington, NM 87401
(505) 327-0416

B. Contact Person: Robert C. Frank
P.O. Box 308
Farmington, NM 87401
(505) 325-8729

C. Location: SW 1/4, NW 1/4 Sec. 2-T29N-R12W
Attached please find a topo map and site plan for the proposed facility. The access will be gained from County Road 3500. The location of skimmer pit and unloading/holding tanks is indicated on the site plan.

D. The major purpose of this facility is for the disposal, by evaporation of produced water from the San Juan Basin. The water will be trucked into location and unloaded into above ground tanks with the oil collected and stored for future treating and sale and the water drained off the bottom into a skimmer pond. The skimmer pond will serve as a back up to the tanks. The second and third ponds will be built as market conditions dictate. Each pond will be equipped with an aeration system and a spray system. The aeration system will be operable from start up and the sprayers will be utilized as market conditions dictate.

E. Three copies of the application have been provided.

F. "I hereby certify that I am familiar with the information contained in and submitted with this application and that such information is true, accurate and complete to the best of my knowledge and belief.

George E Coleman

Signature

JUNE 16, 1989

Date

GEORGE E. COLEMAN

Printed Name

PRESIDENT

Title

TO: Director of the
New Mexico Oil Conservation Division
State Land Office Building
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

RE: Sunco Trucking Water Disposal
Permit Application for
Administrative Approval for
Commercial Evaporation Ponds

LETTER OF PROTEST

COMES NOW Harold W. Horner and Doris J. Horner (hereinafter Protestors), by and through their attorney, Gary L. Horner, and hereby protests the application, design, construction and location of the Sunco Trucking Water Disposal's (hereinafter STWD) proposed commercial evaporation ponds (hereinafter disposal pits).

As and for good cause for said protest, Protestors state:

1. STWD has formally requested administrative approval from the New Mexico Oil Conservation Division (hereinafter OCD) of said disposal pits by letter dated May 19, 1989.

2. STWD has proposed that said disposal pits be located in the northwest quarter of Section 2, Township 29 North, Range 12 West, San Juan County, New Mexico.

3. Protestors own the parcel of land directly west of the proposed location of the proposed disposal pits. Protestors property being approximately described as the east 866 feet of Section 3, Township 29 North, Range 12 West, San Juan County, New Mexico. Protestors property being situated within one-half mile of the proposed location of said disposal pits.

4. Protestors intend, and have intended for some time, to subdivide the aforementioned property for residential purposes when market conditions allow.

5. In order to facilitate such future residential uses of said property, Protestors have caused to be installed: a 500,000 gallon water tank located in the southwest quarter of Section 1, Township 29 North, Range 12 West, San Juan County, New Mexico; as well as, a portion of a water line to be used to serve Protestors property from said water tank.

6. Crouch Mesa, where both the subject disposal pits are to be located and where Protestors property is located, is relatively flat, lying relatively equidistant between Farmington, Aztec and Bloomfield. Therefore, Crouch Mesa currently has significant potential for future residential development.

7. County Road 3500, which is currently under construction and which will provide access between Flora Vista and highway 64 (between Farmington and Bloomfield), will pass within one-quarter mile of the proposed STWD disposal pits.

8. The design proposed by STWD is inadequate with respect to the contamination of surrounding soils and ground water, in

that STWD proposes:

a) to initially construct a single large evaporation pond (see STWD letter dated May 19, 1989 requesting administrative approval for disposal pits - hereinafter STWD application-II.A.1.);

b) in the event of a leak in the single pond, STWD proposes to artificially evaporate said pond until the water depth is below the leak (see STWD application II.A.3.B.1.);

c) in the event of a leak in the single pond, the leak detection system will be recycled to the main pond until market conditions warrant a second pond and the leak can be repaired in the first pond (see STWD application II.A.3.B.1.).

9. With respect to the STWD design, Protestors state:

a) Protestors do not understand the concept of "artificial evaporation;

b) the term "artificial evaporation" is ambiguous and appears to be contrary to the purpose of evaporation ponds;

c) it is likely that the primary liner will be tested for leaks by monitoring the leak detection system and associated sump;

d) it is likely that the secondary liner will never be tested for leaks;

e) if only a single evaporation pond is constructed and leaks develop in the primary liner, the secondary liner will become the primary barrier between the pond and surrounding soils;

f) if the secondary liner has become the primary barrier, but the secondary liner has never been tested for leaks and the use of such evaporation pond is continued without interruption for undetermined, possibly extended periods of time, leaks may be experienced to the surrounding soils for extended periods of time with no provisions being made for the detection or correction of such leaks in the secondary liner.

g) Therefore, the design of such system is inadequate to protect surrounding soils when a single evaporation pond is utilized.

10. Further, STWD proposes that "[i]f a leak is detected, the leak detection system will be pumped into one of the other ponds and the pond that is leaking will be lowered until such depth as the water is below the leak" (see STWD application II.A.3.B.1.). If the second evaporation pond is not built until market conditions allow, such pond will only be built when the capacity to be utilized exceeds the capacity of a single evaporation pond. At such time, when the capacity required exceeds the capacity of a single pond, it will not be possible to completely drain one pond by removing the products from that pond and placing such products in the second pond. Therefore, the system as proposed by STWD will never be sufficient to provide for the draining of such ponds in order to repair leaks.

11. The closure plan proposed by STWD is not adequate in that the sludge, remaining after the life of the disposal pits, will simply be buried in the ground on site (see STWD application

II.A.3.C.1.). OCD apparently believes that such products constitute a risk to surrounding soils and ground water such that double lined evaporation ponds are required to prevent the contamination of surrounding soils and ground water. To simply allow such products to be buried, wrapped in plastic, for all eternity appears to constitute significant risks to the surrounding environment.

12. STWD has not indicated how sludge, that will be removed from the pit during the life of the operation, will be disposed of if markets for such materials are not found. Protestors adamantly state that on site burial or burning is not acceptable.

13. The STWD application does not address the use of injection wells on the site. Pursuant to such application, it would appear that injection wells are not anticipated on the subject site. It would appear that evaporation ponds and injection wells are both viable alternatives for the disposal of produced water. It would appear that the choice between evaporation ponds and injection wells would be based largely upon economics. Protestors understand that such injection wells are not covered by the subject disposal pit application process. It appears that nothing in the STWD application precludes the installation and use of such injection wells in the future. Therefore, it appears that STWD may elect to utilize injection wells at the subject site in the future if market conditions warrant. Such injection wells could create significant contamination of local soils and ground water supplies. If the disposal pits currently being sought are approved, the existence of such disposal pits in the future would probably weigh heavily in favor of allowing STWD to utilize injection wells on the same site.

14. The Notice Of Publication provided by OCD with respect to the STWD application states that "[t]he ground water most likely to be affected by any accidental discharges is at a depth in excess of 80 feet with a total dissolved solids content estimated at 2000 mg/l." It is unclear to Protestors how the ground water most likely to be affected by accidental discharges can be at a depth in excess of 80 feet unless someone is intending to inject products into the ground at depths in excess of 80 feet. Again, if STWD or someone else is intending to use injection wells on the subject site, Protestors have not been notified of such intent and would certainly protest such injection wells if proposed.

15. Protestors adamantly protest the design, construction and location of the STWD disposal pits as proposed. However, Protestors do not perceive the subject STWD application for disposal pits standing alone. Rather, Protestors perceive such application as additionally opening the door to a house of horrors that may yet include additional evaporation ponds, injection wells, unlined mud pits, uncontrolled expansion, accidental discharges, emissions of hydrogen sulfide and other airborne noxious gases, contamination of ground water supplies and contamination of ground surfaces and surface waters.

16. The process and procedures described in OCD's revised August 1988 Guidelines for Permit Application, Design and Construction of Waste Storage/Disposal Pits (hereinafter OCD Pit Guidelines), which have been utilized in the preparation of the subject STWD application, and which represent the basis upon which such STWD application will be reviewed and approved, are not adequate with respect to the protection of surrounding properties, property owners, residents and the public in general with respect to the emission of hydrogen sulfide gas from such facility.

17. The Honorable Samuel Z. Montoya acting in the Eleventh Judicial District Court, County of San Juan, State of New Mexico in the matter of State of New Mexico; Timothy Payne, et al., Plaintiffs, v. Basin Disposal Inc., et al., Defendants, Cause Number CV-87-569-1102 (hereinafter Basin case) has entered a Final Judgment (dated June 6, 1989) against defendants for the sum of $966,247.90 primarily due to personal injuries suffered by plaintiffs as a result of hydrogen sulfide emissions from Basin Disposal, Inc.'s produced water disposal site. In the Court's Amended Findings of Fact in the Basin case (filed June 6, 1989) (hereinafter Basin Facts) the Court found that:

"8. The Basin facility is subject to and regulated by the New Mexico Oil Conservation Division ("OCD")....

"10. The location, design, construction, and operation of the facility were approved by the OCD and were in compliance with all applicable permits, rules, regulations and criteria of the OCD." (Basin Facts, page 3.)

The Basin Court also found that:

"7. ...The primary operation of Basin is to serve as a repository for produced water.... Basin's facility is located two and one-half (2.5) miles north of Bloomfield, New Mexico.... The facility presently includes a large evaporation pond capable of holding some four million gallons of fluid, twelve (12) lined mud pits, and numerous storage tanks in various facets of the operation. The facility opened for business on or about October 1, 1985." (Basin Facts, pages 3 and 4.)

The Basin Court also found that:

"13. Basin started to emit hydrogen sulfide gas at least as early as the spring of 1987." (Basin Facts, page 3.)

"15. The emissions of hydrogen sulfide from Basin have continued up to the time of trial, in varying degrees.

"16. The emissions of hydrogen sulfide from Basin carry over to the homes of the plaintiffs in sufficient concentrations to cause adverse physical and psychological effects and to create intolerably obnoxious odors.

"17. The Emissions of hydrogen sulfide from Basin carry over to highway 44 and throughout the surrounding area for a distance of approximately .5 to 1.0 mile north and 1.0 to 1.5 miles south. The odors are obnoxious and offensive to members of the public.

"18. The spray system operated by Basin caused mist from Basin to carry over to the homes and property of [plaintiffs]....

The mist left a powdery particulate residue as if a salty substance had been sprinkled on their motor vehicles which was hard to remove and damaged the paint and roof of the vehicles.

"19. During the summer of 1987, a rain storm flushed materials which Basin had allowed to seep into the arroyo immediately south of the facility down the arroyo and onto the property of [plaintiffs].... The 'green foam' which was carried onto these plaintiffs' properties left a scummy residue.

"20. The emissions of hydrogen sulfide from Basin were caused by the activity of bacteria which existed in the anaerobic environment created in the evaporation pond.

"21. The hydrogen sulfide emissions were caused by the design and operation of the waste disposal facility including the following acts and omissions by Basin and individual defendants.

"a. the depth of the pond in excess of eleven feet;

"b. the acceptance of volumes of produced water two to three times in excess of the design capacity;

"c. the increase in maximum water level of the pond;

"d. the operation of the spray system;

"e. the failure to monitor incoming loads of produced water from[sic] hydrogen sulfide prior to the summer of 1987;

"f. the failure to permit loads of produced water to settle prior to being placed in the main evaporation pond;

"g. the failure to increase the number of settling tanks to accommodate the increased volume of produced water;

"h. the ongoing presence of free-floating oil on the surface of the main evaporation system;

"i. the failure to remove sediments and sludge from the main evaporation pond;

"j. the policy of the defendants to take every load of produced water brought to the facility regardless of its source or content;

"k. the failure to exercise due caution with regard to loads of materials which may have contained high concentrations of bacteria, sulfides, or sulfates;

"l. the decision to accept loads of produced water containing high concentrations of hydrogen sulfide and to store those loads in tanks with vents exposing the contents to the atmosphere." Basin Facts, page 4 to 6.

The Basin Court further found that:

"28. The emissions of hydrogen sulfide from Basin caused the plaintiffs to experience adverse health effects. The emissions of hydrogen sulfide caused the following physical effects either by direct exposure or as an indirect effect resulting from the stress of living in a noxious environment: eye irritation, nose irritation, throat irritation, lung irritation, headaches, nausea, vomiting.[sic] bloody noses, insomnia, irritability, and diminished concentration.

"29. The emissions of hydrogen sulfide from Basin also caused the plaintiffs to suffer adverse psychological effects. The emissions of hydrogen sulfide from Basin caused the plaintiffs to experience anxiety, depression, anger, and

frustration. The emissions of hydrogen sulfide also caused [plaintiffs]... to develop post-traumatic stress disorder."

"30. There is a need in San Juan County for disposal facilities for produced water. Basin, however, has accepted produced water regardless of whether the source was San Juan County or even New Mexico. In fact, within weeks of opening October 1, 1985, Basin's volume of intake was 1500 to 2000 bbls per day. The design capacity of the evaporation pond was 750 bbls. per day. A substantial or significant portion of this produced water did not come from the vulnerable areas in the San Juan Basin, but rather was trucked in from the Amoco fields in southern Colorado." Basin Facts, pages 7 to 8.

The Basin Court further found that:

"42. The emissions of hydrogen sulfide affect a substantial number of persons, both plaintiffs and non-plaintiffs, who live and work in the vicinity of Basin.

"43. The emissions of hydrogen sulfide from Basin disperse throughout the area and cause offensive and obnoxious odors affecting persons driving on highway 44 and those individuals who live and work in the vicinity of Basin. These emissions of hydrogen sulfide have caused adverse health effects to some persons who have traveled the public roads and highway near Basin or who work in the vicinity....

"45. The emissions of hydrogen sulfide are injurious to the public health and welfare.

"46. The emissions of hydrogen sulfide interfere with the exercise and enjoyment of public rights and the right to use the public thoroughfares in the residential areas around Basin and on the highway.

"47. The emissions of hydrogen sulfide from Basin have diminished the property value of the land surrounding the facility.

"48. The emissions of hydrogen sulfide from Basin constitute an unreasonable interference with rights common to the public....

"53. The defendant's conduct... was not reasonable and it was reasonably foreseeable that the hydrogen sulfide, which defendants knew was a material with dangerous properties present in produced water, would be emitted from the evaporation pond...." Basin Facts, Pages 12 to 13.

18. The STWD disposal pits, like the Basin facility, is designed to dispose of produced water.

19. Conditions found at the Basin facility indicate that produced water brought to the STWD disposal pits can be expected to contain hazardous levels of hydrogen sulfide gas.

20. Conditions found at the Basin facility indicate that conditions at the STWD disposal pits can be expected to generate hazardous levels of hydrogen sulfide gas.

21. Conditions found at the Basin facility indicate that the spray system to be utilized by STWD will increase the level of airborne hydrogen sulfide emissions from the STWD disposal pits.

22. Conditions found at the Basin facility indicate that the proposed STWD disposal pits will represent an unreasonable risk to the health, safety and welfare of those members of the public utilizing the new County Road No. 3500.

23. The public should not be led to expect that their health, safety and/or welfare will in any manner be protected, or assured from harm, from hazardous conditions that may be associated with the STWD disposal pits, simply because STWD may have complied with all applicable permits, rules, regulations and/or guidelines promulgated by OCD with respect to the location, design, construction or operation of the proposed STWD disposal pits.

24. With respect to regulation of hydrogen sulfide emissions, the only apparent rule promulgated by OCD which may be applicable to the subject STWD application is the Contingency Plan expressed in the OCD Pit Guidelines which states that: "[a] contingency plan in the event of... a release of [hydrogen sulfide]... shall be submitted for approval along with the details for pit construction. The contingency plan will outline a procedure for... aeration and treating pit fluids for [hydrogen sulfide]... generation, [hydrogen sulfide]... monitoring and notification of appropriate authorities." (OCD Pit Guidelines, V.H.1., page 10.)

25. With respect to proposed methods for the mitigation of hydrogen sulfide emissions from the STWD disposal pits, the STWD application provides only that "[t]he ponds will be equipped with a commercial aeration system. The aeration systems will be placed in the bottom of the ponds and will consist of three rock diffusers. The location of the diffusers will be equidistant (as close as practical) from each other. They will be anchored to the pond bottom by bricks and or sand tubes. A second aeration system will be placed in the pond bottom as well. This system will consist of a network of perforated 1" and 2" PVC pipe. The system will be able to circulate either a liquid or a gaseous medium. Further details will be forwarded as it becomes available." (Emphasis added.) (STWD application II.A.3.A.) The STWD application further provides that "[e]ach load will be tested for [hydrogen sulfide].... If [hydrogen sulfide]... is detected that load will be isolated and the operator will determine if the water is to be removed or if STWD will treat the load. If STWD treats the load sufficient chlorine will be added so that residual chlorine is present prior to the water being drained into the skimmer pond."

"The ponds will be maintained in an aerobic state. [Hydrogen sulfide]... should not be a problem as each pond has three systems in which to keep the pond aerobic." (STWD application V.I.)

26. The STWD aeration systems have not been properly sized, detailed drawings and calculations of such aeration systems have not been offered to demonstrate sufficiency of the proposed aeration systems. No explanations have been provided with respect to how well such aeration systems will perform as sludge builds

up in the pits. No explanations have been provided with respect to how sludge is to be removed from such pits without damaging such aeration systems. Therefore, Protestors, surrounding residents and the public in general should not be misled with respect to the sufficiency of such systems or the ability of STWD to adequately control hydrogen sulfide emissions from the STWD disposal pits.

27. The National Safety Council has established that hydrogen sulfide can cause hemorrhaging and death at exposure levels of 100-150 parts per million over an 8-48 hour period. The National Safety Council has further established that hydrogen sulfide can cause coughing, collapse and unconsciousness at exposure levels of 500-600 parts per million over a 0-2 minute period and that exposure levels in excess of 600 parts per million can cause death within 0-2 minutes.

28. The Basin Court found that:

"14. The levels of hydrogen sulfide gas emitted from Basin have been measured in a range between 0.1 and 300 parts per million (ppm)." However, the Basin Court further found that "[t]he Gas-Tech monitor used by Basin operators to measure ambient air emissions of hydrogen sulfide was unreliable. The monitor readings taken from that monitor were and are unreliable and have been systematically measuring the ambient air hydrogen sulfide levels below what the levels were in fact. Defendant's own expert... found in the fall of 1988 that Basin's monitor was incapable of calibration and that it had been underrecording hydrogen sulfide levels." (Basin Facts, page 4).

29. The Basin Court ordered "that the defendants may operate their produced water disposal facility only under the following conditions:

"1. that the defendants maintain the disposal pit in an aerobic condition;

"2. keep the level of water in the disposal pit at a depth of no more than three (3) feet;

"5. continue the present chemical treatment of the settling tanks and the disposal pit;

"8. continue monitoring the emissions of hydrogen sulfide and limit such emissions to 0.010 parts per million, in compliance with the ambient air quality standards as promulgated by the environmental Improvement Board of the State of New Mexico under its Air Quality Control Regulation 201 dated June 15, 1981;

"9. monitor the build-up of sludge in the bottom of the disposal pit and remove same, if anaerobic conditions begin to develop in the disposal pit." (Basin Case, Final Judgment, entered June 6, 1989, page 3.)

30. STWD plans to operate its disposal pit at depths up to 13.5 feet (STWD application II.A.2.A.), rather than limiting such depths to 3 feet as ordered upon Basin by the Basin Court.

31. STWD has only mentioned the potential use of chlorine in treating such produced waters. No detailed plans have been provided regarding such treatment plans and it appears that none exist although such chemical treatment may be an integral part of

the efforts required to adequately control hydrogen sulfide emissions, as ordered in the Basin Case.

32. STWD has not stated that it intends to limit hydrogen sulfide emissions to 0.010 parts per million, as ordered in the Basin Case.

33. It does not appear that either STWD or OCD intend to involve the New Mexico Environmental Improvement Board (hereinafter EIB) in the permitting or approval process of the STWD application for disposal pits, although it is the EIB who apparently has been charged with the responsibility for regulating air quality control. It therefore, currently appears that the STWD application will not be reviewed with respect to potential compliance with respect to such EIB regulations.

34. If STWD is allowed to construct said disposal pits as proposed, the value of Protestors property as potential residential property will be greatly diminished. Such residential development of Protestors property may be precluded altogether.

35. It is not necessary that said disposal pits be built in that adequate facilities currently exist in San Juan County for the disposal of produced water from the San Juan Basin.

we can't control this

36. Said disposal pits are located within approximately five (5) miles of the Basin site.

WHEREFORE, Protestors respectfully:

1. State that the disposal pits proposed by STWD would pose intolerable and totally unacceptable harm with respect to the value of their property, the health, safety and welfare of future residents of such area and would unreasonably restrict their own use and enjoyment of their property;

2. Request that the STWD application be denied as proposed;

3. Request that the STWD application be denied as such application may possibly be amended with respect to the proposed location.

Respectfully submitted by:

GARY L. HORNER
P.O. Box 2497
Farmington, New Mexico 87499
(505) 326-2378

August 21, 1989
Date

TO: Director of the
New Mexico Oil Conservation Division
State Land Office Building
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

RE: Sunco Trucking Water Disposal
Permit Application for
Administrative Approval for
Commercial Evaporation Ponds

REQUEST FOR PUBLIC HEARING

COMES NOW Harold W. Horner and Doris J. Horner (hereinafter Protestors) by and through their attorney, Gary L. Horner, and hereby request that a public hearing be held with respect to the Sunco Trucking Water Disposal (hereinafter STWD) Application for Administrative Approval of Commercial Evaporation Ponds.

As and for good cause for said request Protestors state:

1. STWD has formally requested administrative approval from the New Mexico Oil Conservation Division (hereinafter OCD) for said disposal pits by letter dated May 19, 1989.

2. STWD has proposed that said disposal pits be located in the northwest quarter of Section 2, Township 29 North, Range 12 West, San Juan County, New Mexico.

3. Protestors own the parcel of land directly west of the location proposed for said disposal pits. Protestors property being approximately described as the east 866 feet of Section 3, Township 29 North, Range 12 West, San Juan County, New Mexico. Protestors property being situated within one-half mile of the proposed location of said disposal pits.

4. Substantial issues exist with respect to the potential harm that the proposed facilities may cause to the health, safety, welfare and property values of Protestors, surrounding property owners, surrounding residents, future residents and the public in general.

5. The potential harm that the proposed facilities may cause to the health, safety, welfare and property values of Protestors, surrounding property owners, surrounding residents, future residents and the public in general is not made evident by the notices provided by Sunco to surrounding property owners, the notices provided by OCD to surrounding property owners, the notices published by OCD in local newspapers, the application submitted to OCD by STWD with respect to such facilities, or any other means apparent to Protestors.

WHEREFORE, Protestors respectfully request that:

1. A public hearing be held with respect to the subject STWD application;

2. Said public hearing be scheduled such that comments received from the public may be considered by the OCD prior to the OCD's determination to grant or deny STWD the permits

sought;

3. Notices be sent to surrounding property owners of record of such public hearing;

4. Notices be published in local newspapers of such public hearing;

5. Said notices of public hearing state that the subject STWD application raises substantial issues with respect to the potential impact of the proposed facilities on the health, safety, welfare and property values of surrounding property owners, surrounding residents, future residents and the public in general.

Respectfully submitted by:

August 21, 1989
Date

GARY L. HORNER
P.O. Box 2497
Farmington, New Mexico 87499
(505) 326-2378

GARY L. HORNER
ATTORNEY AT LAW

TELEPHONE
(505) 326-2378

P.O. Box 2497
FARMINGTON, NM 87499

November 21, 1989

William J. LeMay, Director
Oil Conservation Division
State Land Office Building
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Sunco Trucking Water Disposal
Permit Application for
Administrative Approval for
Commercial Evaporation Ponds

Dear Mr. LeMay:

I have received your letter to me dated November 2, 1989 and the information enclosed with such letter, which included: a letter from OCD to Sunco Trucking dated November 3, 1989; a letter from Sunco Trucking to OCD dated August 18, 1989; and a letter from OCD to Sunco Trucking dated July 20, 1989.

In said November 2, 1989 letter to me you stated that you hoped that the information provided would alleviate the need for a hearing and asked that I let you know if I still had concerns that are under the jurisdiction of the OCD. My clients, Harold and Doris Horner, have reviewed the above stated information, hereby restate their objections to this project, and continue to feel quite strongly that a public hearing is needed in this matter. They further feel that such public hearing should be conducted in this area.

My clients believe that the notices provided, regarding this project, have not been adequate to inform the public of the potential hazards and harmful effects of this project. My clients believe that the public should be made aware of the potential hazards of this project and that Sunco Trucking should have the opportunity to publicly demonstrate the benefits of such project and its efforts to mitigate such potential hazards. After having been properly informed of the nature of this project, the general public should have the opportunity to be heard on this matter.

I thank you for keeping us informed and appreciate your cooperation in this matter.

Sincerely,

GARY L. HORNER, Esquire

cc: Sunco Trucking Water Disposal
Harold W. and Doris J. Horner

WORK COPY

GARY L. HORNER
ATTORNEY AT LAW

TELEPHONE
(505) 326-2378

P.O. BOX 2497
FARMINGTON, NM 87499

RECEIVED
AUG 22 1989
OIL CONSERVATION DIV.
SANTA FE

Director of the
Oil Conservation Division
State Land Office Building
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Sunco Trucking Water Disposal
Permit Application for
Administrative Approval for
Commercial Evaporation Ponds

Dear Director:

Enclosed please find, with respect to the above mentioned permit application:

(1) a Letter of Protest, and
(2) a Request for Public Hearing.

Please note that I am currently representing Harold W. Horner and Doris J. Horner in the subject matter. Therefore, I respectfully request that any correspondence, that you may wish to have with such clients be directed to me at the above listed address or telephone number.

I hope that the depth of my clients concerns has been made apparent through the accompanying documents and that you will comprehend the serious need for a public hearing on this matter before the OCD considers the approval of the subject permit application.

I thank you for your anticipated timely consideration of this matter.

Sincerely,

GARY L. HORNER, Esquire

cc: Sunco Trucking Water Disposal w/ enclosures
Harold W. and Doris J. Horner w/ enclosures

ORIGINAL TO [illegible]

CURTIS & DEAN

ATTORNEYS AT LAW

506 WEST ARRINGTON • P. O. DRAWER 1259
FARMINGTON, NEW MEXICO 87499

SCOTT M. CURTIS
JOHN A. DEAN, JR.

PHONE: 327-6031
AREA CODE 505

7 AM 8 52

June 6, 1990

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
ATTN: Roger C. Anderson
Post Office Box 2088
State Land Office Building
Santa Fe, New Mexico 87504

RE: Sunco Trucking Water Disposal Commercial Waste Water Disposal Application; OCD Case 9955

Dear Mr. Anderson:

Pursuant to Rule 1208 of the Rules And Regulations of the Oil Conservation Division, I hereby enter my appearance on behalf of Sunco Trucking in the above referenced matter and request service of a copy of all pleadings, pleas or motions filed by the adverse parties herein.

Sincerely,

John A. Dean, Jr. / [illegible]

JOHN A. DEAN, JR.

:ljg

cc: Sunco Trucking Company
Gary L. Horner, Esq.

RULE 711. COMMERCIAL SURFACE WASTE DISPOSAL FACILITIES

A commercial surface waste disposal facility is defined as any facility that receives compensation for collection, disposal, evaporation or storage of produced water, drilling fluids, drill cuttings, completion fluids, and/or other approved oil field related waste in surface pits, ponds, or below grade tanks. Such facility will not be allowed to operate unless it has been permitted in conformity with the following provisions:

A. Prior to the construction, reconstruction or enlargement of a commercial surface waste disposal facility, application for a permit or a modification to an existing permit shall be filed in duplicate with the Santa Fe office of the Division and one copy to the appropriate district office. The application shall be accompanied by:

1. A plat and topographic map showing the location of the facility in relation to governmental surveys (1/4 1/4 section, township, and range), highways or roads giving access to the facility site, and watercourses, water wells, and dwellings within one mile of the site;

2. The names and address of the landowner of the disposal facility site and landowners of record within one-half mile of the site;

3. A description of the facility with a diagram indicating location of fences and cattleguards, and detailed engineering construction/installation diagrams of any pits, liners, dikes, piping, sprayers, and tanks on the facility, prepared in accordance with Division "Guidelines for Permit Application, Design and Construction of Waste Storage/Disposal Pits;"

4. A plan for disposal of approved waste solids or liquids in accordance with Division rules, regulations and guidelines;

5. A contingency plan for reporting and cleanup of spills or releases;

6. A routine inspection and maintenance plan to ensure permit compliance;

7. A closure plan;

8. Geological/hydrological evidence demonstrating that disposal of oil field wastes will not adversely impact fresh water;

9. Proof that the notice requirements of this Rule have been met;

10. Certification by an authorized representative of the applicant that information submitted in the application is true, accurate, and complete to the best of the applicant's knowledge; and

11. Such other information as is necessary to demonstrate compliance with OCD rules and/or orders.

B. The applicant shall give written notice of application to the owners of surface lands and occupants thereof within one-half (1/2) mile and a copy and proof of such notice will be furnished to the Division. The Division will issue public notice by advertisement in a paper of general circulation published in the county in which the disposal facility is to be located. For permit modifications, the Division may issue public notice and may require the applicant to give written notice as above. Any person seeking to comment on such application must file comments with the Division within 30 days of the date of public notice. If there is objection by owners or occupants of adjacent lands, the Director of the Division may set any application for a surface waste disposal permit for public hearing.

C. Before commencing construction, all commercial surface waste disposal facilities shall have a surety or cash bond in the amount of $25,000, in a form approved by the Division, conditioned upon compliance with statutes of the State of New Mexico and rules of the Division, and satisfactory cleanup of the site upon cessation of operation, in accordance with Part J of this Rule. If a bond has been secured for a treating plant permit at the location, that bond shall be sufficient for the surface waste disposal portion of the facility, providing they are contiguous. If an adequate bond is posted by the applicant with a federal or state agency and the bond otherwise fulfills the requirements of this rule, the Division may consider the bond as satisfying the requirement of this rule. The applicant must notify the Division of any material change affecting the bond filed for the site and must, in any case, report the status of their bond annually to the Division;

D. The Director of the Division may administratively issue a permit upon a finding that a complete and proper application has been filed and that no significant objections have been filed within 30 days following public notice. All permits shall be revocable, after notice and hearing, upon showing of good cause and are transferable only upon written approval of the Division Director. The permit shall be consistent with the application and appropriate requirements of Division rules and The Oil and Gas Act.

E. All surface waste disposal facility operators shall file forms C-117-A, C-118, and C-120-A as required by OCD rules.

F. Each operator of a commercial surface disposal facility shall keep and make available for inspection records for each calendar month on the source, location, volume and type of waste (produced water, acids, completion fluids, drilling mud, etc.), date of disposal, and hauling company that disposes of fluids or material in their facility. Such records shall be maintained for a period of two (2) years from the date of disposal.

G. Disposal at a surface facility shall occur only when an attendant is on duty. The facility shall be secured when no attendant is present. When loads can be monitored or otherwise isolated for inspection before disposal, no attendant is required.

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

I. 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.

J. Additional requirements or restrictions may be imposed by a written finding by the Division, including but not limited to the following:

1. An operator with a history of failure to comply with Division rules, regulations, and orders, or

2. Site suitability limitations.

K. The operator shall notify the Division of cessation of operations. Upon cessation of disposal operations for six (6) consecutive months, the operator will complete cleanup of constructed facilities and restoration of the facility site within the following six (6) months, unless an extension of time is granted by the Director of the Division. Such closure shall be in accordance with the closure plan and any modifications approved by the Division Director and may include removal or demolition of buildings, removal of all tanks, vessels, equipment or hardware, containment and removal of fluids and chemicals, backfilling and grading of pits, removal of contaminated soil, aquifer restoration (if necessary) and reclamation of the general facility site. Prior to release of the bond covering the facility, a representative of the Division will inspect the site to determine that restoration is adequate.

L. Upon showing of proper cause, the Director of the Division may order immediate cessation of any surface waste disposal operation. The cessation will remain in effect until withdrawn, or until an order is issued after notice and hearing, when it appears that such cessation is necessary to prevent waste, to protect fresh water, to protect public safety, or to assure compliance with Division rules or orders.

(Case No. 9378, Order No. R-8662, 2 June 1988)
(Case No. 9672, Order No. R-8952, 20 June 1989)
(Case No. 9769, Order No. R-9012, 16 October, 1989)

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

$25,000.00 BOND FOR COMMERCIAL SURFACE WASTE DISPOSAL FACILITY

BOND NO. _____
(For Use of Surety Company)

File with Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87504

KNOW ALL MEN BY THESE PRESENTS:

That _____, (an individual) (partnership) (a corporation organized in the State of _____, with its principal office in the City of _____, State of _____, and authorized to do business in the State of New Mexico), as PRINCIPAL, and _____, a corporation organized and existing under the laws of the State of _____, and authorized to do business in the State of New Mexico with duly appointed resident agent licensed in the State of New Mexico to execute this bond on behalf of the surety company, as SURETY, are held firmly bound unto the State of New Mexico, for the use and benefit of the Oil Conservation Division of the Energy, Minerals and Natural Resources Department pursuant to Chapter 72, Laws of New Mexico, 1935, as amended, and to the State of New Mexico in the sum of Twenty Five Thousand ($25,000.00) Dollars lawful money of the United States for the payment of which, well and truly to be made, said PRINCIPAL and SURETY hereby bind themselves, their successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that:

WHEREAS, The above principal has heretofore or may hereafter enter into the collection, disposal or storage of produced water and/or other oil field related waste in Section _____, Township _____ (North) (South), Range _____ (East) (West), N.M.P.M., _____ County, New Mexico.

NOW, THEREFORE, This $25,000 performance bond is conditioned upon substantial compliance with all applicable statutes of the State of New Mexico and all rules, regulations, and orders of the Oil Conservation Division of the Energy and Minerals Department, and upon clean-up of the facility site to standards of the Oil Conservation Division; otherwise the principal amount of the bond to be forfeited to the State of New Mexico.

PROVIDED, HOWEVER, That sixty (60) days after receipt by the Oil Conservation Division of written notice of cancellation from the Surety, the obligation of the Surety shall terminate as to activities or operations conducted by PRINCIPAL after said sixty (60) day period but shall continue in effect, notwithstanding said notice, as to such activities or operations conducted or commenced before the expiration of the sixty day period.

Signed and sealed this _____ day of _____, 19_____.

PRINCIPAL	SURETY
Mailing Address	Mailing Address
By _____ Signature Title	By _____ Attorney-in-Fact
(Note: Principal, if corporation Affix corporate seal here.)	(Note: Corporate surety affix corporate seal here.)

Note: If corporate surety executes this bond by an attorney-in-fact not in New Mexico, the resident New Mexico agent shall countersign here below.)

Countersigned by:

New Mexico Resident Agent _____ Address _____

STATE OF _____)
)ss.
COUNTY OF _____)

On this _____ day of _____, 19____, before me personally appeared _____, to me known to be the person (persons) described in and who executed the foregoing instrument and acknowledged that he (they) executed the same as he (their) free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year in this certificate first above written.

_____
Notary Public

My Commission Expires: _____

ACKNOWLEDGMENT FORM FOR CORPORATION

STATE OF _____)
)ss.
COUNTY OF _____)

On this _____ day of _____, 19____, before me personally appeared _____, to me personally known who, being by me duly sworn, did say that he is _____ of _____ and that the foregoing instrument was signed and sealed on behalf of said corporation by authority of its board of directors, and acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year in this certificate first above written.

_____
Notary Public

My Commission Expires _____

STATE OF _____)
)ss.
COUNTY OF _____)

On this _____ day of _____, 19____, before me appeared _____, to me personally known, who, being by me duly sworn, did say that he is _____ of _____ and that the foregoing instrument was signed and sealed on behalf of said corporation by authority of its board of directors, and acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year in this certificate first above written.

_____
Notary Public

My Commission Expires: _____
(Note: Corporate surety attach power of attorney)

APPROVED BY:
OIL CONSERVATION DIVISION

By _____

OF THE ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

$25,000.00 CASH BOND FOR COMMERCIAL DISPOSAL FACILITY

File with Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87504

KNOW ALL MEN BY THESE PRESENTS:

That _____, .(an individual) (partnership) (a corporation organized in the State of _____, with its principal office in the City of _____, State of _____ _____, and authorized to do business in the State of New Mexico), is held firmly bound unto the State of New Mexico, for the use and benefit of the Oil Conservation Division of the Energy, Minerals and Natural Resources Department in the sum of Twenty Five Thousand ($25,000.00) Dollars lawful money of the United States.

The conditions of this obligation are such that:

The above principal has heretofore or may hereafter enter into the collection, disposal or storage of produced water and/or other oil field related wastes in Section _____, Township _____ (North) (South), Range _____ (East) (West), N.M.P.M., _____ County, New Mexico.

NOW, THEREFORE, This $25,000 performance bond is conditioned upon substantial compliance with all applicable statutes of the State of New Mexico and all rules, regulations, and orders of the Oil Conservation Division of the Energy, Minerals and Natural Resources Department, and upon clean-up of the facility site to standards of the Oil Conservation Division; otherwise the principal amount of the bond to be forfeited to the State of New Mexico.

The applicant has deposited on behalf of the Division $25,000 (Twenty-five thousand dollars) in the manner indicated on the attachment to this bond, being the principal sum intended to be secured. Applicant pledges the sum as a guarantee that if its executors, assigns, heirs and administrators will abide by the Laws of the State of New Mexico and the Rules and Regulations of the Oil Conservation Division in operating the commercial surface waste disposal facility described herein, and that it will properly reclaim the facility site upon cessation of operations. If the applicant does not properly reclaim and restore the facility site, and otherwise abide by the Rules and Orders of the Oil Conservation Division, this bond shall be forfeited in full and such funds as necessary applied to the cost of reclaiming the facility site. If the principal sum of the bond is less than the actual cost incurred by the Division in reclaiming the plant site, the Division may institute legal action to recover any amounts expended over and above the principal sum of the bond.

NOW THEREFORE, if the above applicant or its successors, assigns, heirs, or administrators or any of them shall properly reclaim and restore the above-described collection, disposal or storage site upon cessation of operations, and otherwise abide by the Rules and Orders of the Oil Conservation Division, then therefore, this obligation shall be null and void and the principal sum hereof shall be paid to the applicant, or its successors, heirs, or administrator, otherwise it shall remain in full force and effect.

Signed and sealed this _____ day of _____, 19_____.

_____ _____

_____ _____

Mailing Address

By _____ _____

Signature Title

(Note: Principal, if corporation
Affix corporate seal here.)

ACKNOWLEDGMENT FORM FOR CORPORATION

STATE OF _____)
)ss.
COUNTY OF _____)

On this _____ day of _____, 19____, before me personally appeared _____, to me personally known who, being by me duly sworn, did say that he is _____ of _____ and that the foregoing instrument was signed and sealed on behalf of said corporation by authority of its board of directors, and acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year in this certificate first above written.

_____
Notary Public

_____
My Commission Expires

STATE OF _____)
)ss.
COUNTY OF _____)

On this _____ day of _____, 19____, before me appeared _____, to me personally known, who, being by me duly sworn, did say that he is _____ of _____ and that the foregoing instrument was signed and sealed on behalf of said corporation by authority of its board of directors, and acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year in this certificate first above written.

_____
Notary Public

_____
My Commission Expires:
(Note: Corporate surety attach power of attorney)

APPROVED BY:
OIL CONSERVATION DIVISION

By_____

Adopted 6-88

ASSIGNMENT OF CASH COLLATERAL DEPOSIT
FOR BOND FOR COMMERCIAL SURFACE WASTE DISPOSAL FACILITY

(Must be a federally-insured bank or savings institution
within the State of New Mexico)

Date _____

Pursuant to Rule 711 of the Rules of the Oil Conservation Division, or successor provisions, _____ (hereinafter referred to as "owner") of _____ (address) has deposited with the _____ (name of state or national bank or savings association) of _____ (address) (herein termed financial institution), the sum of _____ dollars in Certificate of Deposit or savings account No. _____. Owner hereby assigns and conveys all right, title and interest in the deposited sum to the financial institution in trust for the Oil Conservation Division of the Energy and Minerals Department or successor agency of the State of New Mexico. Owner and the financial institution agree that as to the deposited sum or fund:

a. The funds deposited pursuant to the terms of this Agreement are to serve as a cash bond covering a commercial surface waste disposal facility operated by owner.

b. The Oil Conservation Division acquires by this assignment the entire beneficial interest in the fund, with the right to order the trustee in writing to distribute the fund to persons determined by the Division to be entitled thereto, including the Division itself, in amounts determined by the Division, or to the operator upon sale of the facility covered by this agreement.

c. Owner retains no legal or beneficial interest in the fund and has only the right to interest, if any, thereon, and to return of the fund upon written order of the Division.

d. The financial institution agrees that the fund may not be assigned, transferred, pledged or distributed except upon written order of the Division or a court of competent jurisdiction made in a proceeding in which the Division is a party. The financial institution waives all statutory or common law liens or rights of set-off against the fund.

Owner agrees that the financial institution may deduct from interest due owner any attorney fees incurred by the financial institution if claim or demand via writ, summons or other process arising from operator's business is made upon the financial institution.

_____
Signature of Owner,
Personally or by Authorized Officer

_____
Signature of Authorized Officer of
Financial Institution

_____
Title

_____
Title

STATE OF NEW MEXICO
)ss.
COUNTY OF _____

On this _____ day of _____, 19_____, before me personally appeared _____ and _____, to me known to be the person (persons) described in and who executed the foregoing instrument and acknowledged that they executed the same as their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year in this certificate first above written.

My Commission expires:

_____

_____
NOTARY PUBLIC

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

May 29, 1990

CERTIFIED MAIL
RETURN RECEIPT NO. P-918-402-307

Mr. Gary L. Horner, Esq.
P. O. Box 2497
Farmington, New Mexico 87499

RE: Commercial Disposal Application
Sunco Trucking Water Disposal

Dear Mr. Horner:

Enclosed are the most recent submittals from Sunco Trucking. Please note that Sunco has requested a continuance of the examiner hearing to June 13, 1990.

I am also enclosing a Pre-hearing Statement form for your use. Because of the continuance, the Statement does not need to be filed with the Division until June 8, 1990.

If you have any questions, please do not hesitate to contact me at (505) 827-5884.

Sincerely,

Roger C. Anderson
Environmental Engineer

RCA/sl

Enclosure

cc: OCD Aztec District Office
Sunco Trucking

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

Gary Horner
PO Box 2497
Farmington, NM
87499

(SL)

4. Article Number
P918402307

Type of Service:
- ☐ Registered
- ☑ Certified
- ☐ Express Mail
- ☐ Insured
- ☐ COD
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X

7. Date of Delivery
5-30-90

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

GARY L. HORNER
ATTORNEY AT LAW

TELEPHONE
(505) 326-2378

P.O. BOX 2497
FARMINGTON, NM 87499

David R. Catanach
Energy, Minerals and Natural Resources Department
Oil Conservation Division
Post Office Box 2088
State Land Office Building
Santa Fe, New Mexico 87504
(505) 827-5800

May 22, 1990

Re: Sunco Trucking Water Disposal Commercial Waste Water Disposal Application; OCD Case 9955

Dear Mr. Catanach:

I am writing in response to your letter to myself and Robert Frank dated May 15, 1990. First, I am certain that this letter does not conform to the form of your pre-hearing statement, but such document was not attached to my copy of said letter as stated.

Due to the short notice of this hearing and the short notice of the requirement of this statement, I am not fully prepared for said hearing or this response at this time. However, in an attempt to comply, to the extent that I possibly can at this point, I am providing the following preliminary information.

I do not intend to call any witnesses at the subject May 30, 1990 hearing in this matter. However, I do intend to appear and participate in said hearing on behalf of my clients. I do intend to cross-examine any STWD witnesses and to argue my clients position.

I do intend to introduce certain documents, from the Basin Disposal Court case, as exhibits at the subject hearing.

The issues of concern to my clients, and the issues my clients wish addressed at said hearing, are those issues delineated in our Letter of Protest dated August 21, 1989 which was directed to the Oil Conservation Division regarding the subject project.

I hope the above statements are sufficient for your purposes. Please let me know if a pre-hearing conference will be required.

Sincerely,

GARY L. HORNER, Esquire
Attorney for Protestors, HAROLD W. and DORIS J. HORNER

SUNCO TRUCKING
HEAVY HAULING P.O. BOX 642, FARMINGTON, NEW MEXICO

90 MAY 23 AM 8 13

DC 5/23/90

Mr. W.J. LeMay, Director
New Mexico Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87504-2088

May 21, 1990

Subject: Examiner Hearing
Case 9955
Commercial Water Disposal Facility
NW/4, Section 2-T29N-R12W
San Juan County, New Mexico

Dear Mr. LeMay,

Sunco Trucking Water Disposal (STWD) respectfully requests that a continuance of Case 9955 be granted to the next Examiner Hearing of June 13, 1990. Pursuant to New Mexico Oil Conservation Division (NMOCD) Rule 1207 (a) 7 the offset landowners within one half (1/2) mile were not notified of the upcoming hearing until this date.

STWD is sorry for any inconvenience that this may have caused. Please be advised that Mr. Gary Horner, Esq. has been notified of our request for continuance. If I may be of any further assistance, please advise.

Very truly yours,

Robert C. Frank

Robert C. Frank
Agent

HEAVY HAULING P.O. BOX 645, FARMINGTON, NM

90 MAY 24 AM 8 26

New Mexico Oil Conservation Division
Post Office Box 2088
Santa Fe, NM 87504-2088

May 18,1990

Attn: Mr. Roger Anderson

Subject: Commercial Disposal Facility
NW/4, Section 2-T29N-R12W
San Juan County, New Mexico

Dear Mr. Anderson,

Pursuant to your letter of May 2, 1990 and our verbal commitment previous to your letter please be advised that Sunco Trucking Water Disposal would like to revise our response of April 17, 1990 to reflect the changes as follows:

4. B. If fluids are found in the leak detection sump, artificial evaporation and the transportation of fluids to other facilities will be begin immediately.

If I may be of any further assistance, please advise.

Very truly yours,

Robert C. Frank

Robert C. Frank
Agent

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

May 15, 1990

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

Mr. Robert G. Frank
P. O. Box 308
Farmington, New Mexico 87499

and

Gary L. Horner, Esq.
P. O. Box 2497
Farmington, New Mexico 87499

Re: Application of Sunco Trucking Water Disposal for Commercial Waste Water and Evaporation Pond, OCD Case 9955

Gentlemen:

Because of the unique and complex nature of this case and what we understand to be the variety of issues and witnesses who may appear or may present evidence in this case, we are hereby requiring that every party wishing to appear in this case file with the Division, not later than 5:00 p.m. on May 23, 1990, a pre-hearing statement substantially in the form attached hereto. The pre-hearing statement must identify the witnesses and exhibits which will be presented and clearly delineate the issues to be raised.

In addition, attorneys representing the parties should be prepared to appear for a pre-hearing conference on May 29th. The Division will determine whether or not a pre-hearing conference will be necessary after receiving the pre-hearing statements.

You are requested to pass this information on to any other person whom you believe may be a party to this case.

Sincerely,

David R Catanach

DAVID R. CATANACH,
Hearing Examiner

DRC/dr

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

May 2, 1990

CERTIFIED MAIL
RETURN RECEIPT NO. P-918-402-240

Mr. Gary L. Horner, Esq.
P. O. Box 2497
Farmington, New Mexico 87499

RE: Commercial Disposal Facility
Sunco Trucking Water Disposal Co.
San Juan County, New Mexico

Dear Mr. Horner:

Enclosed is Sunco's response to the Oil Conservation Division's (OCD) November 3, 1989 request for information. Also enclosed is the OCD's response to their submittal.

In accordance with Division Rules and procedures, the Sunco Trucking Water Disposal application has been placed on the May 30, 1990 Examiner Hearing Docket for public hearing. The public advertisement for this hearing will be published on or before May 11, 1990. When the docket for the hearing is printed, I will furnish you with a copy.

If you have any questions, please do not hesitate to contact me at (505) 827-5884 or the Division Attorney, Robert Stovall at (505) 827-5805.

Sincerely,

Roger C. Anderson
Environmental Engineer

RCA/sl

cc: OCD Aztec District Office
Sunco

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

Gary L. Horner, Esq.
P.O. Box 2497
Farmington, N.M.
87499

4. Article Number
P918402240

Type of Service:
- ☐ Registered
- ☑ Certified
- ☐ Express Mail
- ☐ Insured
- ☐ COD
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

May 2, 1990

CERTIFIED MAIL
RETURN RECEIPT NO. P-918-402-239

Mr. Robert C. Frank, Agent
SUNCO TRUCKING WATER DISPOSAL
P. O. Box 443
Farmington, New Mexico 87499

RE: Commercial Disposal Facility
NW/4, Section 1, T29N, R12W
San Juan County, New Mexico

Dear Mr. Frank:

The New Mexico Oil Conservation Division (NMOCD) has received your responses, dated April 17, 1990, to OCD's request for additional information on your application for the above referenced disposal facility. The following commitment, as numbered in your response, is required before further action can be taken on your application:

4.B. If fluids are found in the leak detection sump, artificial evaporation and the transportation of fluids to other facilities will begin immediately. Waiting 100 days before commencing hauling is not acceptable.

The OCD is placing your application on the Public Hearing Docket for the Examiner Hearing of May 30, 1990. The OCD will publish a public notice concerning this case on or before May 11, 1990. Pursuant to to rule 1207(a)7. of the Oil Conservation Rules and Regulations, Sunco is required to provide certified notice of the hearing to all surface owners within one-half mile of the disposal facility.

If you have any questions, please contact me at (505) 827-5884.

Sincerely,

Roger C. Anderson
Environmental Engineer

RCA/sl

cc: OCD Aztec District Office
Gary L. Horner, Esq.

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
Sunco Trucking Water Disposal
P.O. Box 443
Farmington, NM 87499
Attn: Robert Frank

4. Article Number
P918402239

Type of Service:
- ☐ Registered
- ☐ Insured
- ☒ Certified
- ☐ COD
- ☐ Express Mail
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X Jeanne Powell

7. Date of Delivery
5-3-90

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

BLOOIE LINE HAULING P.O. BOX 443, FARMINGTON, NM 87499 (505)

New Mexico Oil Conservation Division
PO Box 2088
Santa Fe, NM 87504-2088

April 17, 1990

ATTN: Roger Anderson

SUBJECT: Commercial Disposal Facility
NW/4 Section 2-T29N-R12W
San Juan County, New Mexico

Dear Mr. Anderson:

Pursuant to your letter of ~~July~~ 20, 1989, I would like to address each item separately.

1) The manufacturer's specifications sheet for chemical resistance are attached.

2) Please see attached certification dated March 26, 1990 being performed by Brewer Associates,INC., Farmington, NM.

3) Please be advised that the second pond will be constructed commensurate with the first pond however the second pond will not be lined until market conditions dictate. The third pond will constructed and lined once the market conditions further warrant its construction. The weathered surface of pond two will be ripped and recompacted to the original density requirements prior to being lined.

4) I would like to make a few comments regarding the contingency plan the NMOCD has placed upon determination of a leak in the primary liner.

First: If the affected pond happens to be at free board capacity, 20 acre feet of water, (155,160 bbl's) and none of the other ponds are operational and or full there are some physical constraints regarding the emptying of this pond. To comply with your request to empty the pond within seven (7) days would require the disposal and transportation of 1939.5 (80 bbl) loads in a period of seven (7) days, or the equivalent of 277+ loads per day. There is not currently any one or any combination of existing commercial facilities that can handle such a volume. We believe this to be an unrealistic and physically impossible request.

Secondly: If the purpose of the secondary liner is only for short term containment, why is the liner required to be a minimum of 30 mills thick?

Thirdly: Even if the secondary liner were punctured there will be some inherent impermeability due to the compaction of the subgrade and the general nature of the subsoil. Once the liner(s) were repaired the water would be bound by capillary action to the subsoil.

We would like to offer the following contingency plan as a compromise to the original plan and your recent request.

A. Immediately cease receiving fluids for disposal in the affected pond.

B. Drain the affected pond into the unaffected ponds if available. If none of the ponds are available, commence evaporation and evaporate the pond for a period not to exceed 100 days. If during that period the pond has not been lowered below the source of the leak the water will be hauled away until the water level is below the source of the leak. The water will be disposed of at any one or all three of the following commercial disposal facilities:

    Basin Disposal: Sec 3-T29N-R11W
    Hicks Disposal: Sec 15-T28N-R13W
    Southwest Water Disposal: Sec 32-T30N-R9W

    The leak detection sump will be continually pumped and recycled into the affected pond until such time as the sump dries out. This will indicate the level in the pond at which the leak is located.

C. The location and cause of the leak will be determined and repaired. The liner will be tested for multiple leaks upon fill up. If a second or additional leaks are found the pond will be evaporated below the level and repaired as above. The subsequent repairs will be completed within 30 days of detection.

D. The fluids in the leak detection system will be

removed and placed back in the pond, to be evaporated. The OCD will be notified within 24 hours of the detection of fluids in the sump. At that time the remedial actions, as outlined above will be implemented

5) The holding capacity of each pond, as mentioned previously, is approximately 155,160 bbl's or 871,196 cuft. Salt generation calculations based upon Stanley Zygmunts work with the New Mexico Energy Research Development Institute indicates that the salt generated by passive evaporation will be 7304 cuft per year per pond. The calculations were based on Sodium Chloride (NaCl) as the principle precipitate and an average TDS of 15000 ppm. At that rate it will take 119 years for each pond to fill with salt. With the spray system in operation we expert up to a 10 fold increase in evaporation. That will decrease the life expectancy of the pond to 11.9 years which is consistent with the project life of each pond. . With this in mind we do not intend to monitor the sludge/salt build up. Therefore we are not concerned about liner integrity, aeration systems or circulation systems as the sludge/salt build up will be left intact upon drying and abandonment.

It is our intention to sell or bury the precipitated salts onsite in the plastic liner as per our initial application of May 19, 1989. The pond will then be covered with a PVC liner or clay to prevent any vertical leaching of salts by rain water. An analysis of the precipitated salts will be performed to ascertain if the salts may be buried onsite under the regulations existing at that time. If there are any concentrations of chemical compounds which are not permitted to be buried onsite they will be extracted at that time. The extraction method will be determined at that time when the compounds are known.

Through a conversation with Roger Kolv with Waste Management of Four Corners, operator of the San Juan County Landfill the current regulations would allow the sludge/salt to be disposed of at the County Landfill if the sludge/salt had less than 30% liquid content and fell within the parameters of their permit.

The sludges/salts will be analyzed at the time of abandonment to determine if they will be acceptable at the onsite facility or the County Landfill. If the waste is not acceptable at the onsite facility or County Landfill those unacceptable portions of the sludge/salt will be disposed of at the nearest hazardous waste disposal facility.

We do not anticipate, under the current regulations that there will be any sludges/salts or chemical compounds evolve that will prohibit the disposal of these wastes at the onsite facility or the County Landfill. These are "solid wastes" going in and they will be solid wastes as they exit. The repeated evaporation of water may give concentrations of certain heavy metals that may have to be extracted however they can not be qualified nor quantified at this time. Only at the time of abandonment will they become evident. At that time a determination will be made as to their final

disposal.

During the drying period the leak detection sump will be monitored weekly and the pond will remain locked (closed) to any further dumping. If vandalism becomes a problem the Sheriffs' Department will be notified of the vandalism, breaking and entering of the facility. H2S emissions are very unlikely as the pond will be open to the atmosphere, completely in an aerobic state. However the pond will be monitored weekly for H2S emissions.

7) a. Dissolved sulfides in the pond(s) will be analysed monthly and the results will be kept at the office.

b. Air concentrations of H2S will be measured in tenths of a part per million and the ph will be measured twice daily around the perimeter of the pond(s). The prevailing winds are Southwesterly therefore the sampling points will be located on the Northeast sides of the pond(s) and tanks. The H2S concentrations and ph will be measured in the morning and afternoon.

a. If air concentrations of H2S reaches 1 ppm at the fence line for two consecutive monitor readings, or if dissolved sulfides in the pit water reaches 15 ppm, the OCD will be notified immediately, hourly H2S monitoring (24 hours per day, 7 days per week) will commence at the designated locations, pond water will be analysed for dissolved sulfides daily and the below referenced treatment plan will be implemented so as to reduce dissolved sulfides in the pond and eliminate H2S emissions.

The ponds will be treated on a regular basis with bleach (chlorine). The amount of bleach to be added is anticipated at 1000 gals per month. The bleach is 12-16% active. There is no schedule at this time as the amounts may vary as conditions as yet undetermined warrant. As mentioned previously the pond will be maintained in an aerobic state by the two aeration systems and the sprayer system. The bleach will be added as a matter of prudence.

STWD will maintain a bleach tank on location with a minimum holding capacity of 1000 gallons. Bleach is unstable at these concentrations and therefore has a short shelf life. With the short shelf life (approximately 30 days) we can not store any more chlorine than we intend to use in that period. Material Safety Data Sheets (MSDS) will be located on the tanks containing the bleach, the employees will be properly trained in handling the bleach and proper safety equipment such as rubber gloves and safety goggles will be located near the tanks when handling the bleach

Chemical Distributors, INC. (CDI), Farmington, NM will be the supplier of the bleach. CDI maintains 500 gals. of bleach at their local yard. In addition CDI is currently constructing a bleach plant in El Paso, Texas. The plant is scheduled to be on line April 15, 1990. The plant will have the capacity of 25,000 gallons of 16% bleach per day.

They've indicated that they will maintain their own transportation equipment. They would be able to deliver 5000 gals. of 12-16% active bleach daily to the facility if necessary. They would require 24 hour notice.

If for some reason there should be H2S in the water the active chlorine will react with the H2S as follows:

$$H2S + 4Cl2 + 4\ H2O > H2SO4 + 8\ HCl$$

The net effect is that the bleach will combine with the H2S and water to produce H2SO4 (sulfuric acid) and HCl (hydrochloric acid). This will in turn lower th ph of the pond which further prohibits the growth of bacteria.

In as much as the pond is equipped with three aeration systems we do not believe there will not be an H2S problem. Furthermore each load will be tested for H2S and treated prior to entering the pond. Once the water enters the pond the H2S producing bacteria will be unable to survive in the aerobic pond.

TREATMENT PLAN

1. Determine chlorine demand for sulfides, H2S and organics.
2. Initiate treatment with 12-16% active bleach on hand and at CDI yard.
3. Deliver and treat pond(s) with sufficient bleach to reduce dissolved sulfides and prohibit the emission of H2S. The rate of treatment will be a maximum of 5000 gallons of 12-16% active bleach daily.

b. If air concentrations of H2S reach 10 ppm at the fence line STWD will notify the County Fire Marshal, County Sheriffs Department, New Mexico State Police and OCD. The actions to be taken by STWD will be as follows:

TREATMENT PLAN

1. Notify the parties as shown above.
2. Evacuate those persons residing within 1/4 mile of the fence line. Provide temporary housing at the Motel 6, Farmington, NM or at another motel as approved by STWD. Each person requiring temporary housing will be provided a per diem for meals not to exceed $20.00. Temporary housing and the meal per diem to be provided as long as the H2S levels remain above 10 ppm at the fence line.

3. Implement treatment plan as outlined in "a" above.

Any other actions or requirements imposed by the the OCD after review of H2S emissions will be implemented after review of all alternatives and acceptance by STWD. STWD believes that protection of the general public is paramount and will take prudent actions to ensure the safety of the general public.

8) The skimmer pit will be completely enclosed with screening to prevent migratory birds from reaching the pit.

I believe that this answers all of your concerns. If I may be of any further assistance, please advise.

Very truly yours,

Robert C. Frank

Robert C. Frank
Agent

PALCO LININGS, INC.

DYNALOY CHEMICAL EXPOSURE DATA

This chart reflects the results of field application experience and limited testing of Dynaloy with chemicals and solutions. Unless otherwise specified, concentrations are 100%. These results may not be applicable for use at elevated temperatures.

RATING SYSTEM

A. Effluent has little or no affect on the liner. Probably good for long term containment.

B. Effluent has a minor detrimental affect on the liner. Questionable for continuous long term containment (>5 years), probably good for short term containment.

C. Effluent has a detrimental affect on the liner. Successful long term service improbable. Good for temporary or emergency containment only.

X. Effluent quickly attacks the liner. Not to be used even for short term containment.

?. Following one of the above classifications indicates that the rating is based upon limited information.

Ammonium Nitrate (40%)	A
Benzene	X
Brine	A
Calcium Hydroxide (10%)	A
Cyanide solution (100 ppm, pH=11)	A
Detergents (2%)	A
Diesel Fuel	B
Gasoline	C
Glycols	A?
Hydrochloric Acid (10%)	A
Kerosine	B
Methyl Ethyl Ketone	X
Mineral Oil	A
Motor Oil (SAE 30)	A?
Nitric Acid (10%)	B
Olive Oil	A?
Phosphoric Acid (50%)	A?
Sodium Carbonate (2%)	A
Sodium Hydroxide (10%)	A?
Sodium Hypochlorite (5%)	C
Sulfuric Acid (30%)	A?
Trichloroethylene	X
Transformer oil	B?
Transmission Fluid	B

These chemical exposure data are general in nature. It is recommended that the specific effluent be tested with the liner intended to be used for it's containment.

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PALCO LININGS, INC.

RESEARCH and DEVELOPMENT
LABORATORY REPORT

Title: Immersion Study, Dynaloy®in Petroleum	
Report No. PL-145-85	Submitted SH 1-14-85
Study No.	Approved DMK 1/14/85

Test Method

30 mil Dynaloy® was totally immersed in three types of crude oil at room temperature according to ASTM D471. Weight changes and physical appearance were periodically recorded during the 4-1/4 years exposure.

Days	Iranian Lite	Sahara	North Slope
62	+15.3%	+11.4%	+10.6%
312	+17.2%	+13.2%	+12.3%
734	+18.3%	+14.9%	+13.0%
1549	+17.6%	+16.2%	+14.3%

After over four years of immersion in the petroleum, the Dynaloy® appeared in good shape, was still very flexible, and did not appear to be losing strength. The petroleum was changed after the last measurement and the exposure is continuing.

Spencer Hampton

Spencer Hampton
Laboratory Technician
Palco Linings, Inc.

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PALCO LININGS, INC.

RESEARCH and DEVELOPMENT
LABORATORY REPORT

Title: Immersion Study, Dynaloy® in Diesel Fuel #2	
Report No. PL-161-85	Submitted: SH 9-6-85
Study No. 224	Approved: RSHK 9/6/85

Test Method

Weighed tensile strips of 30 mil unreinforced Dynaloy® were exposed to diesel fuel #2 in accordance with ASTM D471. After the completion of an immersion period, a set of tensile strips were removed from the fuel, quickly wiped clean, weighed and tensile properties run according to ASTM D882. The percent weight and tensile property changes for 1, 3 and 9 days exposure are reported below.

Test Results

		1 day	3 days	9 days
Tensile Strength	MD	-8.1%	-6.2%	-5.9%
	TD	-8.3%	-10.0%	-10.5%
Elongation at Break	MD	-16.8%	-12.1%	-7.8%
	TD	-4.0%	-8.9%	-4.6%
Stress @ 100% Elongation	MD	-5.1%	-4.2%	-6.8%
	TD	-10.7%	-11.8%	-11.0%
Weight Change		+2.6%	+2.3%	+4.0%

Spencer Hampton
Laboratory Technician
PALCO LININGS, INC.

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PALCO LININGS, INC.

RESEARCH and DEVELOPMENT
LABORATORY REPORT

Title: Immersion Study, Dynaloy in Naphtha.	
Report No. PL-150-85	Submitted J.S. 9-26-85
Study No. 211	Approved JMK 4/26/85

Test Method

Unreinforced 30 mil Dynaloy was immersed in Fuel Grade Naphtha at room temperature according to ASTM D471. Weight and physical appearance changes were periodically recorded during the study.

Test Results

Days	Weight Change
11	+2.4%
48	+0.7%
82	+0.4%
218	+0.4%
374	+0.7%

Throughout the immersion, the Dynaloy did not appear to swell, change shape or deteriorate. The Naphtha was replaced with fresh fuel after 218 days exposure and the study is continuing.

PALCO LININGS, INC.

J. Stein

John Stein
Laboratory Technician

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PALCO LININGS, INC.

RESEARCH and DEVELOPMENT
LABORATORY REPORT

Title: Immersion Study, Dynaloy in Sulfuric Acid	
Report No. PL-149-85A	Submitted: SH 3-25-85
Study No. 215	Approved: GMK 3/25/85

INTRODUCTION

Laminated 30 mil unreinforced Dynaloy was immersed in 1% and 10% sulfuric acid according to ASTM D543. The immersion was conducted at 73°F, 122°F and 158°F for a period of five weeks with testing after one and five weeks. After an exposure period was complete, the specimens to be tested were removed from the exposure container, briefly rinsed with tap water, quickly dried, weighed and tested. Tensile properties were determined in accordance with ASTM D882.

Results

The percent weight changes, the average tensile property values and the percent change in tensile properties are listed on table one. Breaking factor and modulus at 100% elongation are in units of lbs/ in width. Elongation at break is expressed in percent. The weight changes are accurate to within 0.1% and the tensile properties to within 5%.

PALCO LININGS, INC.

Spencer Hampton

Spencer Hampton
Laboratory Technician

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TABLE 1, DYNALOY IN SULFURIC ACID

Temp. (^{o}F)	Time (days)	Weight	Breaking Factor	Elongation at Break	Modulus at 100%
1% H_2SO_4					
73^{o}	7	+1.6%	-1.4% 57.5	-2.4% 290	-7.3% 38.4
	35	+3.2%	-0.3% 58.1	3.0% 306	-5.8% 39.0
122^{o}	7	+5.6%	-1.8% 57.3	-0.3% 296	-9.1% 37.6
	35	+10.2%	+1.6% 59.3	-3.6% 286	-4.3% 39.6
158^{o}	7	+10.1%	-4.2% 55.9	-7.0% 276	-6.4% 38.8
	35	+18.6%	-3.7% 56.1	-13.3% 258	+1.4% 42.0
10% H_2SO_4					
73^{o}	7	+0.8%	-2.2% 57.0	-2.8% 289	-8.5% 37.9
	35	+1.1%	-1.6% 57.4	-1.0% 295	-6.7% 38.6
122^{o}	7	+1.0%	-4.6% 55.6	-7.0% 276	-5.8% 39.0
	35	+0.7%	-2.0% 57.1	-4.0% 285	+1.1% 41.9
158^{o}	7	+0.7%	-5.4% 55.1	-4.0% 285	-5.5% 39.1
	35	-0.5%	+7.2% 62.5	-10.8% 265	+11.7% 46.3

PALCO LININGS, INC.

RESEARCH and DEVELOPMENT
LABORATORY REPORT

Title:	LINER WEIGHT CHANGES IN AQUEOUS SOLUTIONS, THE EFFECT OF DISSOLVED SOLIDS CONTENT ON DYNALOY AND PVC
Report No. PL-167-85	Submitted: R.O. 12/11/85
Study No. 232	Approved: GMK 12/11/85

INTRODUCTION

Samples of 30 mil Dynaloy, 20 mil PVC and 30 mil PVC were immersed in aqueous solutions having various dissolved solid contents in order to determine the effect on the water absorption of the liners. The three solutions used in this study were distilled water, tap water and a 5% sodium chloride solution. The immersion was conducted at 50°C for a period of 16 weeks. The weight changes were measured after 2, 4, 8 and 16 weeks.

TEST RESULTS

20 Mil PVC

	2 Weeks	4 Weeks	8 Weeks	16 Weeks
Distilled Water	+1.49%	+1.63%	+1.67%	+2.24%
Tap Water	+1.56%	+1.74%	+1.63%	+2.16%
5% Salt Water	+0.05%	+0.04%	+0.04%	-0.08%

30 Mil PVC

	2 Weeks	4 Weeks	8 Weeks	16 Weeks
Distilled Water	+1.76%	+1.94%	+2.01%	+2.59%
Tap Water	+1.66%	+1.89%	+1.96%	+2.55%
5% Salt Water	-0.07%	-0.03%	-0.03%	-0.10%

30 Mil Dynaloy

	2 Weeks	4 Weeks	8 Weeks	16 Weeks
Distilled Water	+2.12%	+2.17%	+2.11%	+2.44%
Tap Water	+1.80%	+1.74%	+1.56%	+1.78%
5% Salt Water	+0.06%	-0.03%	-0.05%	-0.50%

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PALCO LININGS, INC.

RESEARCH and DEVELOPMENT
LABORATORY REPORT

Title:	Effects of Cyanide Solution and Distilled Water on Palco 30 mil PVC Liner.
Report No. PL-129-83-C	Submitted: R.O. 10/22/86
Study No. 180	Approved: GMK 10/22/86

INTRODUCTION

This study evaluated the affect of a cyanide leach solution on Palco 30 mil Polyvinyl Chloride (PVC) liner at room temperature and 158°F. The US EPA stated in the October 1, 1984 Federal Register that exposure of a liner to a leachate at a temperature 72°F higher than the service temperature would accelerate chemical reactions by a factor of 75. A 28 day immersion study at 158°F would then be equivalent to 2100 days (5.75 years) of service in the field at 86°F. Distilled water was used as a standard for comparison. Tensile properties, tear resistance and weight were checked after 0, 7, 15 and 28 days immersion.

TEST PROCEDURES

A 20 ppm sodium cyanide solution was prepared by adding sodium cyanide to a dilute sodium hydroxide solution. The resulting solution had a pH of ~11.

One inch wide tensile specimens and die "C" tear specimens were cut from a sample of 30 mil PVC after the PVC had acclimated to standard laboratory temperature and humidity for not less than 40 hours. The machine direction tensile specimens were weighed prior to immersion. The specimens for each test period were immersed in separate containers.

At the conclusion of an exposure period, the samples were lightly rinsed with distilled water, gently dried with paper towels and allowed to acclimate to standard laboratory conditions for at least four days. The specimens were then weighed and tested. Tensile properties were tested according to ASTM D882. Tear resistance was tested according to ASTM D1004.

TEST RESULTS

The percent changes in the physical properties are reported on table 1, attached.

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TABLE 1
PL-129-83-C

73°F	DAYS	DISTILLED WATER MD	DISTILLED WATER TD	SODIUM CYANIDE MD	SODIUM CYANIDE TD
Tear Resistance	7	+1%	+3%	+2%	-2%
	15	+5%	+7%	+6%	+9%
	28	+4%	+5%	+6%	+2%
Stress at 100% Elongation	7	-2%	-1%	-3%	-1%
	15	+1%	-2%	+2%	±0%
	28	+6%	+2%	+1%	+1%
Stress at Break	7	-1%	+2%	-2%	±0%
	15	-2%	+2%	-2%	+3%
	28	+6%	+2%	+1%	+1%
Strain at Break	7	-2%	-1%	+4%	-4%
	15	-1%	+1%	-3%	-4%
	28	-2%	±0%	-1%	-2%
Weight	7	±0.0%		-0.1%	
	15	-0.1%		-0.1%	
	28	-0.1%		±0.0%	

158°F	DAYS	DISTILLED WATER MD	DISTILLED WATER TD	SODIUM CYANIDE MD	SODIUM CYANIDE TD
Tear Resistance	7	+2%	+6%	+1%	+13%
	15	+2%	+9%	+1%	+3%
	28	+2%	+10%	+4%	+11%
Stress at 100% Elongation	7	+4%	+4%	+6%	+9%
	15	+5%	+9%	+7%	+8%
	28	+10%	+8%	+7%	+8%
Stress at Break	7	+1%	+2%	±0%	+3%
	15	-4%	+3%	-1%	±0%
	28	+3%	-1%	-2%	+5%
Strain at Break	7	+4%	+4%	+4%	±0%
	15	+2%	-3%	+4%	-5%
	28	-2%	-1%	+3%	-1%
Weight	7	-0.2%		-0.3%	
	15	-0.4%		-0.3%	
	28	-0.4%		-0.3%	

BREWER
ASSOCIATES, INC.

ENGINEERS • SURVEYORS

P. O. BOX 2079 • FARMINGTON, NM 87499 • (505) 327-3303
CLOVIS, NM • (505) 763-4255

March 26, 1990

Mr. George Coleman
Sunco Trucking & Water Disposal
708 S. Tucker Ave
Farmington, New Mexico 87401

Re: Commercial Disposal Facility Northwest Quarter of Section 1 T29N, R12W, San Juan County New Mexico

Transmitted herewith are our calculations regarding Item No. 2 on the letter received by your company from the Energy Minerals and Natural Resources Department, dated November 3, 1989. As we have discussed, actual oxygen requirements for a facility such as yours are difficult to calculate due to the lack of data on the waste stream being received. We have based our calculations on the assumption that a 0.5 milligram per liter residual of dissolved oxygen would be sufficient to maintain the ponds in an aerobic condition. Complete oxygen dispersion will be extremely important. For this reason, we believe that the recirculation/spray evaporation system will be critical to the successful operation of the facility. If actual oxygen demand proves to be greater than anticipated, the recirculation/spray evaporation system will have the capability of adding oxygen to the system, as well as assuring the complete dispersion of available oxygen.

If we can be of further assistance please feel free to contact us at you convenience.

Sincerely yours,

BREWER ASSOCIATES, INC.

Richard P. Cheney, P.E., P.L.S.
President

RPC:jc 90005/L1189

SUNCO TRUCKING AND WATER DISPOSAL
OXYGEN AND MIXING CALCULATIONS

Most criteria developed for oxygen uptake, relates to the treatment of municipal and domestic waste waters. These types of waste have been evaluated for many years and estimates of oxygen demand can be made for design purposes. The same theories and formulas should apply to the treatment of water produced from coal seams. However, very little is known about the oxygen demand of such waters. Generally, the power required to supply oxygen to a system is much less than the power required to provide adequate mixing. For many years waste water treatment design was based on maintaining a dissolved oxygen level of 2.0 mgl within the treatment basin. It was assumed at this level of dissolved oxygen, the oxygen demand would be supplied and there would be sufficient energy available to the waters to maintain adequate mixing. For purposes of this design and calculation we have assumed that the actual oxygen demand will be substantially less than that required in a domestic or municipal waste water treatment facility. The following calculations compute the Hp required to maintain a dissolved oxygen content of 0.5 mgl:

ASSUME THAT DISSOLVED O_2 RESIDUAL SHOULD EQUAL = 0.5 MGL

@ 6.5 mg Requires 27# O_2/Day

#O_2/Feet^3 Air = 0.0175

% Eff per foot of Immersion Depth = 1.0 for Coarse Bubble Diffusers. Use Immersion Depth of 12 feet.

S.O.R. = 1.12 # O_2/hour

$$\text{Air Q required} = \frac{1.12}{(0.0175 \times 0.01 \times 12)} / 60 = 533 \text{ cfm}$$

Corrections for Inlet Conditions

Elevation = 6,000 Feet P = 14.696 psia

P_1 = Inlet Pressure Due to Altitude

14.696 - (6,000/2116.2) = 11.86 psia

T = Air Temperature @ Standard Conditions in Degrees R

= 68 + 460 = 528° R

T_1 = Blower Inlet Air Temperature in Degrees R

= 90+ 460 = 550° R

Calculate Flow Rate From PQ = MRT

M = PQ/RT

Where R = Specific Gas Constant = 53.3 x °R for Air

$$M = \frac{14.696 \times 533 \times 144}{53.3 \times 528} = 40 \text{ lb. m/ min.}$$

$$Q_2 = MRT_1/P_1$$

$$Q = \frac{40 \times 53.3 \times 550}{11.86 \times 144} = 687 \text{ I.C.F.M.}$$

Blower Brake Hp @ Average Inlet Conditions

$$BHP = \frac{0.227 \times Q_2 \times [(P_2/P_1)^{0.283} - 1]}{\text{Blower Efficiency}}$$

Use 2 Psi for Line Losses

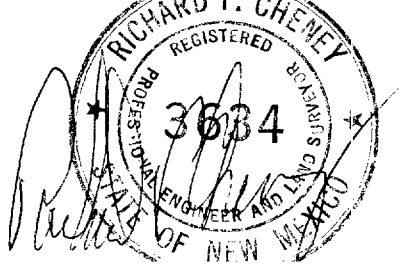
$$P_2 = 11.86 + (.4335 \times 12) + 2 = 19.06$$

Assume Blower Efficiency of 0.7

$$BHP = \frac{0.227 \times 687 \times [(\frac{19.06}{11.86})^{0.283} - 1]}{0.7} = 32 \text{ hp}$$

It is our opinion that incoming waters will have a very small oxygen demand. Therefor, mixing to assure complete dispersion of available oxygen, will be critical to the successful operation of the facility.

The operator proposes to enhance evaporation by installing a high pressure spray system. This system will have two intake points at approximate third points in the pond, and will discharge back to the pond through high pressure spray nozzles attached to an island in the center of the pond. The proposal is to provide a pump with the capability of circulating 50,000 barrels per day during a 10 to 12 hour operating period. Based on a 12 hour operating period this would be equivalent to approximately 3,000 gallons per minute. At this rate the operator would have the capability of moving the complete pond in approximately 36 hours. This turnover would also be enhanced by the operation of the air system. In addition, the spray/evaporation system will also add oxygen to the pond. Based on this set of operating conditions, it is our opinion that the operator will be able to maintain the pond in an aerobic condition or will be able to return it to an aerobic condition if so required. These calculations are based upon the assumption that incoming waters will have very little oxygen demand. It is my understanding that the operator will also have chemical injection capabilities and that the operator will maintain close control over the quality of incoming waters. With aeration, recirculation, and chemical injection capabilities, the operator should have sufficient redundancy to maintain the ponds in an odor free condition.



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

November 3, 1989

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT NO. P-106-675-125

Mr. George Coleman
SUNCO TRUCKING WATER DISPOSAL
708 South Tucker Avenue
Farmington, New Mexico 87401

RE: Commercial Disposal Facility
NW/4, Sec. 1, T29N, R12W
San Juan County, New Mexico

Dear Mr. Coleman:

The Oil Conservation Division (OCD) has received your response dated August 18, 1989, to our request for clarification and additional information on the application for the above referenced facility. The OCD has also received a letter of protest and a request for a public hearing on your application. The OCD is currently in the process of reviewing your application and will continue to do so concurrently with a review of the protest and request for public hearing. Copies of all correspondence between Sunco Trucking Company and the OCD pertaining to the application will be supplied to the attorney representing the protesters.

In continuing the review of your application a number of items were omitted or require further clarification. The following comments and requests for clarification and additional information are based on a review of the application dated June 22, 1989, and your response, dated august 18, 1989, to OCD's comments.

1. You have submitted the manufacturers specifications sheet on the liner. A listing of chemical compatibilities with the liner was not included. Supply the manufacturers chemical resistance information.

2. The August 18, 1989 response includes a description of the operation and circulation systems you propose for the pond. What is the frequency that the pond will be "turned-over" when either or both of the systems are in operation? Submit the design criteria and calculations used to determine if the aeration systems are properly designed and sized to maintain the pond(s) in an aerobic state and preclude the emissions of H_2S gas. A Registered Professonal Engineer that specializes in waste water storage and treatment is required to certify the adequacy of the design and construction of the system.

3. Paragraph I. D. of the original application states "The second and third ponds will be built as market conditions dictate." A memo from the State Engineer Office concerning your application to their office states "Three ponds are proposed, the first two ponds are to be constructed immediately and the third will be constructed as market conditions dictate." Clarify the construction schedule.

4. Paragraph II.A.3.B. of the application states "If there is only one pond at the time the leak is detected, and weather permitting, the pond will be artificially evaporated until ...". The evaporation of the contents of the pond could require a considerable length of time. The purpose of the secondary liner is to intercept fluids and detect any failure of the primary liner. It is not intended, and will not be used, for long term containment of fluids. In the event fluid is detected in the leak detection sump, a plan and commitment is required for the following:

   a. Immediately cease receiving fluids for disposal in the affected pond.

   b. Immediately begin to remove the fluids from the affected pond to an approved location. The removal of the fluids will continue uninterrupted until the pond is empty or the fluid level is below the leak. A period not to exceed seven (7) days will be allowed to accomplish the removal of the fluids.

   c. Determine the location and cause of the leak and repair the liner and test it for other possible leaks.

   d. Remove fluids from the leak detection system prior to placing it back in service.

   If there is only one pond at the facility, or if the pond(s) are at capacity at the time a leak is detected, an off-site location must be used for transfer of the fluids. The off-site location intended for use will be identified in your permit application. The OCD must be notified within 24 hours of the detection of fluids in the sump and your proposed remedial actions.

5. Sludge build up, removal and disposal was not addressed in your application. How do you propose to monitor the rate of sludge and sediment build up? How do you propose to remove the sludges without compromising the integrity of the liner or disturbing the aeration and circulation systems? Where do you propose to dispose of these sludges once removed? The OCD will require a chemical analysis be performed on the sludges and proper disposal methods be followed based on the results of the analyses.

The closure plan in paragraph II.D is not adequate. Any sludge and/or salts remaining after the liquids are removed or evaporated must be analyzed to determine proper disposal. The pond must be monitored for leaks, H_2S gas and prevention of illegal dumping until the ponds are backfilled.

7. Paragraph V.I., Contingency Plan, states each load will be tested for the presence of H_2S gas and treated with chlorine if required. The following monitoring is also required:

   a. Dissolved sulfides in the pond(s) will be analyzed monthly. Records of the analyses will be kept at the facility.

   b. Air concentrations in tenths of a part per million (ppm) of H_2S around the pond(s) and tanks and the pH of the pond(s) will be monitored twice daily during operating hours. Records of such measurements will be kept at the facility. Submit proposed sampling locations and times for this monitoring.

   The following conditions and reporting requirements must be committed to and included in the contingency plan:

   a. If air concentration of H_2S reaches 1 ppm at the fence line for two consecutive monitor readings, or if dissolved sulfides in the pit water reaches 15 ppm, the OCD will be notified immediately, hourly H_2S monitoring (24 hours per day, 7 days per week) will commence at the designated locations, pond water will be analyzed for dissolved sulfides daily, and a previously approved treatment plan will be implemented immediately to reduce dissolved sulfides in the pond and eliminate H_2S emissions. The treatment plan will be submitted and approved as part of the application and will include method of treatment, chemicals to be used, source and availability of chemicals and method of storage of enough treatment chemicals to begin treatment so that there will be no interruption of treatment for "delays in shipment". This plan will also include any possible interactions of treatment chemicals with any constituent likely to be in the pond or normally present in produced water.

   b. If air concentration of H_2S at the fence line reaches 10 ppm at any time, public safety personnel, such as County Fire Marshal, County Sheriff's Department, New Mexico State Police, and the OCD will be notified. Sunco Trucking must submit plans prior to permit approval for actions to be taken to protect public health and safety. Requirements for pond treatment action will be at least as stringent as those required after detection of 1 ppm H_2S, and additional requirements to be imposed will be determined after OCD review.

8. Pursuant to OCD Order No. R-8952 (enclosed) all pits and open top tanks over 16 feet must be screened, netted, or covered to protect migratory birds.

Submission of the information requested will allow review of your application to continue.

If you have any questions, please do not hesitate to call me at (505) 827-5884.

Sincerely,

Roger C. Anderson
Environmental Engineer

RCA/sl

cc: OCD Aztec Office
Gary L. Horner, Farmington

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
Sinco Trucking Water Div.
708 S. Tucker Ave.
Farmington, NM 87401
Attn: George Coleman

4. Article Number
P106675125

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X

6. Signature — Agent
X

7. Date of Delivery
11-6-89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

November 2, 1989

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT NO. P-106-675-187

Mr. Gary L. Horner, Esq.
P. O. Box 2497
Farmington, New Mexico 87499

RE: Sunco Trucking Water Disposal Permit Application for Administrative Approval for a Commercial Evaporation Facility

Dear Mr. Horner:

The Oil Conservation Division (OCD) has received your letter of Protest and Request for Public Hearing, dated August 21, 1989, for the above referenced application. I share many of the concerns mentioned in your protest. The OCD staff will conduct a full review of the application and an investigation of the proposed site, geologic and hydrologic features, operating procedures and construction proposal before any action will be taken on an approval or denial of the application.

Sunco Trucking (applicant) has already responded to OCD's first request for clarifications and additional information (Enclosed). A second request has been prepared by the OCD and has been sent to the applicant. Copies of all correspondence between the applicant and the OCD will be supplied to your office.

A number of the items in your Letter of Protest concern the potential future use of land adjacent to the applicants proposed site. The OCD understands the concern of the protestors that the construction of an industrial waste disposal facility may have an undesirable affect on intended residential construction, however, the OCD does not have the jurisdiction or legislative authority to hold public hearings or administer rules and regulations dealing with county zoning or land use planning. Under the OCD Rules and Regulations permitting review is limited to proposed measures for ground water protection, and general operating procedures to ensure that the facility is operated in a safe manner and receives only oil and gas waste fluids (e.g. requirements include fencing, attendant on duty, recordkeeping, etc.)

Approval or denial of a permit whether administrative or through the hearing process, can consider only these items.

The OCD is in the process of considering your Request for a Public Hearing. I hope the copies of the correspondence between the applicant and the OCD have answered some of your questions and will alleviate the need for a hearing. If you still have concerns that are under the jurisdiction of the OCD, please let me know.

If I or Division personnel can provide you with additional information or assistance, please do not hesitate to call.

Sincerely,

William J. LeMay
Director

WJL/RCA/sl

Enclosure

cc: OCD Aztec
Sunco Trucking Water Disposal

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

Mr. Gary Horner
PO Box 2497
Farmington, NM 87499

4. Article Number
P106675 187

Type of Service:
- ☐ Registered
- ☐ Insured
- ☑ Certified
- ☐ COD
- ☐ Express Mail
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X

7. Date of Delivery
11-6-89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 * U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

MEMORANDUM

September 15, 1989

State Engineer Office
Santa Fe, New Mexico

TO Donald T. Lopez, P.E., Chief, Design and Construction Section

FROM Charles E. Merritt, P.E., Water Resource Engineer

SUBJECT Review of Plans and Specifications for Commercial Surface Disposal Facility, Sunco Trucking Company, San Juan County, T29N, R12W2.

I have reviewed the mylar drawings for Sunco Trucking Company's proposed evaporation ponds. Construction specifications are shown on the drawings. Three ponds are proposed, the first two ponds are to be constructed immediately and the third will be constructed as market conditions dictate. Each pond is to have a capacity of 20 acre-feet and a maximum embankment height of about 15 feet. All three ponds are each to be enclosed by perimeter embankments and are to be placed in line so that transfer of water from one pond to another can be easily achieved. The ponds will be lined with synthetic liner. State Engineer Office checklists are attached indicating all applicable items have been complied with. I recommend the documents be accepted for filing and that construction of the ponds be permitted subject to the following conditions:

1. The qualifications of a professional engineer registered in New Mexico who will supervise construction must be approved by the State Engineer prior to undertaking construction.
2. Construction shall be in accordance with approved plans and specifications. Any modification of the approved plans specifications or design changes must be approved in writing by the State Engineer prior to undertaking such modifications.

3. Upon completion of the construction, the professional engineer supervising construction shall submit to the State Engineer:

   a. a completion report which shall include description of problems encountered and their solution; summary of materials test data and construction photographs;

   b. as-built drawings;

   c. a certificate that the dam as constructed is safe for the intended use.

Charles E. Merritt, P.E.

CEM:dg

Attachment

cc: Dave Boyer, OCD

STATE ENGINEER OFFICE

ENGINEERING REVIEW
PROJECT CHECK LIST

Revised January 9, 1984

I. General, Plans and Specifications Evaporation Ponds

Applicant: Sunco Trucking Company File #

Requirement	Yes	No	Not applicable
1. Filing sheet (original drawings or mylar reproductions) Size, 36" x 24"	X		
2. Plans (original drawings or mylar reproductions) Size, 36" by 24"	X		
3. One-inch margin on all sides of drawings	X		
4. Sheets numbered in sequence	X		
5. Filing sheet separate from detail sheets	X		
6. Carefully and neatly prepared with waterproof India ink	X		
7. All signatures in waterproof black ink	X		
8. Rolled instead of folded	X		
9. Standard engineer's scale of sufficient size	X		
10. Distances and dimensions shown in feet and decimals thereof or metric equivalent	X		
11. Platted to true meridian	X		
12. Area location map included	X		
13. Map title and statements shown on the filing sheet	X		
14. Engineer's stamp or seal impressed on filing sheet	X		
15. Engineer's certificate of registration and preparation on filing sheet	X		
16. Claimant's certificate (special for corporations) on filing sheet	X		
17. Notary Public's signature and seal or stamp impressed on filing sheet in acknowledgement to claimant's certificate	X		
18. Certificate form for State Engineer's acceptance on filing sheet	X		
19. Specifications included	X		
20. Engineer's certification of registration and preparation on specifications	X		
21. Engineer's stamp or seal impressed on specifications	X		
22. Certificate form for State Engineer's acceptance on specifications	X		
23. Statement in specifications recognizing the authority of the State Engineer regarding inspection during construction and full power to act if specifications are not met	X		
24. Cost estimate	X		
25. Filing fees	X		

Note: Stock-water reservoirs in excess of 10 acre-feet shall comply with State Engineer Order Number 68 dated March 10, 1957.

Date September 15, 1989 Signature Charles E. Merritt

ENGINEERING REVIEW
PROJECT CHECK LIST
Revised January 9, 1984

II. Dam and Appurtenances Evaporation Ponds

Applicant: Sunco Trucking Company File #

Requirement	Yes	No	Not applicable
1. Map of drainage area	X		
2. Hazard classification (criteria in SCS TR-60 acceptable)	X		
3. Average annual yield of drainage area in acre-feet 1/			7/
4. Topography of proposed reservoir 2/	X		
5. Area-capacity table or curve for the reservoir to the dam crest	X		
6. Detailed dam site topography	X		
7. Dam site profile along centerline showing foundation materials geology and construction features	X		
8. Maximum dam section and dam section along outlet works	X		
9. Upstream slope not steeper than 2-3/4 to 1 (below spillway) 3/	X		
10. Downstream slope not steeper than 2 to 1 3/	X		
11. Minimum crest width = $2(h)^{\frac{1}{2}}+3'$ (minimum 8') 3/	X		
12. Freeboard above maximum high water elevation, minimum 5 feet 4/			X
13. Riprap and bedding gravel on face of dam 5/			8/
14. Analyses of construction materials submitted			8/
15. Foundation investigation 6/			8/
16. Cutoff trench provided			8/
17. Outlet works design (complete with hydraulic properties); minimum 18" pipe			X
18. Flood detention dams shall be ungated and the principal spillway (or outlet) of flood detention dams should be designed to empty the flood pool within 96 hours and to empty the sediment pool at the maximum practicable rate			X
19. Make and type of gates			X
20. Detailed spillway topography			X
21. Spillway design hydrograph (criteria set forth in SCS TR-60)			
22. Freeboard design hydrograph (are acceptable for items 21 & 22)			X
23. Spillway design hydraulics and capacity			X
24. Normal and maximum water surface elevation	X		
25. Outlet works tied to public survey corner or state coordinates			X
26. Permanent bench mark established above high water line and tied to a public survey corner or state coordinates	X		

1/ Required for other than flood detention dams
2/ Contour interval shall be such as to provide the basis for an accurate area-capacity curve or table
3/ Where earthen dams are to be constructed having other than a low hazard classification, an analysis shall be prepared covering slope and foundation stability under steady seepage conditions and where applicable an appropriate seismic loading; design of the dam shall be based on these studies
4/ Not required for dams designed in accordance with item 22
5/ May be omitted on flood detention dams designed to be emptied in 96 hours or less
6/ Including logs and locations of core or auger holes; material characteristics including strength parameters; settlement or consolidation; and permeability
7/ Perimeter Dam
8/ Pond to be lined with plastic liner

Date September 15, 1989 Signature Charles E Merritt

TO: Director of the
New Mexico Oil Conservation Division
State Land Office Building
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

RE: Sunco Trucking Water Disposal
Permit Application for
Administrative Approval for
Commercial Evaporation Ponds

LETTER OF PROTEST

COMES NOW Harold W. Horner and Doris J. Horner (hereinafter Protestors), by and through their attorney, Gary L. Horner, and hereby protests the application, design, construction and location of the Sunco Trucking Water Disposal's (hereinafter STWD) proposed commercial evaporation ponds (hereinafter disposal pits).

As and for good cause for said protest, Protestors state:

1. STWD has formally requested administrative approval from the New Mexico Oil Conservation Division (hereinafter OCD) of said disposal pits by letter dated May 19, 1989.

2. STWD has proposed that said disposal pits be located in the northwest quarter of Section 2, Township 29 North, Range 12 West, San Juan County, New Mexico.

3. Protestors own the parcel of land directly west of the proposed location of the proposed disposal pits. Protestors property being approximately described as the east 866 feet of Section 3, Township 29 North, Range 12 West, San Juan County, New Mexico. Protestors property being situated within one-half mile of the proposed location of said disposal pits.

4. Protestors intend, and have intended for some time, to subdivide the aforementioned property for residential purposes when market conditions allow.

5. In order to facilitate such future residential uses of said property, Protestors have caused to be installed: a 500,000 gallon water tank located in the southwest quarter of Section 1, Township 29 North, Range 12 West, San Juan County, New Mexico; as well as, a portion of a water line to be used to serve Protestors property from said water tank.

6. Crouch Mesa, where both the subject disposal pits are to be located and where Protestors property is located, is relatively flat, lying relatively equidistant between Farmington, Aztec and Bloomfield. Therefore, Crouch Mesa currently has significant potential for future residential development.

7. County Road 3500, which is currently under construction and which will provide access between Flora Vista and highway 64 (between Farmington and Bloomfield), will pass within one-quarter mile of the proposed STWD disposal pits.

8. The design proposed by STWD is inadequate with respect to the contamination of surrounding soils and ground water, in

that STWD proposes:

a) to initially construct a single large evaporation pond (see STWD letter dated May 19, 1989 requesting administrative approval for disposal pits - hereinafter STWD application-II.A.1.);

b) in the event of a leak in the single pond, STWD proposes to artificially evaporate said pond until the water depth is below the leak (see STWD application II.A.3.B.1.);

c) in the event of a leak in the single pond, the leak detection system will be recycled to the main pond until market conditions warrant a second pond and the leak can be repaired in the first pond (see STWD application II.A.3.B.1.).

9. With respect to the STWD design, Protestors state:

a) Protestors do not understand the concept of "artificial evaporation;

b) the term "artificial evaporation" is ambiguous and appears to be contrary to the purpose of evaporation ponds;

c) it is likely that the primary liner will be tested for leaks by monitoring the leak detection system and associated sump;

d) it is likely that the secondary liner will never be tested for leaks;

e) if only a single evaporation pond is constructed and leaks develop in the primary liner, the secondary liner will become the primary barrier between the pond and surrounding soils;

f) if the secondary liner has become the primary barrier, but the secondary liner has never been tested for leaks and the use of such evaporation pond is continued without interruption for undetermined, possibly extended periods of time, leaks may be experienced to the surrounding soils for extended periods of time with no provisions being made for the detection or correction of such leaks in the secondary liner.

g) Therefore, the design of such system is inadequate to protect surrounding soils when a single evaporation pond is utilized.

10. Further, STWD proposes that "[i]f a leak is detected, the leak detection system will be pumped into one of the other ponds and the pond that is leaking will be lowered until such depth as the water is below the leak" (see STWD application II.A.3.B.1.). If the second evaporation pond is not built until market conditions allow, such pond will only be built when the capacity to be utilized exceeds the capacity of a single evaporation pond. At such time, when the capacity required exceeds the capacity of a single pond, it will not be possible to completely drain one pond by removing the products from that pond and placing such products in the second pond. Therefore, the system as proposed by STWD will never be sufficient to provide for the draining of such ponds in order to repair leaks.

11. The closure plan proposed by STWD is not adequate in that the sludge, remaining after the life of the disposal pits, will simply be buried in the ground on site (see STWD application

II.A.3.C.1.). OCD apparently believes that such products constitute a risk to surrounding soils and ground water such that double lined evaporation ponds are required to prevent the contamination of surrounding soils and ground water. To simply allow such products to be buried, wrapped in plastic, for all eternity appears to constitute significant risks to the surrounding environment.

12. STWD has not indicated how sludge, that will be removed from the pit during the life of the operation, will be disposed of if markets for such materials are not found. Protestors adamantly state that on site burial or burning is not acceptable.

13. The STWD application does not address the use of injection wells on the site. Pursuant to such application, it would appear that injection wells are not anticipated on the subject site. It would appear that evaporation ponds and injection wells are both viable alternatives for the disposal of produced water. It would appear that the choice between evaporation ponds and injection wells would be based largely upon economics. Protestors understand that such injection wells are not covered by the subject disposal pit application process. It appears that nothing in the STWD application precludes the installation and use of such injection wells in the future. Therefore, it appears that STWD may elect to utilize injection wells at the subject site in the future if market conditions warrant. Such injection wells could create significant contamination of local soils and ground water supplies. If the disposal pits currently being sought are approved, the existence of such disposal pits in the future would probably weigh heavily in favor of allowing STWD to utilize injection wells on the same site.

14. The Notice Of Publication provided by OCD with respect to the STWD application states that "[t]he ground water most likely to be affected by any accidental discharges is at a depth in excess of 80 feet with a total dissolved solids content estimated at 2000 mg/l." It is unclear to Protestors how the ground water most likely to be affected by accidental discharges can be at a depth in excess of 80 feet unless someone is intending to inject products into the ground at depths in excess of 80 feet. Again, if STWD or someone else is intending to use injection wells on the subject site, Protestors have not been notified of such intent and would certainly protest such injection wells if proposed.

15. Protestors adamantly protest the design, construction and location of the STWD disposal pits as proposed. However, Protestors do not perceive the subject STWD application for disposal pits standing alone. Rather, Protestors perceive such application as additionally opening the door to a house of horrors that may yet include additional evaporation ponds, injection wells, unlined mud pits, uncontrolled expansion, accidental discharges, emissions of hydrogen sulfide and other airborne noxious gases, contamination of ground water supplies and contamination of ground surfaces and surface waters.

16. The process and procedures described in OCD's revised August 1988 Guidelines for Permit Application, Design and Construction of Waste Storage/Disposal Pits (hereinafter OCD Pit Guidelines), which have been utilized in the preparation of the subject STWD application, and which represent the basis upon which such STWD application will be reviewed and approved, are not adequate with respect to the protection of surrounding properties, property owners, residents and the public in general with respect to the emission of hydrogen sulfide gas from such facility.

17. The Honorable Samuel Z. Montoya acting in the Eleventh Judicial District Court, County of San Juan, State of New Mexico in the matter of State of New Mexico; Timothy Payne, et al., Plaintiffs, v. Basin Disposal Inc., et al., Defendants, Cause Number CV-87-569-1102 (hereinafter Basin case) has entered a Final Judgment (dated June 6, 1989) against defendants for the sum of $966,247.90 primarily due to personal injuries suffered by plaintiffs as a result of hydrogen sulfide emissions from Basin Disposal, Inc.'s produced water disposal site. In the Court's Amended Findings of Fact in the Basin case (filed June 6, 1989) (hereinafter Basin Facts) the Court found that:

"8. The Basin facility is subject to and regulated by the New Mexico Oil Conservation Division ("OCD")....

"10. The location, design, construction, and operation of the facility were approved by the OCD and were in compliance with all applicable permits, rules, regulations and criteria of the OCD." (Basin Facts, page 3.)

The Basin Court also found that:

"7. ...The primary operation of Basin is to serve as a repository for produced water.... Basin's facility is located two and one-half (2.5) miles north of Bloomfield, New Mexico.... The facility presently includes a large evaporation pond capable of holding some four million gallons of fluid, twelve (12) lined mud pits, and numerous storage tanks in various facets of the operation. The facility opened for business on or about October 1, 1985." (Basin Facts, pages 3 and 4.)

The Basin Court also found that:

"13. Basin started to emit hydrogen sulfide gas at least as early as the spring of 1987." (Basin Facts, page 3.)

"15. The emissions of hydrogen sulfide from Basin have continued up to the time of trial, in varying degrees.

"16. The emissions of hydrogen sulfide from Basin carry over to the homes of the plaintiffs in sufficient concentrations to cause adverse physical and psychological effects and to create intolerably obnoxious odors.

"17. The Emissions of hydrogen sulfide from Basin carry over to highway 44 and throughout the surrounding area for a distance of approximately .5 to 1.0 mile north and 1.0 to 1.5 miles south. The odors are obnoxious and offensive to members of the public.

"18. The spray system operated by Basin caused mist from Basin to carry over to the homes and property of [plaintiffs]....

The mist left a powdery particulate residue as if a salty substance had been sprinkled on their motor vehicles which was hard to remove and damaged the paint and roof of the vehicles.

"19. During the summer of 1987, a rain storm flushed materials which Basin had allowed to seep into the arroyo immediately south of the facility down the arroyo and onto the property of [plaintiffs].... The 'green foam' which was carried onto these plaintiffs' properties left a scummy residue.

"20. The emissions of hydrogen sulfide from Basin were caused by the activity of bacteria which existed in the anaerobic environment created in the evaporation pond.

"21. The hydrogen sulfide emissions were caused by the design and operation of the waste disposal facility including the following acts and omissions by Basin and individual defendants.

"a. the depth of the pond in excess of eleven feet;

"b. the acceptance of volumes of produced water two to three times in excess of the design capacity;

"c. the increase in maximum water level of the pond;

"d. the operation of the spray system;

"e. the failure to monitor incoming loads of produced water from[sic] hydrogen sulfide prior to the summer of 1987;

"f. the failure to permit loads of produced water to settle prior to being placed in the main evaporation pond;

"g. the failure to increase the number of settling tanks to accommodate the increased volume of produced water;

"h. the ongoing presence of free-floating oil on the surface of the main evaporation system;

"i. the failure to remove sediments and sludge from the main evaporation pond;

"j. the policy of the defendants to take every load of produced water brought to the facility regardless of its source or content;

"k. the failure to exercise due caution with regard to loads of materials which may have contained high concentrations of bacteria, sulfides, or sulfates;

"l. the decision to accept loads of produced water containing high concentrations of hydrogen sulfide and to store those loads in tanks with vents exposing the contents to the atmosphere." Basin Facts, page 4 to 6.

The Basin Court further found that:

"28. The emissions of hydrogen sulfide from Basin caused the plaintiffs to experience adverse health effects. The emissions of hydrogen sulfide caused the following physical effects either by direct exposure or as an indirect effect resulting from the stress of living in a noxious environment: eye irritation, nose irritation, throat irritation, lung irritation, headaches, nausea, vomiting.[sic] bloody noses, insomnia, irritability, and diminished concentration.

"29. The emissions of hydrogen sulfide from Basin also caused the plaintiffs to suffer adverse psychological effects. The emissions of hydrogen sulfide from Basin caused the plaintiffs to experience anxiety, depression, anger, and

frustration. The emissions of hydrogen sulfide also caused [plaintiffs]... to develop post-traumatic stress disorder."

"30. There is a need in San Juan County for disposal facilities for produced water. Basin, however, has accepted produced water regardless of whether the source was San Juan County or even New Mexico. In fact, within weeks of opening October 1, 1985, Basin's volume of intake was 1500 to 2000 bbls per day. The design capacity of the evaporation pond was 750 bbls. per day. A substantial or significant portion of this produced water did not come from the vulnerable areas in the San Juan Basin, but rather was trucked in from the Amoco fields in southern Colorado." Basin Facts, pages 7 to 8.

The Basin Court further found that:

"42. The emissions of hydrogen sulfide affect a substantial number of persons, both plaintiffs and non-plaintiffs, who live and work in the vicinity of Basin.

"43. The emissions of hydrogen sulfide from Basin disperse throughout the area and cause offensive and obnoxious odors affecting persons driving on highway 44 and those individuals who live and work in the vicinity of Basin. These emissions of hydrogen sulfide have caused adverse health effects to some persons who have traveled the public roads and highway near Basin or who work in the vicinity....

"45. The emissions of hydrogen sulfide are injurious to the public health and welfare.

"46. The emissions of hydrogen sulfide interfere with the exercise and enjoyment of public rights and the right to use the public thoroughfares in the residential areas around Basin and on the highway.

"47. The emissions of hydrogen sulfide from Basin have diminished the property value of the land surrounding the facility.

"48. The emissions of hydrogen sulfide from Basin constitute an unreasonable interference with rights common to the public....

"53. The defendant's conduct... was not reasonable and it was reasonably foreseeable that the hydrogen sulfide, which defendants knew was a material with dangerous properties present in produced water, would be emitted from the evaporation pond...." Basin Facts, Pages 12 to 13.

18. The STWD disposal pits, like the Basin facility, is designed to dispose of produced water.

19. Conditions found at the Basin facility indicate that produced water brought to the STWD disposal pits can be expected to contain hazardous levels of hydrogen sulfide gas.

20. Conditions found at the Basin facility indicate that conditions at the STWD disposal pits can be expected to generate hazardous levels of hydrogen sulfide gas.

21. Conditions found at the Basin facility indicate that the spray system to be utilized by STWD will increase the level of airborne hydrogen sulfide emissions from the STWD disposal pits.

22. Conditions found at the Basin facility indicate that the proposed STWD disposal pits will represent an unreasonable risk to the health, safety and welfare of those members of the public utilizing the new County Road No. 3500.

23. The public should not be led to expect that their health, safety and/or welfare will in any manner be protected, or assured from harm, from hazardous conditions that may be associated with the STWD disposal pits, simply because STWD may have complied with all applicable permits, rules, regulations and/or guidelines promulgated by OCD with respect to the location, design, construction or operation of the proposed STWD disposal pits.

24. With respect to regulation of hydrogen sulfide emissions, the only apparent rule promulgated by OCD which may be applicable to the subject STWD application is the Contingency Plan expressed in the OCD Pit Guidelines which states that: "[a] contingency plan in the event of... a release of [hydrogen sulfide]... shall be submitted for approval along with the details for pit construction. The contingency plan will outline a procedure for... aeration and treating pit fluids for [hydrogen sulfide]... generation, [hydrogen sulfide]... monitoring and notification of appropriate authorities." (OCD Pit Guidelines, V.H.1., page 10.)

25. With respect to proposed methods for the mitigation of hydrogen sulfide emissions from the STWD disposal pits, the STWD application provides only that "[t]he ponds will be equipped with a commercial aeration system. The aeration systems will be placed in the bottom of the ponds and will consist of three rock diffusers. The location of the diffusers will be equidistant (as close as practical) from each other. They will be anchored to the pond bottom by bricks and or sand tubes. A second aeration system will be placed in the pond bottom as well. This system will consist of a network of perforated 1" and 2" PVC pipe. The system will be able to circulate either a liquid or a gaseous medium. Further details will be forwarded as it becomes available." (Emphasis added.) (STWD application II.A.3.A.) The STWD application further provides that "[e]ach load will be tested for [hydrogen sulfide].... If [hydrogen sulfide]... is detected that load will be isolated and the operator will determine if the water is to be removed or if STWD will treat the load. If STWD treats the load sufficient chlorine will be added so that residual chlorine is present prior to the water being drained into the skimmer pond."

"The ponds will be maintained in an aerobic state. [Hydrogen sulfide]... should not be a problem as each pond has three systems in which to keep the pond aerobic." (STWD application V.I.)

26. The STWD aeration systems have not been properly sized, detailed drawings and calculations of such aeration systems have not been offered to demonstrate sufficiency of the proposed aeration systems. No explanations have been provided with respect to how well such aeration systems will perform as sludge builds

up in the pits. No explanations have been provided with respect to how sludge is to be removed from such pits without damaging such aeration systems. Therefore, Protestors, surrounding residents and the public in general should not be misled with respect to the sufficiency of such systems or the ability of STWD to adequately control hydrogen sulfide emissions from the STWD disposal pits.

27. The National Safety Council has established that hydrogen sulfide can cause hemorrhaging and death at exposure levels of 100-150 parts per million over an 8-48 hour period. The National Safety Council has further established that hydrogen sulfide can cause coughing, collapse and unconsciousness at exposure levels of 500-600 parts per million over a 0-2 minute period and that exposure levels in excess of 600 parts per million can cause death within 0-2 minutes.

28. The Basin Court found that:

"14. The levels of hydrogen sulfide gas emitted from Basin have been measured in a range between 0.1 and 300 parts per million (ppm)." However, the Basin Court further found that "[t]he Gas-Tech monitor used by Basin operators to measure ambient air emissions of hydrogen sulfide was unreliable. The monitor readings taken from that monitor were and are unreliable and have been systematically measuring the ambient air hydrogen sulfide levels below what the levels were in fact. Defendant's own expert... found in the fall of 1988 that Basin's monitor was incapable of calibration and that it had been underrecording hydrogen sulfide levels." (Basin Facts, page 4).

29. The Basin Court ordered "that the defendants may operate their produced water disposal facility only under the following conditions:

"1. that the defendants maintain the disposal pit in an aerobic condition;

"2. keep the level of water in the disposal pit at a depth of no more than three (3) feet;

"5. continue the present chemical treatment of the settling tanks and the disposal pit;

"8. continue monitoring the emissions of hydrogen sulfide and limit such emissions to 0.010 parts per million, in compliance with the ambient air quality standards as promulgated by the environmental Improvement Board of the State of New Mexico under its Air Quality Control Regulation 201 dated June 15, 1981;

"9. monitor the build-up of sludge in the bottom of the disposal pit and remove same, if anaerobic conditions begin to develop in the disposal pit." (Basin Case, Final Judgment, entered June 6, 1989, page 3.)

30. STWD plans to operate its disposal pit at depths up to 13.5 feet (STWD application II.A.2.A.), rather than limiting such depths to 3 feet as ordered upon Basin by the Basin Court.

31. STWD has only mentioned the potential use of chlorine in treating such produced waters. No detailed plans have been provided regarding such treatment plans and it appears that none exist although such chemical treatment may be an integral part of

the efforts required to adequately control hydrogen sulfide emissions, as ordered in the Basin Case.

32. STWD has not stated that it intends to limit hydrogen sulfide emissions to Ø.ØlØ parts per million, as ordered in the Basin Case.

33. It does not appear that either STWD or OCD intend to involve the New Mexico Environmental Improvement Board (hereinafter EIB) in the permitting or approval process of the STWD application for disposal pits, although it is the EIB who apparently has been charged with the responsibility for regulating air quality control. It therefore, currently appears that the STWD application will not be reviewed with respect to potential compliance with respect to such EIB regulations.

34. If STWD is allowed to construct said disposal pits as proposed, the value of Protestors property as potential residential property will be greatly diminished. Such residential development of Protestors property may be precluded altogether.

35. It is not necessary that said disposal pits be built in that adequate facilities currently exist in San Juan County for the disposal of produced water from the San Juan Basin.

36. Said disposal pits are located within approximately five (5) miles of the Basin site.

WHEREFORE, Protestors respectfully:

1. State that the disposal pits proposed by STWD would pose intolerable and totally unacceptable harm with respect to the value of their property, the health, safety and welfare of future residents of such area and would unreasonably restrict their own use and enjoyment of their property;

2. Request that the STWD application be denied as proposed;

3. Request that the STWD application be denied as such application may possibly be amended with respect to the proposed location.

Respectfully submitted by:

GARY L. HORNER
P.O. Box 2497
Farmington, New Mexico 87499
(505) 326-2378

August 21, 1993
Date

TO: Director of the
New Mexico Oil Conservation Division
State Land Office Building
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

RE: Sunco Trucking Water Disposal
Permit Application for
Administrative Approval for
Commercial Evaporation Ponds

REQUEST FOR PUBLIC HEARING

COMES NOW Harold W. Horner and Doris J. Horner (hereinafter Protestors) by and through their attorney, Gary L. Horner, and hereby request that a public hearing be held with respect to the Sunco Trucking Water Disposal (hereinafter STWD) Application for Administrative Approval of Commercial Evaporation Ponds.

As and for good cause for said request Protestors state:

1. STWD has formally requested administrative approval from the New Mexico Oil Conservation Division (hereinafter OCD) for said disposal pits by letter dated May 19, 1989.

2. STWD has proposed that said disposal pits be located in the northwest quarter of Section 2, Township 29 North, Range 12 West, San Juan County, New Mexico.

3. Protestors own the parcel of land directly west of the location proposed for said disposal pits. Protestors property being approximately described as the east 866 feet of Section 3, Township 29 North, Range 12 West, San Juan County, New Mexico. Protestors property being situated within one-half mile of the proposed location of said disposal pits.

4. Substantial issues exist with respect to the potential harm that the proposed facilities may cause to the health, safety, welfare and property values of Protestors, surrounding property owners, surrounding residents, future residents and the public in general.

5. The potential harm that the proposed facilities may cause to the health, safety, welfare and property values of Protestors, surrounding property owners, surrounding residents, future residents and the public in general is not made evident by the notices provided by Sunco to surrounding property owners, the notices provided by OCD to surrounding property owners, the notices published by OCD in local newspapers, the application submitted to OCD by STWD with respect to such facilities, or any other means apparent to Protestors.

WHEREFORE, Protestors respectfully request that:

1. A public hearing be held with respect to the subject STWD application;

2. Said public hearing be scheduled such that comments received from the public may be considered by the OCD prior to the OCD's determination to grant or deny STWD the permits

sought;

3. Notices be sent to surrounding property owners of record of such public hearing;

4. Notices be published in local newspapers of such public hearing;

5. Said notices of public hearing state that the subject STWD application raises substantial issues with respect to the potential impact of the proposed facilities on the health, safety, welfare and property values of surrounding property owners, surrounding residents, future residents and the public in general.

Respectfully submitted by:

GARY L. HORNER
P.O. Box 2497
Farmington, New Mexico 87499
(505) 326-2378

August 21, 1989
Date

(see Various Concerns raised by citizens over Disposal Pits)

GARY L. HORNER
ATTORNEY AT LAW

TELEPHONE
(505) 326-2378

P.O. Box 2497
FARMINGTON, NM 87499

August 21, 1989

RECEIVED

AUG 22 1989

OIL CONSERVATION DIV.
SANTA FE

Director of the
Oil Conservation Division
State Land Office Building
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Sunco Trucking Water Disposal
Permit Application for
Administrative Approval for
Commercial Evaporation Ponds

Dear Director:

Enclosed please find, with respect to the above mentioned permit application:

(1) a Letter of Protest, and
(2) a Request for Public Hearing.

Please note that I am currently representing Harold W. Horner and Doris J. Horner in the subject matter. Therefore, I respectfully request that any correspondence, that you may wish to have with such clients be directed to me at the above listed address or telephone number.

I hope that the depth of my clients concerns has been made apparent through the accompanying documents and that you will comprehend the serious need for a public hearing on this matter before the OCD considers the approval of the subject permit application.

I thank you for your anticipated timely consideration of this matter.

Sincerely,

GARY L. HORNER, Esquire

cc: Sunco Trucking Water Disposal w/ enclosures
Harold W. and Doris J. Horner w/ enclosures

Work Copy

8/22

To: Bill, Bob, Frank—

I expect we will need a public hearing on this. I'll know more after Roger & I review the "protest"

Dave

HEAVY HAULING P.O. BOX 443, FARMINGTON, NM

Roger - Is this the same aeration system purchased by Basin that was then replaced by the one they have now? Dave

August 18, 1989

N.M. Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

Attn: Roger Anderson

Re: Commercial Disposal Facility
NW/4 Section 2-T29N-R12W
San Juan County, NM

Dear Mr. Anderson:

Pursuant to your letter of July 20, 1989, I would like to address each item separately.

1. The liner company to be used at this time is Palco Linings Inc. The specification sheet for both liners is attached.

2. The commercial aeration system will be purchased from Aquatic Eco-systems Inc. The specification sheet for the diffusers and air blower are attached. The data for each is indicated by a check mark. There will be a total of eighteen diffusers with a capacity of 0.10 cfm or 1.8 cfm. The blower will have a capacity of 3.6 cfm at a hydrostatic pressure of 5.0 psi. The hydrostatic pressure of 13.5' of water will be approximately 5.75 psi. The efficiency of the blower will be reduced by altitude 20%; however, the rate will still be 2.88 cfm. The 2.8 cfm will be more than adequate to supply air to the diffusers.

   The other systems will consist of 2" PVC trunk line and 1" lateral. The laterals will be perforated in gangs on 20' centers with eight, 1/32" holes per gang. (See attached.) The PVC pipe will be anchored to the pond bottom with sand tubes. This system will be capable of pumping gaseous and/or liquid mediums. The liquid will be pumped by splitting the sprayer pump and introducing the liquid through a Venturi type hopper. The air will be supplied by a Masport pump (130 cfm at 6 psi hydrostatic backpressure). There will be a total of 288 holes. Each hole will allow 0.42 cfm to pass under 15 psi. The Masport pump delivers 20 psi continuous. If necessary, the

Masport pump can be replaced by a compressor.

3. The spray system will only be operated during those periods when an attendant is on duty. During periods of high wind or gusts, the system will be turned off. During periods of slight to moderate winds, the pump will be slowed so as to maintain the salt or spray inside the pond.

4. Washed sand and "pea" gravel (please see plans).

5. The main line will be 2" and will be perforated. The laterals will be 1" and perforated as well.

6. The anchor trench will be set back a minimum of 9" from slope break.

7. The discharge siphons are shown on the drawings.

8. Beams will be placed around the tanks so as to have a volume sufficient to contain one-third more than the capacity of the four interconnected tanks.

9. The incidental oil will be treated and subsequently sold to Gary Energy.

10. The proposed fence is indicated on the drawings.

11. The O.C.D. will be notified within one working day of any leaks.

12. The application with the State Engineer has been filed concurrently with this letter.

13. A bond, $25,000.00, will be obtained prior to construction and after permit approval.

I believe I have answered all of your questions or comments. If I may be of any further assistance, please advise.

Very truly yours,

Robert C. Frank
Agent

RCF/chb

STANDARD SIZES

CHECK OUR NEW LOWER PRICES

PART NO.	LENGTH	WIDTH	ACTUAL WEIGHT	AIR SUPPLY CONNECTION	SUGGESTED CFM	PRICE	QTY. PRICE
AS-1	1.5	50	03 lb.	3 16" OD	.05	$ .64 ea	100+ $ 58 ea
AS-2	1.5	.75	.06 lb.	3.16" OD	.10	.95 ea	100+ .85 ea
AS-3	2.0	1.0	1 lb.	3 16" OD	.20	1.76 ea	50+ 1.58 ea
AS-4	1.5	1.5	.21 lb.	3.16" OD	.25	2.30 ea	50+ 2.07 ea
AS-5	3.0	1.0	.16 lb.	1/4" OD	.30	2.40 ea	50+ 2.16 ea
AS-8	3.0	1.5	.39 lb.	1/4" OD	.35	3.55 ea	50+ 3.20 ea
AS-15	6.0	1.5	.75 lb.	1/4" OD	.50	5.38 ea	50+ 4.84 ea
ALR-15	6.0	1.5	.75 lb.	1/2" NPT	.50	6.40 ea	50+ 5.76 ea
AS-23	9.0	1.5	1.35 lb.	3/8" OD	.75	8.00 ea	40+ 7.20 ea
ALR-23	9.0	1.5	1.35 lb.	1/2" NPT	.75	9.20 ea	40+ 8.30 ea
AS-30	12.0	1.5	1.50 lb.	3/8" OD	1.00	10.30 ea	40+ 9.26 ea

MATERIALS OF CONSTRUCTION

Body . . . . . Silica Glass
Fitting . . . . ABS, Linear Polyethelene or special order
Maximum pore size . . . . . 140 microns (.0055 in.)
Bubble size . . . . . 1-3 millimeters (.04-.15 in.)
Flexural Strength . . . . . 2500 psi
Modulus of rupture . . . . . 500 psi
Nominal particle retention . . . . . 50 microns
Service life at pH below 8.0 . . . . . unlimited

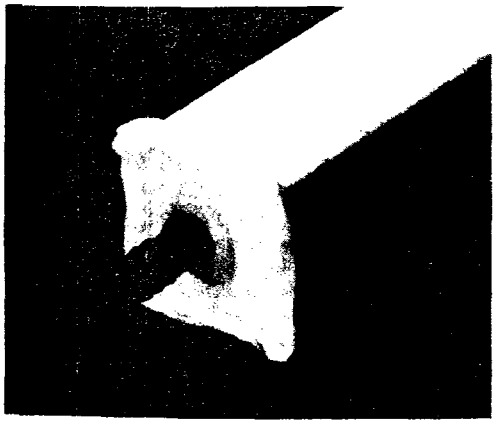
All dimensions in inches. Dimensions of length and width are ± 1/8". Non-standard fittings are available on request.

The suggested CFM shown above is for reference only Higher CFM amounts will create larger bubbles.

SMALL PORE DIFFUSERS FOR PURE OXYGEN AND OZONE APPLICATIONS

These diffusers are made of the same material as the above diffusers but with a smaller pore size to produce a finer bubble. They require higher pressure to operate than our regular diffusers and will clog somewhat faster due to the smaller pore size. To restore them to like-new performance, immerse in HCL (muriatic) acid.

CPVC and 316 stainless steel fittings with 1/2" MNPT are available for applications using ozone and other gases.



PART NO.	LENGTH	WIDTH	ACTUAL WEIGHT	AIR SUPPLY CONNECTION	PRICE	QTY. PRICE
AS-1-0	1.5	.50	.03 lb.	3/16" OD	$ 1.05 ea.	100+/$ .85 ea.
AS-2-0	1.5	.75	.06 lb.	3/16" OD	$ 1.75 ea.	100+/$1.40 ea.
AS-3-0	2.0	1.0	.1 lb.	3/16" OD	$ 2.90 ea.	50+/$2.30 ea.
AS-4-0	1.5	1.5	.21 lb.	3/16" OD	$ 3.50 ea	50+/$2.80 ea.
AS-5-0	3.0	1.0	.16 lb.	1/4" OD	$ 3.80 ea.	50+/$3.00 ea.
AS-8-0	3.0	1.5	.39 lb.	1/4" OD	$ 5.50 ea.	50+/$4.40 ea.
AS-15-0	6.0	1.5	.75 lb.	1/4" OD	$ 8.30 ea.	50+/$6.65 ea.
ALR-15-0	6.0	1.5	.75 lb.	1/2" NPT	$ 9.10 ea.	50+/$7.30 ea.
AS-23-0	9.0	1.5	1.35 lb.	1/4" OD	$11.30 ea.	40+/$9.00 ea.
ALR-23-0	9.0	1.5	1.35 lb.	1/2" NPT	$12.78 ea.	40+/$9.60 ea.
AS-30-0	12.0	1.5	1.50 lb.	1/4" OD	$14.50 ea.	40+/$11.60 ea.

All dimensions in inches. Dimensions of length and width are ± 1/8"

A bead of silicone may be applied around the edges of the diffuser as shown above. This will prevent the diffuser from scratching your fiberglass and/or protect the diffuser from abrasion from concrete surfaces. You can apply the silicone yourself or ask us to do it for an additional charge of $1.00 per diffuser.

A policy of continuous improvement is followed, and the right to alter published data without notice is reserved

2056 Apopka Blvd. Apopka, FL 32703 407/886-3939 FAX 407/886-6787

AIR COMPRESSORS

ROTARY VANE AIR COMPRESSORS

The motor-mounted design makes this unit a durable, lightweight, and versatile workhorse. For use in aeration, destratification, and de-icing of water bodies to a depth of 18 feet.

Self-sealing carbon vanes automatically adjust as they wear to maintain pump efficiency. Standard equipment includes thermal overload protection, air filter, and 8 ft. cord (115V. is standard; specify if 230V. is desired).

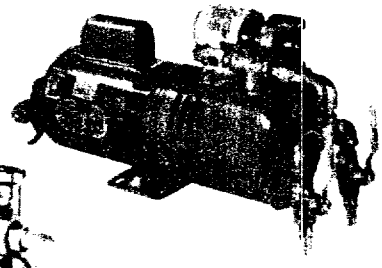
Our Rotary Vane Compressors feature:

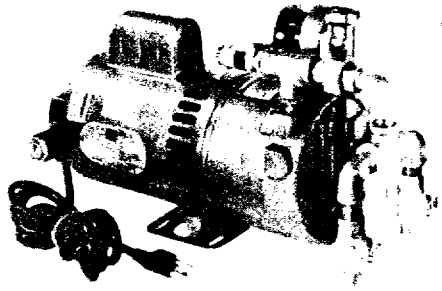
- Oil-less lubrication
- Direct Drive - No belts or pulleys or mounting base required
- Simple Vane Replacement
- Polyurethane Rust Protection
- Additional motor protection provided by external reset fuses

For 1989 we introduce our new quiet models. These compressors have been redesigned for reduced operating noise and improved performance. Their higher price may be off-set by your comfort and flexibility of location wherever noise is a consideration.

The only wearing parts, the carbon vanes, should last about one year of continuous operation. They can be replaced in about fifteen minutes with common tools. Consult your distributor or an A.E.S. design specialist if you require assistance in choosing sizes, accessories or applications.

0822 Shown below
with AB599 & AOV2PR

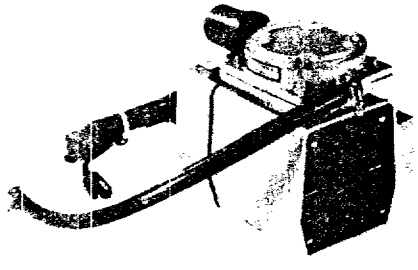




1022Q with AB599
& AOV2PF shown
above for comparison

PART NO	DESCRIPTION	VANE PT. NO	MAX. PRESS	CFM FREE A.R. 3 PSI	CFM FREE A.R. 10 PSI	VOLTAGE	RUNNING AMPS @ 115V	HP	SHIP WT	PRICE
0822	Compressor	AF109C	10	3.6	3.2	115-60HZ	6.1	1/3	32	$263.00
0822Q	**Compressor, Quiet**	**AH850A**	**10**	**3.6**	**3.2**	**115-60HZ**	**6.1**	**1/3**	**37**	**304.00**
0822	Compressor	AB992B	9	6.7	6.2	115/230 - 60HZ	9.0	1/2	50	358.00
0822Q	**Compressor, Quiet**	**AK513**	**9**	**6.7**	**6.2**	**115/230 - 60HZ**	**9.0**	**1/2**	**63**	**392.00**
0822HP	Compressor, High pressure	AB992B	15	6.7	6.2	115/230 - 60HZ	12.0	3/4	58	415.00
0822HPQ	**Compressor, H.P. Quiet**	**AK513**	**15**	**6.7**	**6.2**	**115/230 - 60HZ**	**12.0**	**3/4**	**68**	**471.00**
1022	Compressor	AB992B	10	9.5	9.0	115/230 - 60HZ	12.0	3/4	58	386.00
1022Q	**Compressor, Quiet**	**AK513**	**10**	**9.5**	**9.0**	**115/230 - 60HZ**	**12.0**	**3/4**	**70**	**438.00**
FB109	Diaphragm Compressor	—	60	1.7	1.5	115 - 50/60HZ	3.75	1/3	15	220.00

PART NO	DESCRIPTION	SHIP WT	PRICE	PART NO	DESCRIPTION	SHIP WT	PRICE
AF109C	Vanes (set of 4)	.5 lb.	$ 22.00	AOV3	Three valve outlet	4 lbs.	$ 49.00
AB992B	**Vanes (set of 4)**	**.5 lb.**	**29.00**	**AOV3PR**	**Three valve outlet w/P.R. valve**	**4.5 lbs.**	**64.00**
AH850A	Vanes (set of 4)	.5 lb.	25.50	AOV4	Four valve outlet	5 lbs.	60.00
AK513	**Vanes (set of 4)**	**.5 lb.**	**34.20**	**AOV4PR**	**Four valve outlet w/P.R. valve**	**5.5 lbs.**	**75.00**
AC393	Filter element	1 lb.	3.00	AOV5	Five valve outlet	6 lbs.	70.00
AK524	**Felt for all quiet models**	**.1 lb.**	**1.50**	**AOV5PR**	**Five valve outlet w/P.R. valve**	**6.5 lbs.**	**85.00**
AB599	Muffler assembly (specify H.P.)	2 lbs.	24.00	AKCV34M	Inlet check valve	1 lb.	10.00
AK600	**Pressure relief 3/8" npt**	**.5 lb.**	**10.00**	**AB-300A**	**Diaphragm Repair Kit for AB-300B**	**.1 lb.**	**7.00**
AOV1	Single outlet	2 lbs.	10.00	AB-300B	Replacement felt for AB-300A	.1 lb.	50
AOV1PR	**Single outlet w/P.R. valve**	**2.5 lbs.**	**22.00**	**AF-109K**	**Repair Kit for AF109C**	**.3 lb.**	**10.00**
AOV2	Two valve outlet	3 lbs.	36.00	AF-109D	Replacement diaphragm for FB-109	.1 lb.	5.25
AOV2PR	**Two valve outlet w/P.R. valve**	**3.5 lbs.**	**51.00**				



DIAPHRAGM COMPRESSOR (FB109)

Here is a long life oil-less diaphragm compressor with a compact motor mounted design. It has a 1/3 hp permanent split capacitor motor. Used together with our ALA-4 diffuser assembly for aeration/destratification of small ponds from 6' to 30' (2 to 10 meters) in depth. Built for continuous operation and no maintenance (other than air filter cleaning) with air flow up to 60 PSI (1.5 CFM @ 10 PSI, 1.2 CFM @ 20 PSI, 0.7 CFM @ 40 PSI, 0.3 CFM @ 60 PSI.)

Easy diaphragm replacement after two years of operation. 115 volt, 50/60 cycle with internal thermal protection. Comes with air filter, power cord and flex hose (2") outlet assembly adapter for 1/2" poly tubing (9/16" I.D.). Made in U.S.A.

Reduce performance by 20% when operating @ 50 HZ.

SEE SPECIFICATIONS & PRICE ABOVE

TABLE A
DYNALOY® POND LINER SPECIFICATIONS

PROPERTY	TEST METHOD	MINIMUM MATERIAL PROPERTIES TEST VALUE	TEST VALUE	TEST VALUE
Gauge (Nominal)		36 mils	40 mils	45 mils
Scrim (reinforcing fabric)		Polyester 9×9-1000 denier	Polyester 9×9-1000 denier	Polyester 9×9-1000 denier
Thickness, mils minimum	ASTM D751			
1. Overall		34 mils	37 mils	41 mils
2. Over Scrim	Optical Method	11 mils	11 mils	11 mils
Breaking Strength (pounds, minimum)	ASTM D751 (grab method)	200 lbs	220 lbs	250 lbs
Tear Strength (pounds, minimum)	ASTM D751 (as modified by NSF)			
1. Initial		35 lbs	35 lbs	35 lbs
2. After Aging	Oven aging @212°F 30 days	25 lbs	25 lbs	25 lbs
Low Temperature	ASTM D2136 1/8 in. Mandril 4 hrs., Pass	−40°F	−40°F	−40°F
Dimensional Stability (each direction, percent change maximum)	ASTM D1204 212°F, 1 hr.	2%	2%	2%
Volatile Loss (percent loss maximum)	ASTM D1203 MTD A 30-mil sheet	0.7%	0.7%	0.7%
Hydrostatic Resistance (pounds/sq in minimum)	ASTM D751 Method A. Proc. 1	250 psi	250 psi	250 psi
Ply Adhesion (each direction pounds/in wicth minimum)	ASTM D413 Machine MTD, Type A, (as modified by NSF)	7 lbs/in width or Film Tearing Bond	7 lbs/in width or Film Tearing Bond	7 lbs/in width or Film Tearing Bond
Resistance to Soil Burial (percent change maximum in original value)	ASTM D3083 30-mil sheet (as modified by NSF)			
Unsupported Sheet				
1. Breaking Strength		5%	5%	5%
2. Elongation at Break		20%	20%	20%
3. Modulus 100% Elongation		20%	20%	20%
Oil Resistance (percent weight change maximum)	ASTM D471 30-mil sheet 7 days @ 158° F. ASTM oil #2	5%	5%	5%

MINIMUM FACTORY SEAM REQUIREMENTS

Factory Seaming Method		———— Dielectric Fusion Weld ————		
Bonded Seam Strength (factory seam breaking strength, lbs min)	ASTM D751 (as modified by NSF)	160 lbs	176 lbs	200 lbs
Peel Adhesion (lb/in minimum)	ASTM D413 (as modified by NSF)	——— Ply separation in plane of scrim or 10 lbs/in. ———		
Resistance to Soil Burial (percent change maximum in original value)	ASTM D3083 (as modified by NSF)			
Bonded Seam Strength		−20%	−20%	−20%
Peel Adhesion		−20%	−20%	−20%

Dynaloy® is a Palco Registered Trade Mark.

TABLE A
PVC POND LINER SPECIFICATIONS

MINIMUM MATERIAL PROPERTIES

PROPERTY	TEST METHOD	TEST VALUE	TEST VALUE	TEST VALUE	TEST VALUE
Gauge (nominal)		**20 mils**	**30 mils**	**40 mils**	**50 mils**
Thickness, minimum	ASTM D792 Par. 9.1.3	19 mils	~~28.5 mils~~	38 mils	47.5 mils
Specific Gravity	ASTM D792 MTD A-1	1.24 to 1.30	1.24 to 1.30	1.24 to 1.30	1.2 to 1.3
Minimum Tensile Properties (each direction)	ASTM D882				
1. Breaking Factor (lbs/inch width)	MTD A or B one inch wide	46 lbs/in width (2300 psi)	69 lbs/in width (2300 psi)	92 lbs/in width (2300)	120 lbs/in width (2400 psi)
2. Elongation at Break (percent)	MTD A or B	300%	300%	300%	350%
3. Modulus (Force) @ 100% Elongation (lbs/inch width)	MTD A or B	18 lbs/in width (900 psi)	27 lbs/in width (900 psi)	36 lbs/in width (900 psi)	55 lbs/in width (1,100 psi)
Tear Resistance (minimum average pounds)	ASTM D1004 Die C	6 lbs (300 lbs/in)	8 lbs (267 lbs/in)	10 lbs (250 lbs/in)	14 lbs (280 lbs/in)
Low Temperature Impact (50% pass)	ASTM D1790	−15°F	−15°F	−20°F	−30°F
Dimensional Stability (each direction, percent change maximum)	ASTM D1204 212°F 15 Min.	±5%	±5%	±5%	±5%
Water Extraction (max % wt loss)	ASTM D3083 (as modified by NSF)	0.35%	0.35%	0.35%	0.35%
Volatile Loss (max % wt loss)	ASTM D1203 MTD A	0.9%	0.7%	0.5%	0.6%
Resistance to Soil Burial (percent change maximum in original value)	ASTM D3083 (as modified by NSF)				
1. Breaking Factor		5%	5%	5%	5%
2. Elongation at Break		20%	20%	20%	20%
3. Modulus @ 100% Elongation		20%	20%	20%	20%
Hydrostatic Resistance (pounds/sq in minimum)	ASTM D751 MTD A	60 psi	82 psi	89 psi	110 psi

FACTORY SEAM REQUIREMENTS

Factory Seaming Method		———— Dielectric Fusion Weld ————			
Bonded Seam Strength (factory seam breaking factor, ppi width)	ASTM D3083 (as modified by NSF)	36.8 lbs/in width	55.2 lbs/in width	73.6 lbs/in width	96 lbs/in width
Peel Adhesion (pounds/inch minimum)	ASTM D413 (as modified by NSF)	————10 lbs/in Width or Film Tearing Bond————			
Resistance to Soil Burial (percent change maximum in original value)	ASTM D3083 (as modified by NSF)				
Bonded Seam Strength		−20%	−20%	−20%	−20%
Peel Adhesion		−20%	−20%	−20%	−20%

FIELD SEAM REQUIREMENTS

Field Seaming Method		———— Bodied Solvent Weld ————			
Bonded Seam Strength (Seam Breaking Factor)	ASTM D3083 (as modified by NSF)	36.8 lbs/in Width	55.2 lbs/in Width	73.6 lbs/in Width	96 lbs/in Width

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 1PM	Date 9-8-89

Originating Party

Casey Horner - Protestant

Other Parties

David Boyer OCD

326-2378 P.O. Box 2497 Farmington 87499

Subject

SUNCO

Discussion

Wanted to know status of permit application. Told him it was under review and that no decision would be made until after had reviewed what all parties had to say. Before a decision would be made on public hearing would try to resolve issues raised. Told him that should have a response by end of month, and that OCD would try to resolve all technical issues, but that land-use/zoning issues up to county commission.

Conclusions or Agreements

I told him would copy him on all correspondence

Distribution

SUNCO file.

Signed David R Boyer

Roger - Put in
Sunco file.
Send Horner
copies of corresp-
ondence to date
if have not.
TBx

copy to:
Frank
David B.

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

Ecological Services
Suite D, 3530 Pan American Highway, NE
Albuquerque, New Mexico 87107

July 31, 1989

Mr. William J. Lemay, Director
State of New Mexico Energy, Minerals
and Natural Resources Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Dear Mr. Lemay:

We have reviewed the Public Notice, received July 25, 1989, requesting comments for a proposed construction of a commercial evaporation basin. The basin will be constructed and operated by Sunco Trucking Company, Robert C. Frank, Agent, P. O. Box 308, Farmington, New Mexico 87499. The basin will be located in the SW/4, NW/4, Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico.

A member of my staff and a special agent were given a tour may 8, 1989 of refineries, oil and gas fields and commercial disposal basins in San Juan County. At several locations dead migratory birds (ducks and shorebirds) were found trapped in surface oil present on the pits and basins. Several of these birds were found in disposal basins.

Pursuant to the November 1, 1988 meeting to resolve the loss of migratory birds in oil industry disposal basins, effective measures to exclude migratory birds from oil pits and similar structures should also be used in oil and gas operations in San Juan County. Sunco Trucking Company should take specific precautions to prevent oil from getting on the surface of the evaporation pond, or develop a method to exclude birds from the basin.

If we can be of further assistance please call Richard Roy or Tom O'Brien at (505) 883-7877 or FTS 474-7877.

Sincerely yours,

John C. Peterson
Field Supervisor

cc:
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Mr. Dan Marshal, Strategic Air Command, Albuquerque, New Mexico
Regional Director, U.S. Fish and Wildlife Service, Fish and Wildlife Enhancement, Albuquerque, New Mexico

File Copy

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

July 20, 1989

CERTIFIED MAIL
RETURN RECEIPT NO. P-106-675-045

Mr. George Coleman
SUNCO TRUCKING WATER DISPOSAL
708 South Tucker Avenue
Farmington, New Mexico 87401

RE: Commercial Disposal Facility
NW/4. Sec. 2, T29N, R12
San Juan County, New Mexico

Dear Mr. Coleman:

The Oil Conservation Division (OCD) has received your application for approval to construct and operate a commercial disposal facility located in the NW/4, Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico. The following comments and requests for clarification and additional information are based on a review of the application:

1. (II.A.2A) Supply the manufacturers specification sheet on the liners to be installed.

2. (II.A.3.A) Supply the manufacturers specifications and construction schematics for the proposed aeration systems.

3. (II.A.3.A) Submit proposed operating procedures for the enhanced evaporation spray system. These procedures should include mechanisms for the prevention of salt or spray drift outside of the surface of the liner.

4. (V.D.2.B) What permeable material will be used between the primary and secondary liner?

5. (V.D.2.D) This section states the main leak detection line will be 2" PVC. The schematic indicates a 4" PVC perforated line will be used. Please clarify this discrepancy. If a 2" PVC line is to be used it must be perforated.

6. (V.D.3.B) The anchor trench must be set back a minimum of 9 inches from the slope break.

7. (V.D.4.H) Supply a schematic showing all discharge lines, siphons, and piping.

8. (V.F.2) All tanks containing any fluids other than fresh water will be bermed to contain one-third more than the capacity of the tank within the berm or one-third more than the total capacity of all inter-connected tanks within the berm. Include all proposed berms in the schematic requested in 7 above.

9. (V.F.2) What will be the disposition of incidental oil accumulated at the facility? If the accumulated oil will be marketed to a refinery, the proposed facility could be considered a treating plant and may be required to comply with OCD Rule 312 along with all reporting requirements.

10. (V.G.I) Where will the proposed fence be located?

11. (V.I) This section states "... if a leak is detected the OCD will be notified within one working day." Section III.B.1 states OCD will be notified within two working days. Please correct this discrepancy. One working day notification is required.

12. (Miscellaneous) The State Engineer's Office has determined that any impoundment of water that holds more than 10 acre feet and/or has an embankment height in excess of 10 feet will require a permit for construction under the State Engineer Design Criteria for the Construction of Dams. Our review of your application will continue concurrently with the State Engineer's review.

13. (Miscellaneous) Pursuant to OCD Rule 711.C., all commercial waste disposal facilities shall have a surety or cash bond in the amount of $25,000.00. This bond shall be acceptable to the OCD and effective prior to starting any construction at the site.

A copy of the public notice issued by this office is enclosed. The public notice was submitted for publication in the Albuquerque Journal and the Farmington Times on or before July 28, 1989. A copy of this notice will also be mailed to all property owners you have identified in your application.

The submittal of information requested in this letter is necessary for review of your application to continue by the OCD. If you have any questions, please contact me at (505) 827-5884.

Sincerely,

for Roger C. Anderson
Environmental Engineer

RCA/sl

Enclosure

cc: OCD Aztec Office

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

Sunco Trucking Water Disposal
708 S. Tucker Ave.
Farmington, Nm 87401
Attn: George Coleman

4. Article Number

P 106 675 045

Type of Service:

- ☐ Registered
- ☐ Insured
- ☑ Certified
- ☐ COD
- ☐ Express Mail
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address

X

6. Signature — Agent

X

7. Date of Delivery

7-22-89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

P-106 675 045

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
See Reverse

George Coleman

Sent to Sunco Trucking Water Disp.	
Street and No. 708 S. Tucker Ave	
P.O., State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

PS Form 3800, June 1985

Sunco Trucking
Wave Calculations

7/19/87

I Wind speed = U_A = 50 mph
Fetch = 424 ft
Depth = 15 ft
Side Slope 1:3

From fig 3-28
Wave height = H = 0.5 ft
Period = T = .9

II Breaking Wave Height, H_b

$$\frac{H}{gT^2} = \frac{0.5}{(32.2)(0.9)^2} = 0.0192$$

from fig 7-3

$$\frac{H_b}{H_0} = 1 \quad \therefore \quad H_b = H = 0.5 \text{ ft}$$

from fig 7-2
α = 2.0
β = 1.43

$d_{B\,max} = \alpha H_b = (2)(0.5) = 1$
$d_{B\,min} = \beta H_b = (1.43)(.05) = .72$

Freeboard Determination

$d = 15 - 1.5 = 13.5$

assume smooth wall $\therefore X = 1.0$

EQ 7-73

$$y_c = d + h_o + \frac{1+X}{2} H_i$$

$H_i = 0.5 ft$ $\qquad \frac{H_i}{d} = \frac{0.5}{13.5} = .037$

$\frac{H_i}{g T^2} = .0192$

from fig 7-90

$\frac{h_o}{h_i} \approx .36$

$h_o = 0.36 H_i = (0.37)(0.5) = .185$

$y_c = 13.5 + 0.185 + \left(\frac{1+1}{2}\right)(0.5)$

$y_c = 14.185$

Top of BERM is @ 15ft $\therefore$

safety factor $= 15 - 14.185 = .815 ft$

$\approx 54\%$

NOTICE OF PUBLICATION

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Oil Conservation Division Regulations, the following permit to construct and operate a commercial evaporation facility has been submitted for approval to the Director of the Oil Conservation Division, State Land Office Building, P. O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505) 827-5800:

> **Sunco Trucking Company, Robert C. Frank, agent, P.O. Box 308, Farmington, New Mexico 87499,** has submitted for approval an application to construct and operate a commercial evaporation pond located in the SW/4 NW/4, Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico. Produced water associated with the completion and production operations of oil and gas wells will be disposed of in a synthetically double lined wastewater evaporation pond equipped with leak detection. The permit application addresses the construction, operations, spill/leak prevention and monitoring procedures to be utilized at the facility. The ground water most likely to be affected by any accidental discharges is at a depth in excess of 80 feet with a total dissolved solids content estimated at 2000 mg/l.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. Prior to ruling on any proposed permit or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 17th day of July, 1989. To be published on or before July 28, 1989.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY, Director

S E A L

PS Form 3811, July 1983 447-845

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☐ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:

Albuquerque Journal
717 Silver S.W.
Albuquerque, NM 87102

4. Type of Service:

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number

P 612 458 698

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee

X

6. Signature — Agent

X

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

DOMESTIC RETURN RI

P 612 458 698

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Albq. Journal	
Street and No. 717 Silver SW	
P.O., State and ZIP Code Albq. NM 87102	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1983-403-517

PS Form 3800, Feb. 1982

P-106 675 159

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Farmington Daily Times	
Street and No.	
P.O., State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

PS Form 3800, June 1985

P-106 675 039

HW & Doris Horner
4111 Skline Dr.
Farm., NM

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

PS Form 3800, June 1985

P-106 675 042

Dewey Foutz
PO Box 1356
Pagosa Spr, CO

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

PS Form 3800, June 1985

P-106 675 041

Marides Wynn & Valeri Hato
5108 Schmitt Road
Farm, NM

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

PS Form 3800, June 1985

P-106 675 040

John Scott
5301 Marcy Place
Farm, NM

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

PS Form 3800, June 1985

P-106 675 035

George & Barbara Coleman
Dr. 3337
Farm., NM

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

PS Form 3800, June 1985

P-106 675 036

Laurence & Barbara Wooden
PO Box 12356
Albq., NM

Postage	
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom Date, and Address of Delivery	
TOTAL Postage and Fees	
Postmark or Date	

PS Form 3800, June 1985

P-106 675 037

Morning Corp.
PO Dr. 9
Farm., NM

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

PS Form 3800, June 1985

P-106 675 038

BLM
1235 La Plata Hwy
Farm., NM

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

PS Form 3800, June 1985

SAN JUAN COUNTY ABSTRACT & TITLE COMPANY

THE FOLLOWING TRACTS WITHIN APPROXIMATELY ONE-HALF (½) MILE OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER (SW¼NW¼) OF SECTION TWO (2), IN TOWNSHIP TWENTY-NINE (29) NORTH OF RANGE TWELVE (12) WEST, N.M.P.M., SAN JUAN COUNTY NEW MEXICO

TRACT 1: GEORGE E. COLEMAN and BARBARA M. COLEMAN Drawer 3337 Farmington, New Mexico 87499	The SW¼NW¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M. (Copy of deed attached) Book 1099 Page 4
TRACT 2: GEORGE E. COLEMAN and BARBARA M. COLEMAN Drawer 3337 Farmington, New Mexico 87499	The N½NW¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M. (Copy of deed attached) Book 1099 Page 4
TRACT 3: LAWRENCE H. WOODARD and ARLOA R. WOODARD, Trustees P.O. Box 12356, Station F Albuquerque, New Mexico 87105	The S½NE¼ and the NW¼NE¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M. (Copy of deed attached) Book 1012 Page 302
TRACT 4: MORNINGSTAR CORPORATION P.O. Drawer 9 Farmington, New Mexico 87499	The SE¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M. (Copy of deed attached) Book 939 Page 410 Book 1088 Page 153
TRACT 5: [redacted] BLM [redacted] 1235 La Plata Hiway Farmington 87401	The SW¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M.
TRACT 6: H. W. HORNER and DORIS J. HORNER 4111 Skyline Drive Farmington, New Mexico 87401	The approximate East 865 feet of the E½E½ of Section 3, in Township 29 North of Range 12 West, N.M.P.M. (Copy of deed attached) Book 904 Page 351
TRACT 7: DEWEY K. FOUTZ P.O. Box 1356 Pagosa Springs, Colorado 81147	The approximate West 877.89 feet of the East 1742.89 feet of the E½E½ of Section 3, in Township 29 North of Range 12 West, N.M.P.M. (Copy of deed attached) Book 1090 Page 218
TRACT 8: MARIDES FOUTZ WYNN and VALARIE FOUTZ HATCH 5108 Schmitt Road Farmington, New Mexico 87401	The W½E½ of Section 3, in Township 29 North of Range 12 West, except that as described in Tract 7 above. (Copy of deed attached) Book 879 Page 247

-SEE CONTINUATION-

Copy of notice
To each landowner
on list

Certified

TRACT 9:
JOHN S. SCOTT
5301 Marcy Place
Farmington, New Mexico 87401

The E½SE¼ of Section 34, in Township 30 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 914 Page 540

TO June 1, 1989, 4:30 P.M.

SAN JUAN COUNTY ABSTRACT & TITLE COMPANY

By
President

OFT/gw
Enclosures

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
SL.
Lawrence & Barbara Woodard
P.O Box 12356
Albuquerque, NM 87105

4. Article Number
P106 675 036

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X

7. Date of Delivery
7/21/87

8. Addressee's Address *(ONLY if requested and fee paid)*

ALBUQUERQUE NEW MEXICO JUL 21 1989 U.S.P.O.

PS Form **3811**, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
51
JOHN SMITH
5301 Marcy st.
Farmington, NM 87

4. Article Number
P106 675 040

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X John Smith

6. Signature — Agent
X

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

FARMINGTON NM AUG 22 1989 U.S.P.O.

PS Form **3811**, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to: SL
H. W. & Doris Horner
4111 Skyline Drive
Farmington, NM 87401

4. Article Number P 106 675 039

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X D. D. Horner

6. Signature — Agent
X

7. Date of Delivery 7-24-89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to: SL
Bureau of Land Management
1235 La Plata Hwy
Farmington, NM 87401

4. Article Number P 106 675 038

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X Jonnie Howell

7. Date of Delivery 7/26/89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
SL
Morning Corp.
PO Drawer 9
Farmington, NM 87499

4. Article Number
P106675037

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X Sandra McMahon

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

MAR 21 1989 USPS

PS Form **3811**, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
SL
George & Barbara Coleman
Dr. 3337
Farmington, NM 87499

4. Article Number
P106675035

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X Barbara Coleman

7. Date of Delivery
3-21-89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
Dewey K. Foutz
PO Box 1356
Pagosa Springs, CO 81147
sl

4. Article Number
P106 675 042

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X Fawn J. Foutz

7. Date of Delivery
7-24-89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 * U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
Marides Wynn & Valarie Hatch
5108 Schmitt Road
Farmington, NM 87401
sl

4. Article Number
P106 675 041

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X Shawn Hatch

6. Signature — Agent
X

7. Date of Delivery
7.21.89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 * U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

SUNCO TRUCKING P.O. BOX 405 FARMINGTON NM 87499 (505) 327-

June 22, 1989

New Mexico Oil Conservation Division
310 Old Santa Fe Trail, Room 206
Santa Fe, NM 87503

Attn: Dave Boyer

Subject: Commercial Disposal Ponds
Section 2-T29N-R12W
San Juan County, NM

Dear Dave,

In addition to the attached application please find copies of the return mail receipts and a tabulation of the property owners within one half mile of the facility. A sample notification letter is attached as well.

The file sheet has been sent to the State Engineers Office for review and corrections, if necessary. Sunco Trucking Water Disposal request the permitting and notification processes, on behalf of O.C.D., begin at your convenience.

If you have any questions, please contact Robert C. Frank. He will be the contact person for this project. If I may be of any further assistance, please advise.

Very truly yours,

Robert C. Frank for

Charles Badsgard

RECEIVED

JUL - 2 1989

OIL CONSERVATION DIV.
SANTA FE

II. General Description

A. Proposed Operations

1. The facility will be built pursuant to the attached diagram. The facility will be equipped with one unloading tank, two storage tanks, one skimmer pit and three large evaporation ponds. Ponds number two and three will be built as market conditions dictate. At this time the only fluids to be accepted are produced water from oil and gas operations.

2. A. Surface impoundments:
Produced Water will be the only effluent stored. Below please find a tabulation of the pond specifications.

	Area (ft. ^{2})	Volume *(bbls)	Depth (ft.)	Slope (Inside & Outside)
Skimmer Pond	1,963	2,300	11'	3:1
Pond 1	90,000	195,000	15'	3:1
Pond 2	90,000	195,000	15'	3:1
Pond 3	90,000	195,000	15'	3:1
Total	271,963	587,300		

The subsurface consists of a sandy loam material. The subgrade will be prepared, placed in 6" to 9" lifts and compacted to 95% of proctor and + 4% of optimum moisture. The actual values will be determined by an independent laboratory testing firm.

The secondary liner will be made of 30 mil or greater PVC. The primary liner will be made of 30 mil or greater CPER or equivalent. The primary line is resistant to sunlight, hydro-carbons, fungus, algae, bacteria and salt water. The secondary liner is resistant to hydrocarbons, fungus, algae, bacteria and salt water. Each liner will be laid in the ponds by rolls and then seamed together. The leak detection system will consist of 1" perforated laterals draining to a central 2" line which will drain to a sump outside of the berm.

The freeboard will be 1.5' leaving the pond a maximum height of 13.5' of water. There will be no runoff or runon as the ponds will be self contained and the drainage diverted away from the ponds. The ponds are on a gentle slope with no major drainage problems.

B. There are no drying beds anticipated at this time. If the need arises the OCD will be notified prior to any such work being implemented.

C. Nothing anticipated.

3. A. Ancillary Equipment
The ponds will be equipped with a commerical aeration system. The aeration systems will placed in bottom of the ponds and will consist of three rock diffusers. The location of the diffusers will be equidistant (as close as practical)

from each other. They will be anchored to the pond bottom by bricks and or sand tubes. A second aeration system will be placed in the pond bottom as well. This system will consist of a network of perforated 1" and 2" PVC pipe. The system will be able to circulate either a liquid or gaseous medium. Further details will be forwarded as it becomes available.

The ponds will be equipped with sprayers. The sprayers will be located on a floating island. The island will be anchored to the sides of the pond. The island will consist of at least four nozzles and eight jets. The exact configuration is not known at this time. The sprayers will be supplied by a centrifugal pump with a capacity of at least 14 BWPM. The power supply for the pump will be either a natural gas or electric motor.

At this time no other ancillary equipment is anticipated.

B. Spill/Lead Prevention and Procedure

1. In as much as the ponds will be double lined, and with the ponds sloped to a sump there will be no other containment or clean up apparatus necessary. If a leak is detected the leak detection system will be pumped into one of the other ponds and the pond that is leaking will be lowered until such depth as the water depth is below the leak. The liner repaired and the pond placed back into operation.

   If there is only one jpond at the time the leak is detected, and weather permitting, the pond will be artificially evaporated until the water depth is below the leak. The leak detection sump will be recycled to the main pond. If at this time market conditions warrant a second pond will be built and the leaking pond will be repaired.

   The OCD will be notified within 2 working days of any leaks.

2. The leak detection system will be the only means in which leaks are to be detected. The sumps will be inspected at least weekly. If leaks are detected the procedure outlined above in B.1 will be followed.

C. Closure Plan

1. At that point in time when the facility is to be closed the ponds will be evaporated and left to dry for one year. After the drying period the salts will be marketed if an economical market exists or they will be buried on site, in the original plastic. The ponds berms will be backfilled in to cover the pond and the area recontoured as near as practical to the original contours. The area will then be reseeded.

III. Site Characteristics

A. Hydrologic Features
1. The nearest running water is the Animas River which is approximately 1-1/2 miles North. The State Engineers Office in Albuquerque, NM was consulted as to the location of the nearest water well. There is a well reported in the SE4, SE4 of Section 34-T30N-R12W. The well encountered water at 25'. The total depth of the well is 107'. A copy of the well record is attached. The well is used for household and livestock watering purposes. A field inspection of the reported quarter section revealed that the well is either abandoned or mis-located in the records.
2. This information is not available as there is no ground water reported within 1 mile of the facility.
3. The flow direction of ground water most likely to be affected by any leak is Northwesterly based upon topography.
4. A water sample can not be obtained as mentioned above therefore no analysis is available.

B. Geologic Description of Pit Site
1. The pit site rests on a paleoerosional surface as evidenced by the attached drillers log. Nine test holes were drilled to determine the soil mechanics. The soil type ranges from a clay/sand mixture to silt/sand mixture and cobbles/boulders.
2. The name and depth of the most shallow aquifer is unknown.
3. Not available
4. Not available.

C. Flood Protection
1. The flooding potential at the pit site with respect to major precipitation and/or run off is minimal at best as the pond will be maintained with at least a 1-1/2' freeboard. The facility is located on top of a broad ridge well out of any established water courses. In any event drainage away from the ponds will be accomplished by diversion ditches cut on the uphill side of the facility.
2. The pond is well out of the 100 year flood plain.
3. The outside of the site will be checked after each major rainfall. The OCD will be notified of any significant erosion.

IV. In as much as these ponds are to be synthetically lined no further information is necessary at this time.

V. General Construction Requirements

A. Those ponds are out of any water courses.

B. The natural evaporative capacity for each pond is approximately 175 BWPD. This is based on a net evaporation rate of 48"/year and 90,000 ft^2 surface area. As mentioned earlier

sprayers will be installed as market conditions warrant. The anticipated enhanced evaporation rate is 1050 BWPD per pond. The holding capacity of each pond is approximately 195,000 barrels of water. Being that this is a commercial operation with a relatively infinite market the pond can not be sized to known produced water volumes. As mentioned earlier market conditions will dictate the operations of this facility.

2. Wave caculations for a pond with this small of a fetch is difficult. Interpolation of a graph supplied by the US Army Corp. of Engineers indicates that a unidirectional 40 mph sustained wind along the maximum fetch of 424' will generate a 6" wave. Sustained winds of this magnitude in this area are not common. The likelihood of a sustained wind along the maximum fetch are remote at best. The wave run up is estimated at 3". The total wave action on the dike is 9". The average yearly rainfall for this area is 12". With the rainfall occuring over the entire year, we feel that an 18" freeboard is adequate.
3. Both the inside and outside slopes of all ponds will be 3:1.
4. The traveling surface of the level top will be twelve feet.
5. The ponds will be equipped with a commercial aeration system consisting of three rock diffusers and an air compressor. The second system will be a network of perforated PVC pipe laid in the bottom of the pond. The second system will be able to circulate either a liquid or gaseous medium.

C. Synthetically Lined Evaporation Pits.
   1. Materials
      a. The liners will be flexible
      b. Not applicable
      c. The liners will be at least 30 mils thick
      d. Both the primary liner and secondary liner will be resistant to hydrocarbons, salts, acidic and alkaline solutions, fungus, bacteria and rot. In addition the primary liner will be resistant to ultraviolet light.

D. The ponds will be equipped with a leak detection system.
   2. a. The OCD office in Aztec will be notified at least 24 hours in advance of the primary liner installation.
      b. A drainage and sump leak detection system will be used.
      c. Not applicable
      d. The leak detection system will consist of 1" perforated PVC laterals draining at a 2% grade to a 2" PVC main line. The 2" PVC main line will drain at 1% to a corrosion proof sump which will be located outside of the berm. No point in the pond bottom will be greater than 20' from a detection line.
   3. a. The bed of the pit and the inside and outside grades of the levee will be smooth, compacted to 95% of proctor, free of holes, rocks, stumps, clods or other debris which could rupture the liner. The onsite characteristics should allow for the liners to be placed directly on the finished berm.

b. An anchor trench will be excavated 6" wide, 12" deep and set back from the slope break.

4. a. The OCD office in Aztec will be notified at least 24 hours prior to secondary liner installation.
   b. The liner will be installed and the joints sealed pursuant to the manufacturers specifications.
   c. The liner will rest smoothly on the pit bed and inner face of the levey and shall be of sufficient size to extend to the bottom of the anchor trench and back out a minimum of two inches from the trench on the side furthest from the pond. Folds in the liner will be located in the pit corners to compensate for temperature fluctuations
   d. Two gas vents will be installed on each side of each pond. The liner will be resting on a sandy loam material which should be adequate for venting purposes. A sieve test will be run on the material to be certain no more than 5% of the material will pass through a 200 sieve. The vents will be located approximately 9" down from the berm, break.
   e. Used casing on equivelant will be used to anchor the liner in the liner trench.
   f. Not applicable
   g. All sand or gravel placement will be completed so as to not jeopardize the liner on which it is placed.
   h. All siphons and discharge lines will be directed away from the liner.

E. Clay lined Pits
Not applicable

F. Skimmer Ponds/Tanks
1. Skimmer tanks and a skimmer pond will be used. Water will be drained from the bottom of the tanks into the skimmer pond. Water will be gravity siphoned from the skimmer pond to the main evaporation pits.
2. As mentioned above water will be drained from the tanks and subsequently the oil will be stored in tank(s) for future treatment and sale.
   a. The skimmer pit will be built as the main ponds including two liners and a leak detection system.
   b. The skimmer tank will be corrosion resistant and open to the air on one side for leak detection purposes
   c. The siphon will be located as far from the skimmer tank as possible
   d. The skimmer pond will be kept clean of appreciable oil. The entry into the siphon will be at least 2' below the horizontal member of the siphon. The vertical siphon top will be set above the top of the skimmer pond.
   e. Not applicable

G. Fences and Signs
1. A fence will be constructed around the entire facility. The fence will be of sufficient strength to keep livestock out of the facility. The fence will be closed and locked at all times when the pond is not manned.

2. A sign at least 12" X 24" with 2" lettering will be placed at the facility entrance and will identify the owner/operator, location and emergency phone numbers.

H.

1. The leak detection sumps will be checked for leaks weekly
2. The outside of the berms will be maintained so as to prevent erosion. After each rain the pond perimeters will be walked to inspect for wash outs.

I. Contingency Plan

As mentioned earlier if a leak is detected the OCD will be notified within one working day. The sump will be continually pumped into the pit that is leaking or into a seperate pit. The pond that is leaking will be drained so that the water is below the liner tear and the liner repaired. The pit will be placed back into operation.

Each load will be tested for H_2S. If H_2S is detected that load will be isolated and the operator will determine if the water is to be removed or if STWD will treat the load. If STWD treats the load sufficient chlorine will be added so that residual chlorine is present prior to the water being drained into the skimmer pond.

The ponds will be maintained in an aerobic state. H_2S should not be a problem as each pond has three systems in which to keep the pond aerobic.

Drillers Log

Hole 1 SE Corner Pond 1

Depth	Description
0-2	Red brown clay/sand; 50/50, topsoil
3-6	Tan Silt, powderey, 25% Clay
6-9	Med. Brown Silt, 15% Clay grading to siltstone, medium hard.
9-10	Light gray sandstone, Med grain, Subround, 30% Clay, Poor sorting

Hole 2 SW Corner Pond 1

Depth	Description
0-3	Red brown clay/sand; 50/50, Topsoil
3-4	Light brown clay, 40% very fine grain sand
4-6	Light grey silt/sand with 20% Clay
6-9	Light grey-tan sandstone, meduim grain subround, poor sorting, 20-30% clay hard

Hole 3 NW Corner Pond 1

Depth	Description
0-2	Red brown clay, 5-10% silt
2-3	Red brown clay, 10% sand, 15% silt
3-4	Light grey to tan silt, 10% sand medium hard grading to siltstone.
4-10	Light grey-tan sand, fine grain, 15% silt, 10% clay medium hard.
10-26.5	Tan sand, medium grain to sub coarse grain, subangular to subround, poor sorting, very friable 0-20% silt

Drillers Log Continued

Hole 4 60'NE of SW Corner of Pond 2

Depth	Description
0-2	Red brown clay, 10% sand
2-7	Tan sand, unconsolidated, 15-20% silt, very fine grain, fair sorting
7-8	Light grey silt, 25-35% Sand, 35% Clay
8-12	Tan sandstone, fine to meduim grain, fair sorting, subround 25% silt, 10% clay, moderately friable. Auger refusal at 12!

Hole 5 SE Corner of Pond 2

Depth	Description
0-1	Red brown clay, 10% sand
1-6	Light grey sand interbedded with red brwon clay, 50/50, mod cement with anhydrite. Sand is very fine grain and well rounded.
6-7.5	Buff colored sand, very fine grain, well rounded, well sorted, 50% silt
7.5-8	Tan sand, coarse grain, angular. Very fiable, moderately cemented fair sorting
8-10	Tan Sand, very fine grain, fair rounding, 25% silt, 25% Anhydrite
10-10.5	Tan sand and clay 50/50
10.5-13	Light brown sandstone, very fine grain, fair sorting, well rounded, 10% clay, hard

Hole 6 SE Corner Pond 3

Depth	Description
0-4	Red brown clay, 10% sand
4-8	Tan Silt
8-12	Tan sand, very fine grain, subround, well sorted, 15% silt
12-18	As above, fine grain, subangular
18-20	Grey brown clay, 10% silt, powdery

Hole 7 NW Corner Pond 2

Depth	Description
0-4	Red brown clay, 10% sand occassional gravel
4-9	Light grey to buff silt, 20% sand, Anhydrite
9-13	As above, tan
13-17	Tan Sand, very fine grain, subround. fair sorting, 15% silt
17-20	Grey brown clay, 10% silt, Powdery

Drillers Log Continued

Hole 7 NW Corner Pond 2

Depth	Description
0-4	Red brown clay, 10% sand occassional gravel
4-9	Light grey to buff silt, 20% sand, Anhydrite
9-13	As above, tan
13-17	Tan Sand, very fine grain, subround. fair sorting, 15% silt
17-20	Grey brwon clay, 10% silt, Powdery

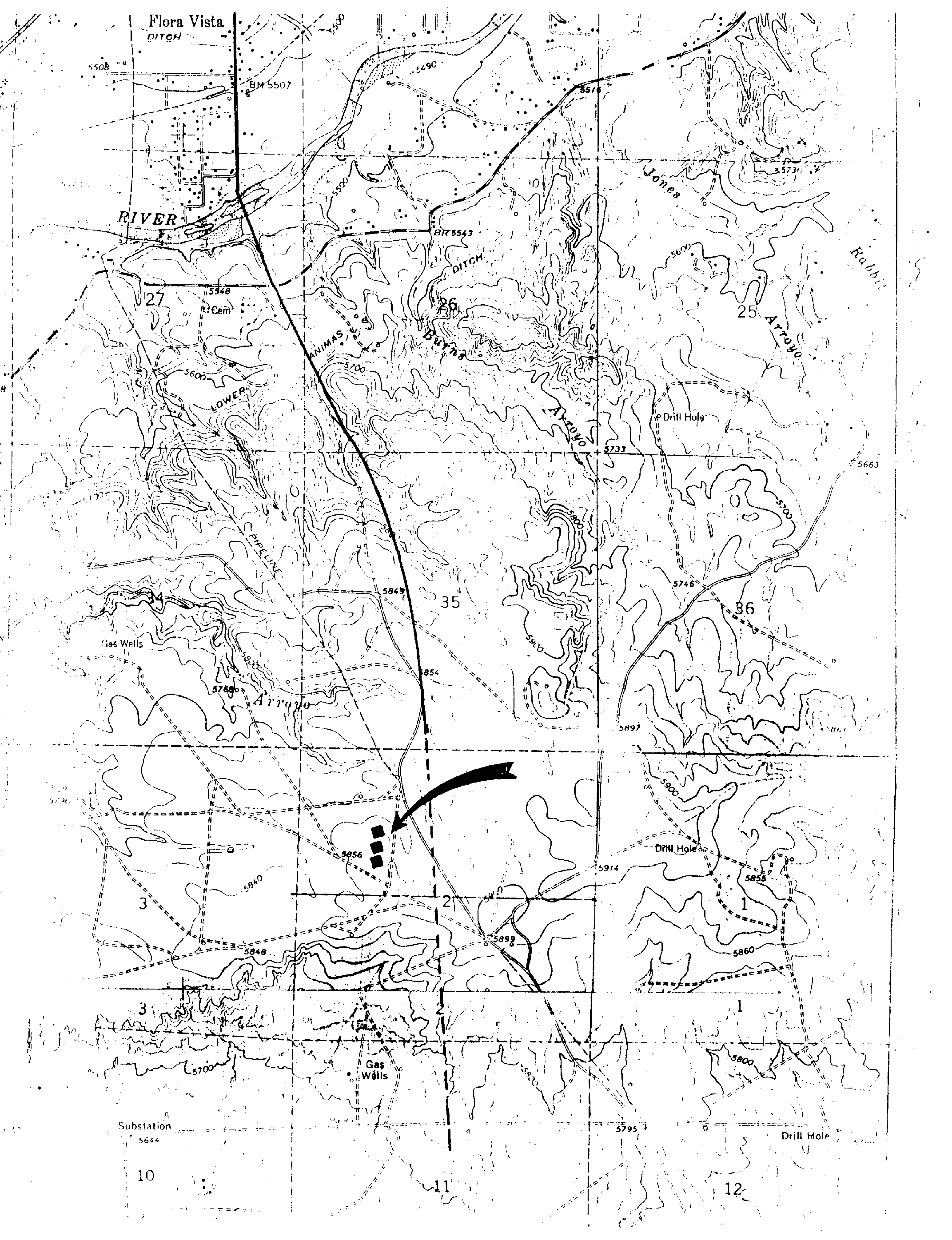
Hole 8 NW Corner Pond 3

Depth	Description
0-2.5	Red brown clay, 15% sand
2.5-4	Tan sand mottled with red brown clay, 35%.
4.5-5.5	Buff silt, sand 40%, anhydrite 10%
5.5-8	Tan sand fine to medium grain, well sorted, fair rounding, 20% silt, trace anhydrite, occassional gravel 10%
8-12	Tan sand medium to coarse grain, subangular, poor sorting, 20% gravel, 10% silt
12-15	Grey brown clay, mottled with light grey sand and red brown clay
15-17	Cobbles/Boulders. Auger refusal at 17'

Hole 9 NE Corner Pond 3

Depth	Description
0-2	Dark Red brown clay, 10% sand
3-4	Red brown silt, 10% sand, 30% clay
4-12.5	Tan Sand, Fine grain, subround well sorted, 10-30% Clay, trace anhydrite
12.5-13	Brown Grey clay, mottled with light grey clay
13-15	Light grey clay
15-18	Cobbles/Boulders. Auger refusal at 18"

end



Flora Vista
DITCH
BM 5507
5490
5516
5730
Jones
RIVER
BR 5543
DITCH
Rabbit
5548
27
Cem
26
25
ANIMAS
Burns
Arroyo
5700
5600
LOWER
Drill Hole
Arroyo
5733
5663
PIPELINE
5849
35
5746
36
Gas Wells
5854
5768
Arroyo
5897
5900
5856
Drill Hole
5840
5914
5855
3
2
1
5899
5848
5860
3
2
1
5700
Gas Wells
5800
Substation
5644
5795
Drill Hole
10
11
12

HC # 71909
$2.00 SF

READ INSTRUCTIONS ON BACK

Revised March 1972

APPLICATION TO APPROPRIATE UNDERGROUND WATERS IN ACCORDANCE WITH SECTION 75-11-1 NEW MEXICO STATUTES

77 AUG 11 P 1:55

STATE ENGINEER OFFICE
ALBUQUERQUE, N. MEX.

1. Name and Address of Applicant:

File No. SJ-428

SCOTT TRUST

P. O. BOX "O"

AZTEC, NEW MEXICO 87410

2. Describe well location under one of the following subheadings:

a. ____ ¼ SE ¼ SE ¼ of Sec. 34 Twp. 30 Rge. 12 N. M. P. M., in San Juan County.

b. Tract No. ____ of Map No. ____ of the ____

c. Lot No. ____ of Block No. ____ of the ____ Subdivision, recorded in ____ County.

d. X = ____ feet, Y = ____ feet, N. M. Coordinate System ____ Zone in the ____ Grant.

e. Give street address or route and box No. of property upon which well is to be located, or location by direction and distance from known landmarks ____

3. Approximate depth (if known) ____ feet; outside diameter of casing under 7 in inches.

Name of driller (if known) John C. Hargis Jr.

4. Use of water (check appropriate box or boxes):

- [X] Household, non-commercial trees, lawn and garden not to exceed 1 acre.
- [X] Livestock watering.
- [ ] Drinking and sanitary purposes and the irrigation of non-commercial trees, shrubs and lawns in conjunction with a commercial operation.
- [ ] Prospecting, mining or drilling operations to discover or develop natural resources.
- [ ] Construction of public works, highways and roads.

If any of the last three were marked, give name and nature of business under Remarks. (Item 5)

STATE ENGINEER OFFICE
SANTA FE, N.M. 87501
77 AUG 11 PM 1 54

5. Remarks: ____

I, Sandy Scott, affirm that the foregoing statements are true to the best of my knowledge and belief and that development shall not commence until approval of the permit has been obtained.

Scott Trust, Applicant

By: Sandy Scott

Date: July 31, 1977

ACTION OF STATE ENGINEER

This application is approved for the use indicated, subject to all general conditions and to the specific conditions numbered 4 on the reverse side hereof. This permit will automatically expire unless this well is drilled or driven and the well record filed on or before 8/31/78.

S. E. Reynolds, State Engineer

By: J. K. Couzens

J. K. Couzens, Engineer, Water Rights Div.

Date: Aug. 9, 1977

File No. SJ-428

GENERAL CONDITIONS OF APPROVAL

A. The maximum amount of water that may be appropriated under this permit is 3 acre feet in any calendar year.

B. The well shall be drilled only by a driller licensed in the State of New Mexico in accordance with Section 75-11-13 New Mexico Statutes Annotated. A licensed driller shall not be required for the construction of a driven well; provided, that the casing shall not exceed two and three-eights (2 3/8) inches outside diameter (Section 75-11-13).

C. Driller's log must be filed in the office of the State Engineer within 10 days after the well is drilled or driven. Failure to file the log within that time shall result in automatic cancellation of the permit. Log forms will be provided by the State Engineer upon request.

D. The casing shall not exceed 7 inches outside diameter except under specific conditions in which reasons satisfactory to the State Engineer are shown.

E. If the well under this permit is used at any time to serve more than one household, livestock in a commercial feed lot operation, or any other commercial purpose, the permittee shall comply with Specific Conditon of Approval number 5(b).

F. In the event this well is combined with other wells permitted under Section 75-11-1 New Mexico Statutes Annotated, the total outdoor use shall not exceed the irrigation of one acre of non-commercial trees, lawn, and garden, or the equivalent outside consumptive use, and the total appropriation for household and outdoor use from the entire water distribution system shall not exceed 3 acre feet per annum.

SPECIFIC CONDITIONS OF APPROVAL

(Applicable only when so indicated on the other side of this form.)

1. Depth of the well shall not exceed the thickness of the (a) the valley fill or (b) Ogallala formation.
2. The well shall be constructed to artesian well specifications and the State Engineer Office shall be notified before casing is landed or cemented.
3. Appropriation and use of water under this permit shall not exceed a period of one year from the date of approval.
4. Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.
5. A totalizing meter shall be installed before the first branch of the discharge line from the well and the installation shall be acceptable to the State Engineer; the State Engineer shall be advised of the make, model, serial number, date of installation, and initial reading of the meter prior to appropriation of water and pumping records shall be submitted to the District Supervisor (a) for each calendar month, on or before the 30th day of the following month (b) on or before the 10th of January, April, July and October of each year for the three preceding calendar months (c) for each calendar year on or before the 30th day of January of the following year.
6. The well shall be plugged upon completion of the permitted use and a plugging report shall be filed in the office of the State Engineer within 10 days.
7. Final approval for the use of the well shall be dependent upon a leakage test made by the State Engineer Office.
8. Use shall be limited strictly to household and/or drinking and sanitary purposes; water shall be conveyed from the well to the place of use in closed conduit and the effluent returned to the underground so that it will not appear on the surface. No irrigation of lawns, garden, trees or use in any type of pool or pond is authorized under this permit.

INSTRUCTIONS

The application shall be made in the name of the actual user of the well for the purpose specified in the application.

The application shall be executed in triplicate and forwarded with a $1.00 filing fee to the appropriate office of the State Engineer.

A separate application must be filed for each well to be drilled or used.

If well to be used is an existing well, an explanation (and file number, if possible) should be given under Remarks. (Item 5.)

Applications for appropriation, well logs and request for information in the following basins should be addressed to the State Engineer at the office indicated;

Bluewater, Estancia, Rio Grande, and Sandia Basins
District No. 1, 505 Marquette NW, Room 1023, Albuquerque, New Mexico 87101

Capitan, Carlsbad, Fort Sumner, Hondo, Jal, Lea, Penasco, Portales, Roswell, and Upper Pecos Basins
District No. 2, Box 1717, Roswell, New Mexico 88201

Animas, Gila-San Francisco, Hot Springs, Las Animas Creek, Lordsburg, Mimbres, Nutt-Hockett, Playas, San Simon, and Virden Valley Basins
District No. 3, Box 844, Deming, New Mexico 88030

Canadian River Basin
State Engineer Office, State Capitol, Bataan Memorial Bldg., Santa Fe, New Mexico 87501

'77 SEP 23 PM 1 23 Revised June 1972

STATE ENGINEER OFFICE

WELL RECORD

STATE ENGINEER OFFIC
SANTA FE, N.M. 87501

Section 1. GENERAL INFORMATION

(A) Owner of well Scott Thust Owner's Well No. #2
Street or Post Office Address P.O. Box (¢)
City and State Aztec ,New Mexico 87410

Well was drilled under Permit No. S.J. 428 and is located in the:

a. ____ ¼ ____ ¼ SE ¼ SE ¼ of Section 34 Township 30 Range 12 N.M.P.M.

b. Tract No. ____ of Map No. ____ of the ____

c. Lot No. ____ of Block No. ____ of the ____
Subdivision, recorded in ____ County.

d. X= ____ feet, Y= ____ feet, N.M. Coordinate System ____ Zone in the ____ Grant.

(B) Drilling Contractor John C .Hargis License No. WD.724

Address RT.1 Box 260-B Aztec New Mexico

Drilling Began 20 Sept. Completed 21 Sept. Type tools Cable/? Size of hole 8' in.

Elevation of land surface or ____ at well is ____ ft. Total depth of well 107 ft.

Completed well is [#] shallow [ ] artesian. Depth to water upon completion of well 25 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
25	30	5	Dark Blue Water Sand	5
90	107	17	Blue Water Sand	5- 6

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	Perforations To
8'	24	Weld	0	10- 5	10-5	None	Surface	
5'	Plastic		0	107	107		60	100

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement

77 SEP 28 P 1:34
STATE ENGINEER OFFICE
ALBUQUERQUE, N. MEX.

Section 5. PLUGGING RECORD

Plugging Contractor ____
Address ____
Plugging Method ____
Date Well Plugged ____
Plugging approved by:
____
State Engineer Representative

No.	Depth in Feet Top	Depth in Feet Bottom	Cubic Feet of Cement
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received 9/23/77

Quad ____ FWL ____ FSL ____

File No. SJ-428 Use Dom. Location No. 30N.12W.34 440
San JuanCo.

Section 6. LOG OF HOLE

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color and Type of Material Encountered
0	25	25	Boulders @ Brown Sand
25	30	30 5	Drrk Blue Water Sand
##30	90	60	Sa ndy Shale
90	107	17	Dark Blue Water Sand
			Gravel Pack 107' Of Hole

G

Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

John C. Hargis
Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All sections, exc Section 5, shall be answered as completely an urately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

'77 SEP 23 PM 1 23

Revised June 1972

STATE ENGINEER OFFICE

WELL RECORD

STATE ENGINEER OFFIC
SANTA FE, N.M. 87501

Section 1. GENERAL INFORMATION

(A) Owner of well Scott Trust Owner's Well No. #2
Street or Post Office Address P.O. Box (0)
City and State Aztec ,New Mexico 87410

Well was drilled under Permit No S.J. 428 and is located in the:

a. ____ ¼ ____ ¼ SE ¼ SE ¼ of Section 34 Township 30 Range 12 N.M.P.M.

b. Tract No. ____ of Map No. ____ of the ____

c. Lot No. ____ of Block No. ____ of the ____
Subdivision, recorded in ____ County.

d. X= ____ feet, Y= ____ feet, N.M. Coordinate System ____ Zone in the ____ Grant.

(B) Drilling Contractor John C .Hargis License No. WD.724

Address RT.1 Box 260-B Aztec New Mexico

Drilling Began 20 Sept. Completed 21 Sept. Type tools Cable/? Size of hole 8' in.

Elevation of land surface or ____ at well is ____ ft. Total depth of well 107 ft.

Completed well is ☒ shallow ☐ artesian. Depth to water upon completion of well 25 ft.

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90	107	17	Blue Water Sand	5- 6

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	Perforations To
8'	24	Weld	0	10- 5	10-5	None	Surface	
5'	Plastic		0	107	107		60	100

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement

77 SEP 28 P 1:34
STATE ENGINEER OFFICE
ALBUQUERQUE, N. MEX.

Section 5. PLUGGING RECORD

Plugging Contractor ____
Address ____
Plugging Method ____
Date Well Plugged ____
Plugging approved by:

____
State Engineer Representative

No.	Depth in Feet Top	Depth in Feet Bottom	Cubic Feet of Cement
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received 9/23/77

Quad ____ FWL ____ FSL ____

File No. SJ-428 Use Dom. Location No. 30N.12W.34 440
San Juan Co.

Section 6. LOG OF HOLE

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color and Type of Material Encountered
0	25	25	Boulders @ Brown Sand
25	30	5	Drrk Blue Water Sand
##30	90	60	Sa ndy Shale
90	107	17	Dark Blue Water Sand
			Gravel Pack 107' Of Hole

Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

John C. Hargis
Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All sections, e: t Section 5, shall be answered as completely : ccurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

SUNCO TRUCKING COMPANY
WATER AND OILFIELD HEAVY HAULING P.O. BOX 443, FARMINGTON, NM 87499 (505) 327-0416

June 13, 1989

Lawerence H. Woodard and Arloa R. Woodard, Trustees
P. O. Box 12356, Station F
Albuquerque, New Mexico 87105

New Mexico Oil and Gas Conservation Division requires anyone permitting an application for the design and construction of a waste storage/disposal pit to notify all property owners within a one half mile radius of proposed construction site.

Sunco Trucking Company is notifying said property owners that the design and construction of a waste storage/disposal pit is being applied for in ($SW\frac{1}{4}NW\frac{1}{4}$), Section 2, Township 29 North, Range 12 West.

If you have any questions, please contact the New Mexico Oil & Gas Conservation Division.

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:	4. Article Number
DEWEY K. FOUTZ P. O. BOX 1356 PAGOSA SPRINGS, COLORADO 81147	P 718 636 977
	Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address X D K Foutz	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature — Agent X	
7. Date of Delivery 6/19/89	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:	4. Article Number
MORNINGSTAR CORPORATION P. O. DRAWER 9 FARMINGTON, NEW MEXICO 87499	P 718 636 973
	Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address X	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature — Agent X Sandra McMahon	
7. Date of Delivery	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
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1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:	4. Article Number
BLM LAND 1235 LA PLATA HIGHWAY FARMINGTON, NEW MEXICO 87401	P 718 636 974
	Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address X L. Crow	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature — Agent X	
7. Date of Delivery 6/16/89	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

WARNING: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
JOHN S. SCOTT
5301 MARCY PLACE
FARMINGTON, NEW MEXICO 87401

4. Article Number
P 718 636 979

Type of Service:
- ☐ Registered
- ☐ Insured
- ☒ Certified
- ☐ COD
- ☐ Express Mail
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Address
X John Scott

6. Signature – Agent
X

7. Date of Delivery
6-15-89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIP

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
LAWERENCE WOODARD AND ARLOA WOODARD
P. O. BOX 12356, STATION F
ALBUQUERQUE, NEW MEXICO 87105

4. Article Number
P 718 636 972

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X Patricia Thornton

6. Signature — Agent
X

7. Date of Delivery JUN 14 1989

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
MARIDES FOUTZ WYNN & VALARIE FOUTZ HATCH
5108 SCHMITT ROAD
FARMINGTON, NEW MEXICO 87401

4. Article Number
P 718 636 978

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X Celeste K. Johnson

6. Signature — Agent
X WW

7. Date of Delivery
6/14/89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
H.W. HORNER AND DORIS J. HORNER
4111 SKYLINE DRIVE
FARMINGTON, NEW MEXICO 87401

4. Article Number
P 718 636 975

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X Doris J. Horner

6. Signature — Agent
X

7. Date of Delivery
6-16-89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SAN JUAN COUNTY ABSTRACT & TITLE COMPANY

THE FOLLOWING TRACTS WITHIN APPROXIMATELY ONE-HALF (½) MILE OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER (SW¼NW¼) OF SECTION TWO (2), IN TOWNSHIP TWENTY-NINE (29) NORTH OF RANGE TWELVE (12) WEST, N.M.P.M., SAN JUAN COUNTY NEW MEXICO

TRACT 1:
GEORGE E. COLEMAN and BARBARA M. COLEMAN
Drawer 3337
Farmington, New Mexico 87499

The SW¼NW¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 1099 Page 4

TRACT 2:
GEORGE E. COLEMAN and BARBARA M. COLEMAN
Drawer 3337
Farmington, New Mexico 87499

The N½NW¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 1099 Page 4

TRACT 3:
LAWRENCE H. WOODARD and ARLOA R. WOODARD, Trustees
P.O. Box 12356, Station F
Albuquerque, New Mexico 87105

The S½NE¼ and the NW¼NE¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 1012 Page 302

TRACT 4:
MORNINGSTAR CORPORATION
P.O. Drawer 9
Farmington, New Mexico 87499

The SE¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 939 Page 410
Book 1088 Page 153

TRACT 5:
NO PATENT OF RECORD
BLM LAND
1235 La Plata Hiway Farmington 87401

The SW¼ of Section 2, in Township 29 North of Range 12 West, N.M.P.M.

TRACT 6:
H. W. HORNER and DORIS J. HORNER
4111 Skyline Drive
Farmington, New Mexico 87401

The approximate East 865 feet of the E½E½ of Section 3, in Township 29 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 904 Page 351

TRACT 7:
DEWEY K. FOUTZ
P.O. Box 1356
Pagosa Springs, Colorado 81147

The approximate West 877.89 feet of the East 1742.89 feet of the E½E½ of Section 3, in Township 29 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 1090 Page 218

TRACT 8:
MARIDES FOUTZ WYNN and VALARIE FOUTZ HATCH
5108 Schmitt Road
Farmington, New Mexico 87401

The W½E½ of Section 3, in Township 29 North of Range 12 West, except that as described in Tract 7 above.
(Copy of deed attached) Book 879 Page 247

-SEE CONTINUATION-

TRACT 9:
JOHN S. SCOTT
5301 Marcy Place
Farmington, New Mexico 87401

The E½SE¼ of Section 34, in Township 30 North of Range 12 West, N.M.P.M.
(Copy of deed attached) Book 914 Page 540

TO June 1, 1989, 4:30 P.M.

SAN JUAN COUNTY ABSTRACT & TITLE COMPANY

By _____
President

OFT/gw
Enclosures

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

May 19, 1989

New Mexico Oil Conservation Division
310 Old Santa Fe Trail Room 206
Santa Fe, NM 87503

Attn: Dave Boyer

Subject: Administrative Approval
Commercial Evaporation Ponds
NW 1/4, Sec. 2-T29N-R12W
San Juan County, New Mexico

Dear Mr. Boyer:

Sunco Trucking Water Disposal (STWD) requests administrative approval for a lined commercial evaporation pond. The revised August 1988 Guidelines for Permit Application, Design and Construction of Waste Storage/Disposal Pits will be used, as presented and as applicable, for the format of this application.

I. General Information

A. Owner: Sunco Trucking Water Disposal
708 S. Tucker Ave.
Farmington, NM 87401
(505) 327-0416

B. Contact Person: Robert C. Frank
P.O. Box 308
Farmington, NM 87401
(505) 325-8729

C. Location: SW 1/4, NW 1/4 Sec. 2-T29N-R12W
Attached please find a topo map and site plan for the proposed facility. The access will be gained from County Road 3500. The location of skimmer pit and unloading/holding tanks is indicated on the site plan.

D. The major purpose of this facility is for the disposal, by evaporation of produced water from the San Juan Basin. The water will be trucked into location and unloaded into above ground tanks with the oil collected and stored for future treating and sale and the water drained off the bottom into a skimmer pond. The skimmer pond will serve as a back up to the tanks. The second and third ponds will be built as market conditions dictate. Each pond will be equipped with an aeration system and a spray system. The aeration system will be operable from start up and the sprayers will be utilized as market conditions dictate.

E. Three copies of the application have been provided.

F. "I hereby certify that I am familiar with the information contained in and submitted with this application and that such information is true, accurate and complete to the best of my knowledge and belief.

George E Coleman

Signature

JUNE 16, 1989

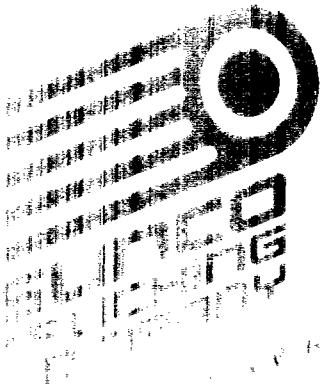
Date

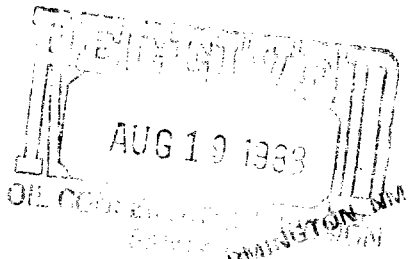
GEORGE E. COLEMAN

Printed Name

PRESIDENT

Title





August 16, 1988

Oil & Gas Conservation Division
Land Office Building
P.O. Box 2088
Santa Fe, New Mexico 87501

ATTENTION: Mr. David Boyer

Dear David:

I received your packets on Waste Disposal Pits and appreciate the information.

At this time our company is at a primitive stage of building this operation and our main priorities is to continue to keep an open line of communications with your agency. We know this type of facility is very sensitive with the public; therefor, if there is any additional information or recommendations your agency would like to send to us, it would be greatly appreciated.

Sincerely,

Chuck Badsgard
Sales

/rb

RULE 709. REMOVAL OF PRODUCED WATER FROM LEASES AND FIELD FACILITIES

(a) Transportation of any produced water by motor vehicle from any lease, central tank battery, or other facility, without an approved Form C-133 (Authorization to Move Produced Water) is prohibited.

(b) Authorization to transport produced water may be obtained by filing three copies of Form C-133 with the Director of the Division in Santa Fe.

(c) No owner or operator shall permit produced water to be removed from its leases or field facilities by motor vehicle except by a person possessing an approved Form C-133.

RULE 710. DISPOSITION OF TRANSPORTED PRODUCED WATER

(a) No person, including any transporter, may dispose of produced water on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any other place or in any manner which will constitute a hazard to any fresh water supplies.

Delivery of produced water to approved salt water disposal facilities, secondary recovery or pressure maintenance injection facilities, or to a drill site for use in drilling fluid will not be construed as constituting a hazard to fresh water supplies provided the produced waters are placed in tanks or other impermeable storage at such facilities.

(b) The supervisor of the appropriate district office of the Division may grant temporary exceptions to paragraph (a) above for emergency situations, for use of produced water in road construction or maintenance, or for use of produced waters for other construction purposes upon request and a proper showing by a holder of an approved Form C-133 (Authorization to Move Produced Water).

(c) Vehicular movement or disposition of produced water in any manner contrary to these rules shall be considered cause, after notice and hearing, for cancellation of Form C-133.

new rule 6/6/88

RULE 711. COMMERCIAL SURFACE WASTE DISPOSAL FACILITIES

A commercial surface waste disposal facility is defined as any facility that receives compensation for collection, disposal, evaporation or storage of produced water, drilling fluids, drill cuttings, completion fluids, and/or other approved oil field related waste in surface pits, ponds, or below grade tanks. Such facility will not be allowed to operate unless it has been permitted in conformity with the following provisions:

A. Prior to the construction, reconstruction or enlargement of a commercial surface waste disposal facility, application for a permit or a modification to an existing permit shall be filed in duplicate with the Santa Fe office of the Division and one copy to the appropriate district office. The application shall be accompanied by:

1. A plat and topographic map showing the location of the facility in relation to governmental surveys (1/4 1/4 section, township, and range), highways or roads giving access to the facility site, and watercourses, water wells, and dwellings within one mile of the site;

2. The names and address of the landowner of the disposal facility site and landowners of record within one-half mile of the site;

3. A description of the facility with a diagram indicating location of fences and cattleguards, and detailed engineering construction/installation diagrams of any pits, liners, dikes, piping, sprayers, and tanks on the facility, prepared in accordance with Division "Guidelines for Permit Application, Design and Construction of Waste Storage/Disposal Pits;"

4. A plan for disposal of approved waste solids or liquids in accordance with Division rules, regulations and guidelines;

5. A contingency plan for reporting and cleanup of spills or releases;

6. A routine inspection and maintenance plan to ensure permit compliance;

7. A closure plan;

8. Geological/hydrological evidence demonstrating that disposal of oil field wastes will not adversely impact fresh water;

9. Proof that the notice requirements of this Rule have been met;

10. Certification by an authorized representative of the applicant that information submitted in the application is true, accurate, and complete to the best of the applicant's knowledge; and

11. Such other information as is necessary to demonstrate compliance with OCD rules and/or orders.

B. The applicant shall give written notice of application to the owners of surface lands and occupants thereof within one-half (1/2) mile and a copy and proof of such notice will be furnished to the Division. The Division will issue public notice by advertisement in a paper of general circulation published in the county in which the disposal facility is to be located. For permit modifications, the Division may issue public notice and may require the applicant to give written notice as above. Any person seeking to comment on such application must file comments with the Division within 30 days of the date of public notice. If there is objection by owners or occupants of adjacent lands, the Director of the Division may set any application for a surface waste disposal permit for public hearing.

C. All commercial surface waste disposal facilities shall have a surety or cash bond in the amount of $25,000, in a form approved by the Division, conditioned upon compliance with statutes of the State of New Mexico and rules of the Division, and satisfactory cleanup of the site upon cessation of operation, in accordance with Part J of this Rule. If a bond has been secured for a treating plant permit at the location, that bond shall be sufficient for the surface waste disposal portion of the facility, providing they are contiguous. If an adequate bond is posted by the applicant with a federal or state agency and the bond otherwise fulfills the requirements of this rule, the Division may consider the bond as satisfying the requirement of this rule. The applicant must notify the Division of any material change affecting the bond filed for the site and must, in any case, report the status of their bond annually to the Division;

D. The Director of the Division may administratively issue a permit upon a finding that a complete and proper application has been filed and that no significant objections have been filed within 30 days following public notice. All permits shall be revocable, after notice and hearing, upon showing of good cause and are transferable only upon written approval of the Division Director. The permit shall be consistent with the application and appropriate requirements of Division rules and The Oil and Gas Act.

E. All surface waste disposal facility operators shall file forms C-117-A, C-118, and C-120-A as required by OCD rules.

F. Each operator of a commercial surface disposal facility shall keep and make available for inspection records for each calendar month on the source, location, volume and type of waste (produced water, acids, completion fluids, drilling mud, etc.), date of disposal, and hauling company that disposes of fluids or material in their facility. Such records shall be maintained for a period of two (2) years from the date of disposal.

G. Disposal at a surface facility shall occur only when an attendant is on duty. The facility shall be secured when no attendant is present. When loads can be monitored or otherwise isolated for inspection before disposal, no attendant is required.

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

I. Additional requirements or restrictions may be imposed by a written finding by the Division, including but not limited to the following:

1. An operator with a history of failure to comply with Division rules, regulations, and orders, or

2. Site suitability limitations.

J. The operator shall notify the Division of cessation of operations. Upon cessation of disposal operations for six (6) consecutive months, the operator will complete cleanup of constructed facilities and restoration of the facility site within the following six (6) months, unless an extension of time is granted by the Director of the Division. Such closure shall be in accordance with the closure plan and any modifications approved by the Division Director and may include removal or demolition of buildings, removal of all tanks, vessels, equipment or hardware, containment and removal of fluids and chemicals, backfilling and grading of pits, removal of contaminated soil, aquifer restoration (if necessary) and reclamation of the general facility site. Prior to release of the bond covering the facility, a representative of the Division will inspect the site to determine that restoration is adequate.

K. Upon showing of proper cause, the Director of the Division may order immediate cessation of any surface waste disposal operation. The cessation will remain in effect until withdrawn, or until an order is issued after notice and hearing, when it appears that such cessation is necessary to prevent waste, to protect fresh water, to protect public safety, or to assure compliance with Division rules or orders.

GUIDELINES FOR PERMIT APPLICATION, DESIGN, AND CONSTRUCTION OF WASTE STORAGE/DISPOSAL FACILITIES

(Revised 11-90)

NEW MEXICO OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
P. O. BOX 2088
SANTA FE, NEW MEXICO 87504-2088

PREFACE

The following specifications shall be used as a guide to the preparation of a permit application for waste storage/disposal facilities to be used to contain those wastes regulated by the Oil Conservation Division. (Individual districts may have additional restrictions or requirements.) All plans and specifications shall be submitted to and approved by the Oil Conservation Division prior to construction. Designs may deviate from the following specifications if it can be shown that the design integrity is such that the construction of impoundments will not affect any present or future sources of protectable ground water, and the facility is protective of public health and the environment. Please note that this guide does not take precedence over any specifications outlined in the Oil Conservation Commission's Order No. 3221-C for centralized surface waste storage/disposal facilities. It does take precedence for commercial surface waste disposal facilities. These specifications do not apply to well-site produced water or reserve pits.

If any levee to be constructed is more than ten feet (10') in height from ground level, or if a pit volume is more than 10 acre-feet, the State Engineer Office must also review and issue a permit for construction of the pit.

GUIDELINES FOR APPLICATION FOR WASTE STORAGE/DISPOSAL FACILITY PERMITS

I. Type of Operation

Indicate the major purpose(s) of the facility (e.g., produced water evaporation pit, disposal of oil field solids, etc.) and briefly describe the processes occurring at the facility.

II. Operator

Name of owner or legally responsible party, include address and telephone number.

III. Location of Disposal Pit

Give a legal description of the location (i.e., 1/4 1/4 Section, Township, Range, and County). Use state coordinates or latitude/longitude on unsurveyed land. Submit a large scale topographic map, site plan, or detailed aerial photograph for use in conjunction with the written material. It should depict highways or roads giving access to the facility site.

IV. Expansion Request

If the application is for an expansion of an existing facility, include the original OCD order or approval authorization for the facility.

V. Land Ownership

Include a topographic map, plot map or aerial photograph delineating land ownership boundaries.

VI. Storage/Disposal Facilities Description

A. Describe what types of liquids, solids, and/or soils are proposed to be accepted for disposal (e.g. produced water, drilling muds, completion fluids, tank bottoms, hydrocarbon contaminated solids, etc.)

B. Describe proposed on-site facilities to be used for effluent storage/disposal of process/produced water, drilling mud, sludges, waste oils, etc., including

surface impoundments, disposal pits, below grade tanks, etc. Locate the various storage/disposal areas on the facility site plan or topographic map. If materials or effluent other than produced water are proposed to be discharged at the site, describe in detail and provide expected volumes.

VII. Engineering Design

A. Provide technical data on the design elements of each disposal method. Engineering designs must be submitted to OCD for approval prior to construction.

1. Surface impoundments - Type and volume of effluent stored, area, volume, depth, slope of pond sides, sub-grade description, liner type and thickness, compatibility of liner and effluent, installation methods, leak detection methods, freeboard, runoff/runon protection.

2. Solids and semi-solids treatment and disposal - Describe in detail how petroleum waste solids, semi-solids or sludges will be handled including proposals for recycling, reclaiming and/or disposal. Provide disposal pit(s) location, size, volume, liner (if required), and type of solids. Facilities reclaiming oil are subject to OCD Rule 312.

3. Landfarming - Describe how contaminated solids (including soils and/or tank bottoms) will be landfarmed. Include information on proposed spreading rates, lift thickness, discing frequency, use of nutrients or chemicals to enhance degradation and proposed testing to monitor effectiveness.

B. General Construction Requirements

1. Location

Liquid and solids disposal pits and ponds shall not be located in any watercourse, lakebed, sink-hole, or other depression. Pits and ponds adjacent to any such watercourse or depression shall be located safely above the high-water level of such watercourse or depression.

2. Design and Construction

a. Evaporation ponds shall be designed and constructed to provide the minimum evaporative surface area needed for the maximum yearly volume of liquid to be discharged to the pond. This design parameter shall be based upon local climatological data. Such data and calculations used for the pond design shall be

submitted with any proposed plans and specifications. Special care should be taken when calculating the pond volume to account for the decrease in the evaporation rate during the winter months.

b. The design freeboard allowance shall take wave action into account to prevent overtopping due to wave action. A determination of the wave type (breaking or nonbreaking) shall be made to determine the forces acting upon the levee. Such calculations shall be submitted with the details for pond construction. Liner markings or some other device shall be installed to accurately measure freeboard.

c. The pond is to 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 (see Figure 1).

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

e. An aeration system may be required to be constructed to prevent anaerobic conditions from forming in a pond. The necessity for this requirement will be determined individually based on pond design specifications submitted.

f. Upon completion of construction "as-built" completion diagrams certified by a registered professional engineer shall be submitted including locations and top-of-pipe elevation of monitor wells, if required.

3. Synthetically Lined Evaporation Ponds

a. Materials

(1) Synthetic materials used for lining evaporation ponds shall be impermeable and may be rigid, semi-rigid, or flexible.

(2) If rigid or semi-rigid materials are used, leak proof expansion joints shall be provided, or the material shall be of sufficient thickness and strength to withstand (without cracking) expansion, contraction, and settling movements in the underlying earth.

(3) If flexible membrane materials are used, they shall be of at least 30 mil thickness and shall have good resistance to tears or punctures.

(4) All materials used for lining evaporation ponds shall be resistant to hydrocarbons, salts, and acidic and alkaline solutions. The liners shall also be resistant to ultraviolet light or provision made to protect the material from the sun, as specified in Section c.(6).

(5) Synthetically lined pits shall incorporate a double liner system with a leak detection system installed between the primary (top) and secondary (bottom) liner.

b. Leak Detection System

(1) A leak detection system of an approved design shall be installed between the primary and secondary liner. The appropriate OCD district office should be notified at least 24 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) Leak detection systems may consist of, but are not necessarily limited to, approved fail-safe electric detection system or drainage and sump systems.

(3) If an electric grid detection system is used, provision must be made for adequately testing all components to ensure the system remains functional.

(4) If the drainage and sump system is to be used, a network of slotted or perforated drainage pipes shall be installed between the primary and secondary liners. 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 (see Figure 2).

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. In extremely rocky areas, it will probably be necessary to cover the pond bed 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. (See Figure 3).

(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. (See Figure 3). In locations where temperature variations are significant, wrinkles or folds shall be placed at each corner of the pond to allow for the contraction and expansion of the membrane due to temperature variations. The membrane manufacturer should be consulted on this matter.

(4) Certain conditions require the venting of gas that may accumulate beneath a liner. If organic matter exists in the soils under the liner, or if natural gas is present in the region, gas production is likely. When a fluctuating water table is present immediately below the pond bottom, pockets of are may also accumulate below the liner. The net result of gas or air accumulation below the liner may be the "floating" of the liner to the pond surface. Two possible vent designs are illustrated in Figure 4. The need to vent this accumulated gas can be accomplished by providing a uniform layer of sand (which less than 5% will pass the 200 sieve) or a geotextile beneath the liners. To achieve the best results

from either of these media, the slope from the lowest point of the pond to the toe of the dike must be at least 2%. The venting medium is carried across the entire bottom and up the side slopes. Vents should be located approximately one foot (1') down from the crown of the dike. (See Figure 3)

(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) If the lining material used for the primary liner is not sun-resistant, at least one inch (1") of sand or other suitable material shall be spread uniformly to cover the liner over the floor of the pit. Gravel or other wave-resistant material with sufficient angle of repose to remain in place shall be used to cover the sloping inner wall of the levee. A geotextile liner shall be placed beneath any gravel layer to provide protection for the membranae liner. Any gravel or sand layers used to protect the membranae liner from the sun shall extend to the anchor trench.

(7) Any sand or gravel layers placed on top of a membranae liner shall be done in such a manner that the risk of tearing the liner is minimized.

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

4. Clay Lined Ponds

a. Materials

Clay liners will be constructed of compacted clay soils or a mixture of bentonite and soil such that a maximum permeability of 1.0×10^{-7} cm/s is achieved. The application rate for bentonite to soil should be based on laboratory tests. In the absence of laboratory data, a minimum of 6 lbs. of bentonite must be thoroughly mixed with each cubic feet of soil prior to compaction.

b. Design and Construction

In addition to requirements of Part VII.2.b above, the following requirements shall also be observed for clay-lined pits:

(1) All vegetation, trash, stones, and other objects large enough to interfere with compaction will be removed from the pit site prior to compaction.

(2) Compacted clay liners shall be a minimum of three feet (3') thick uniformly throughout the bottom and sides of the pit, with a extra two feet (2') of clay liner at the toes of sidewall slopes and under aerators, if used.

(3) Clay materials shall be compacted by a sheep's foot roller in lifts not exceeding nine inches (9") in loose thickness to a minimum of 95% of the standard proctor density (ASTM D-698), with soil at optimum moisture content.

(4) Fluid used to compact lifts of clay lining materials will be similar to fluids to be placed in ponds, without hydrocarbons.

(5) A registered professional engineer shall certify correct placement, thickness, and compaction of the pond liner.

(6) At any point of discharge into the pond, no fluid force shall be directed to the clay liner. Splash pads to prevent erosion under aerators or on levees may include rip-rap or concrete aprons, synthetic materials, discharge tubes with upward facing outlets, or various weirs.

c. Unless otherwise approved by the OCD, ground water monitoring will be required to detect an fluids released from clay lined facilities.

5. Unlined Evaporation Ponds

a. Unlined disposal ponds will not be approved in areas where fresh water (as defined by OCD rules) underlies the site unless the constituent quality of the produced water is better than then underlying ground water.

b. Sufficient geologic and hydrologic information will be required to be provided to demonstrate that water disposal in unlined evaporation ponds will not migrate to areas of protectable fresh water.

6. Spray Evaporation Systems

a. Sprayer systems may be approved to enhance natural evaporation.

b. Engineering designs for the sprayer system must be submitted for approval prior to installation.

c. Spray systems shall be operated such that spray-borne salt does not leave the bermed area.

7. Skimmer Ponds/Tanks

a. Required Use

A skimmer pond or tank shall be used to separate any oil from the water prior to allowing the water to discharge into the evaporation pond, except for the following cases:

(1) It can be shown that the water being discharged into the pond contains no oil or grease.

(2) The discharge into the pond is from an oil or natural gas processing facility where the discharge has already clarifier passed through a skimmer basin, skimmer tank, decanter, or API Separator.

b. Design Criteria

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

(1) If a skimmer pond is to be used, the pond shall conform to the same design criteria as the evaporation pond.

(2) If a skimmer tank is to be used, the material of construction and/or design shall provide for corrosion resistance.

(3) If a skimmer pond is to be used, 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 pond.

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

(5) Figures 5 - a and b illustrate general design criteria for skimmer ponds and tanks, respectively. All skimmer pond shall be lined unless specifically exempted.

8. Fences, Signs and Netting

a. Unless otherwise permitted by the OCD, 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 fences shall be constructed so as to prevent livestock 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 Plans)

It is necessary to include in the discharge plan submittal a contingency plan that anticipates where any leaks or spills might occur. It must describe how the discharger proposes to guard against such accidents and detect them when they have

occurred. The contingency plan also must describe the steps proposed to contain and remove the spilled substance or mitigate the damage caused by the discharge such that ground water is protected, or movement into surface waters is prevented. The discharger will be required to notify the OCD Director of significant leaks and spills, and this commitment and proposed notification threshold levels must be included in the contingency plan.

A. Describe measures to be taken in the event of pond or pit failure as determined by the leak detection sumps or by ground water monitoring. Outline a procedure for analyses of fluids found, proposed schedule for OCD notification, removal of fluids from the leak detection system, repairs to the pond, and cleanup of contaminated water.

B. Describe proposed procedures addressing containment, cleanup and reporting in case of major and minor spills at the facility. Include information as to whether areas are curbed, paved and drained to sumps; final disposition of spill material; proposed schedule for OCD notification of spills; etc.

C. If an injection well is used for on-site effluent disposal, describe the procedures to be followed to prevent unauthorized discharges to the surface or subsurface in the event the disposal well or disposal line is shut-in for workover or repairs (e.g. extra storage tanks, emergency pond, shipment offsite, etc.). Address actions to be taken in the event of disposal pipeline failure, extended disposal well downtime, etc.

IX. Operation and Maintenance

A. Leak detection sumps shall be inspected for fluids at least weekly; monitor wells, if required, shall be checked at least monthly and sampled if fluids are present. Analyses will be furnished to the OCD. Records of dates, inspector and status of the leak detection system or ground water monitoring wells shall be maintained.

B. 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 after any rainfall of consequence.

C. Pond freeboard levels shall not be less than approved by OCD.

D. All surface waste disposal facility operators shall file forms C-117-A, C-118, and C-120-A as required by OCD rules.

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

F. Only liquids and solids that are non-hazardous by 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.

G. Each operator of a commercial surface disposal facility shall keep and make available for inspection records for each calendar month on the source, location, volume and type of waste (produced water, 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 their facility. Such records shall be maintained for a period of two (2) years from the date of disposal.

H. Disposal at a surface facility shall occur only when an attendant is on duty. The facility shall be secured when no attendant is present. When loads can be monitored or otherwise isolated for inspection before disposal, no attendant is required.

X. Closure Plan

A. Provide a facility closure plan detailing plans as necessary for removal of all fluids and/or wastes, back-filling, grading and mounding of pits, cleanup of contaminated soils, and if necessary, aquifer restoration.

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. Site Characteristics - Fresh Water Protection Demonstration

A. The following hydrologic/geologic information is required to be submitted with all applications. Some information already may be on file with OCD and can be provided to the applicant on request.

1. Hydrologic Features

a. Provide the name, description, and location of any bodies of water, streams (indicate perennial or intermittent), or other watercourses (arroyos, canals, drains, etc.); and ground water discharge sites (water wells, seeps, springs, marshes, swamps)

within one (1) mile of the outside perimeter of the facility. For water wells, specify use of water (e.g., public supply, domestic, stock, etc.)

b. Provide the total dissolved (TDS) concentration (in mg/l) of the ground water most likely to be affected by any discharge. Include the source of the information and how it was determined.

c. Provide the flow direction of the ground water most likely to be affected by any leaks. Include the source of the information and how it was determined.

d. It is suggested that you provide a recent water quality analysis of the ground water, if available, including the name of the analyzing laboratory, sample location, and data the sample was taken. This suggestion is made so that background information is available in case of leaks or charges of neighboring groundwater contamination.

2. Geologic Description of Pond Site

Provide the following information and attach or reference source information, as available, (e.g., driller's logs):

a. Soil type(s) (sand, clay, loam, caliche);

b. Name and depth to water to most shallow aquifer(s);

c. Composition of aquifer material (e.g., alluvium, sandstone, basalt, etc.); and

d. Depth to rock at base of alluvium.

3. Flood Protection

Provide information on:

a. The flooding potential at the facility with respect to major precipitation and/or runoff events; and

b. Flood protection measures (berms, drainage channels, etc.), if applicable, for at least a 100-year flood.

c. Proposed schedule for OCD notification in case of flooding or washout.

B. Provide any additional information necessary to demonstrate that approval of the application will not result adversely affect fresh water protected for present or reasonably foreseeable future use. Depending on the method and location of discharge, detailed technical information on site hydrologic and geologic conditions may be required to be submitted for discharge plan evaluation. This material is most likely to be required for unlined surface impoundments and pits, and leach fields. Check with OCD before providing this information. However, if required it could include but not be limited to:

1. Stratigraphic information including formation and member names, thickness, lithologies, lateral extent, etc.

2. Generalized maps and cross-sections;

3. Potentiometric maps for aquifers potentially affected;

4. Porosity, hydraulic conductivity, storativity and other hydrologic parameters of the aquifer;

5. Specific information on the water quality of the receiving aquifer; and

6. Information on expected alteration of contaminants due to sorption, precipitation or chemical reaction in the unsaturated zone, and expected reactions and/or dilution in the aquifer.

XII. Proof of Notice

Attach proof that the notice requirements of OCD Rule 711 have been met (commercial disposal facilities only).

XIII. H_2S Contingency Plan

A contingency plan in the event of a release of H_2S shall be submitted for approval along with the details for pit construction. The contingency plan will outline a procedure for monitoring for H_2S, notifying the OCD, aeration or treatment of pit fluids for H_2S generation, H_2S monitoring and notification of appropriate authorities.

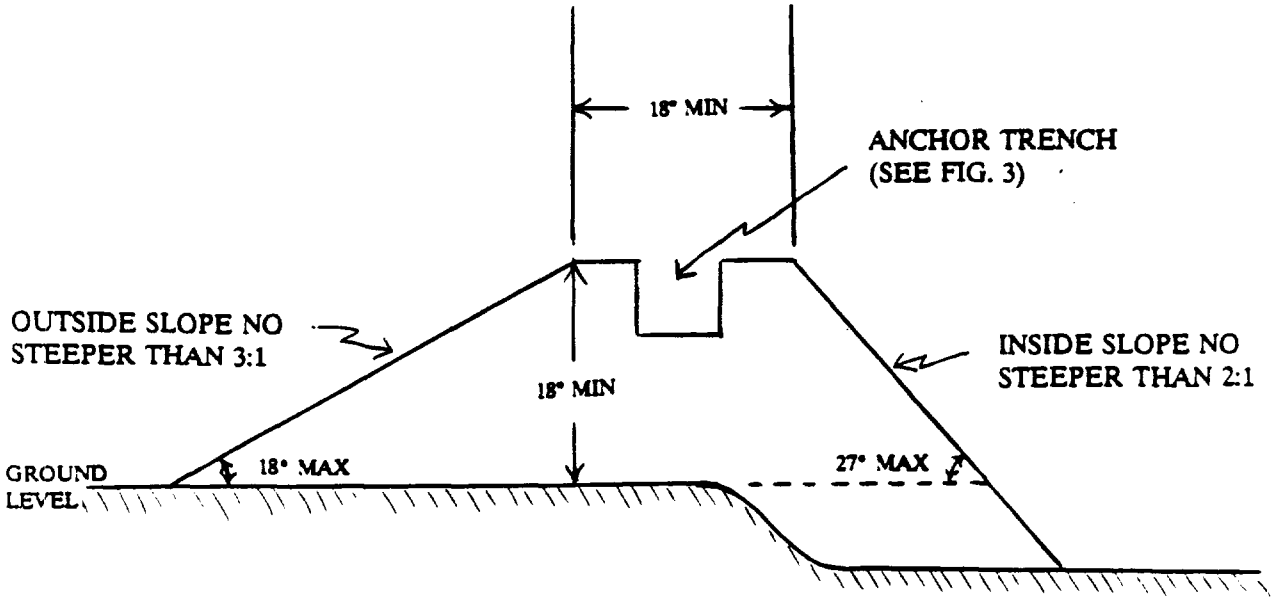
XIV. Additional Information

Provide any additional information necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.

XV. Certification

Include the signature information required on the application form.

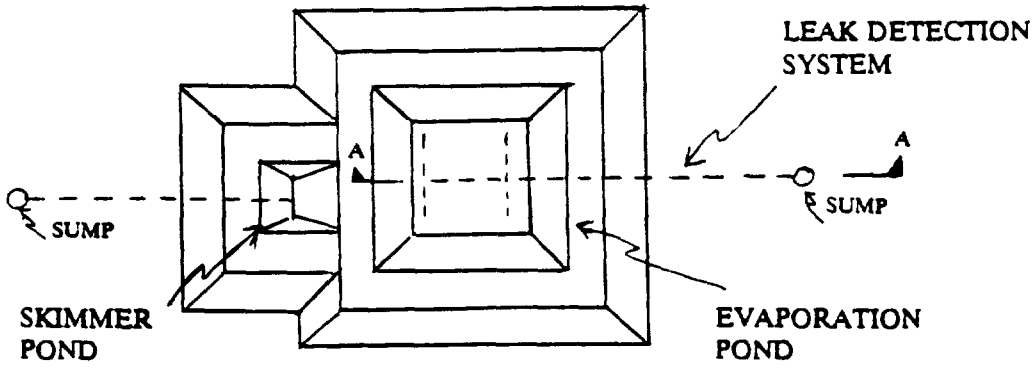
FIGURE 1: PIT CONSTRUCTION



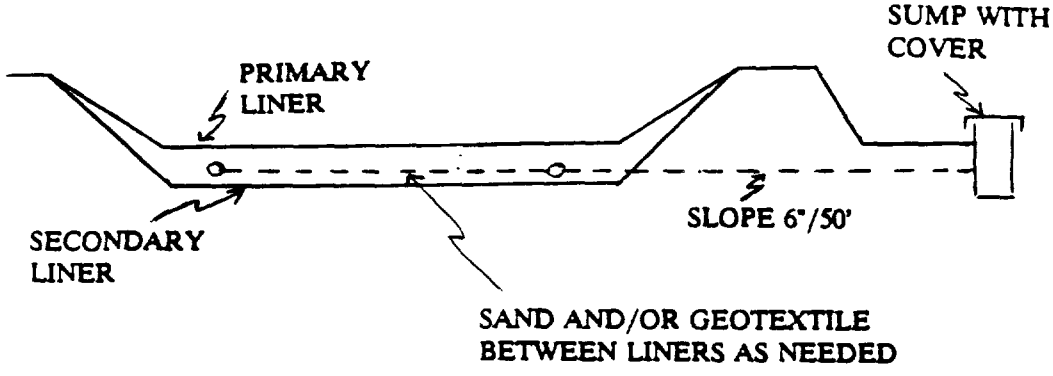
NOTE: LEVEE TO BE CONSTRUCTED IN A MANNER SUCH THAT DESIGN COMPACTION AND DIMENSIONS PROVIDE FOR A MINIMUM SAFETY FACTOR OF TWO FOR FORCES ACTING AGAINST THE LEVEE.

FIGURE 2 - LEAK DETECTION SYSTEM

PLAN



SECTION A-A



NOTE: SKIMMER POND TO HAVE SEPARATE LEAK DETECTION SYSTEM AND SUMP.

FIGURE 3 - ANCHOR TRENCH

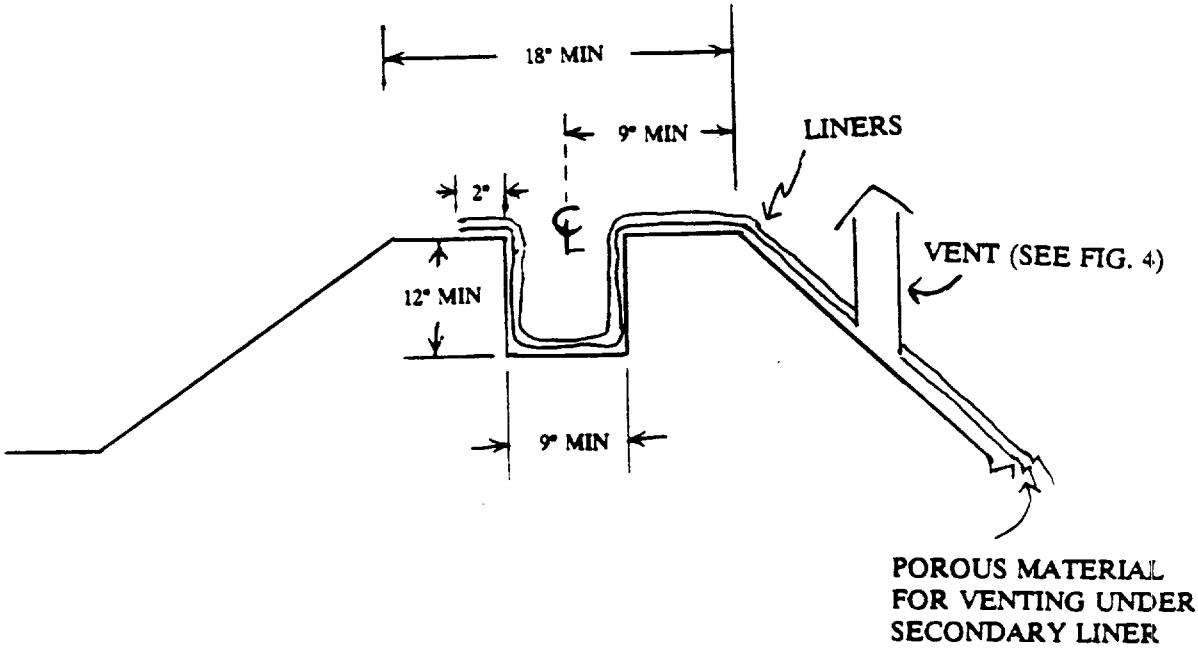
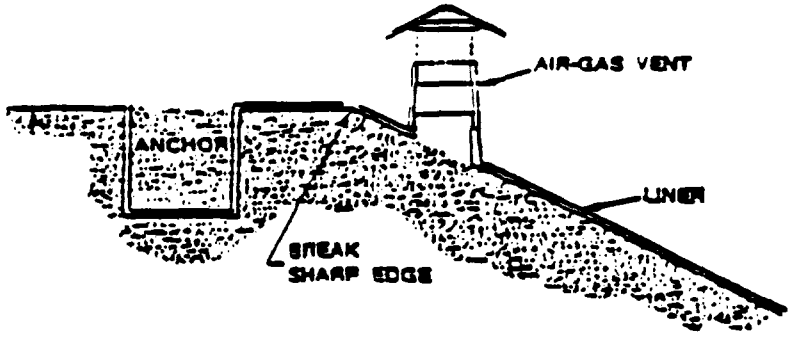


FIGURE 4 - VENT DESIGNS

SOURCE: EPA REPORT #SW-870, "LINING OF WASTE IMPOUNDMENT FACILITIES", PG. 260



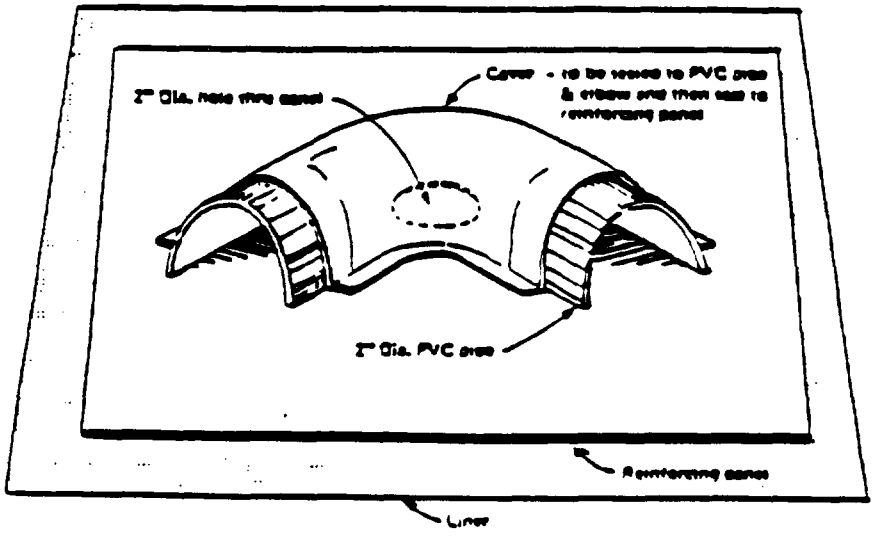
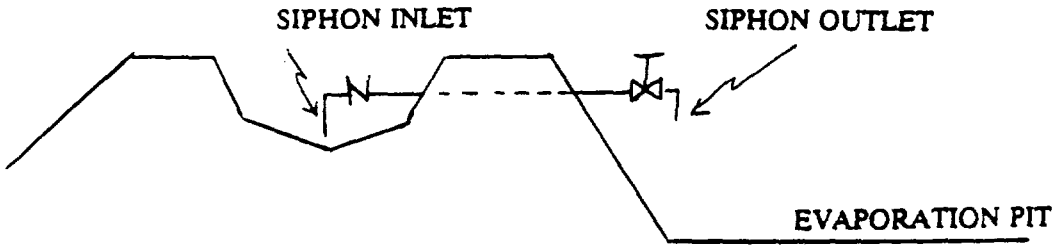
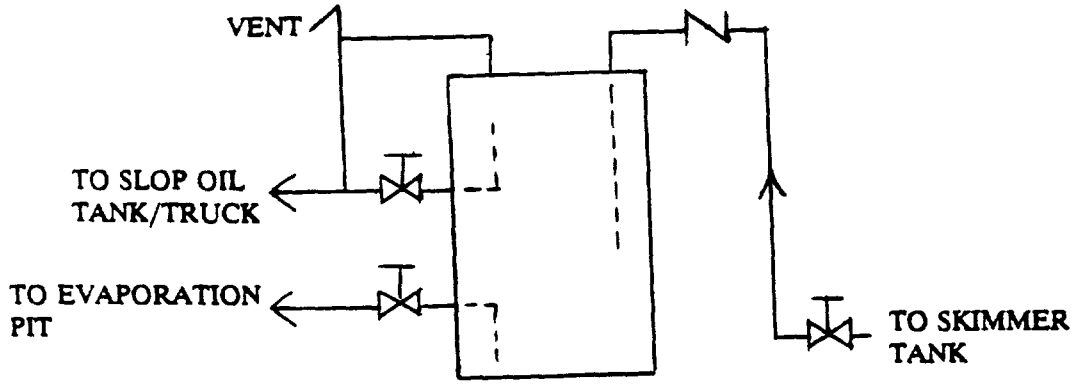


FIGURE 5: SKIMMER POND/TANK

(A) SKIMMER POND



(B) SKIMMER TANK



NOTE: BEFORE BEGINNING DISCHARGES TO SKIMMER POND/TANK, FILL WITH FRESH WATER TO SIPHON INLET.