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

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

CASE NO. 9955
ORDER NO. R-9485

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

ORDER OF THE DIVISION

BY THE DIVISION:

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

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

FINDS THAT:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

IT IS THEREFORE ORDERED THAT:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

operation of the facility.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

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