

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

APPLICATION OF THE NEW MEXICO OIL CONSERVATION DIVISION FOR  
REPEAL OF EXISTING RULES 709, 710 AND 711 CONCERNING SURFACE  
WASTE MANAGEMENT AND ADOPTION OF NEW RULES GOVERNING  
SURFACE WASTE MANAGEMENT

CASE NO. 13586

NOTICE OF FILING OF FIFTH AMENDED PROPOSAL

The New Mexico Oil Conservation Division, the applicant in this case, hereby files its amended proposal.

Exhibit A hereto, dated March 31, 2006, sets forth specific modifications to proposed new Rule 53 that the division now proposes in this case, as a result of comments received at the outreach meeting held on March 17. Except for the modifications shown on Exhibit A, the Division continues to urge the adoption of the proposed rules set forth in Exhibit A to its Notice of February 27, 2006.

RESPECTFULLY SUBMITTED,



David K. Brooks  
Assistant General Counsel  
Energy, Minerals and Natural  
Resources Department of the State of  
New Mexico  
1220 S. St. Francis Drive  
Santa Fe, NM 87505  
(505)-476-3450

Attorney for The New Mexico Oil  
Conservation Division

2006 MAR 31 PM 2:00

**EXHIBIT A TO NOTICE OF FILING OF FIFTH AMENDED PROPOSAL  
March 31, 2006**

**19.15.2.53 SURFACE WASTE MANAGEMENT FACILITIES:**

**A.** Definitions applicable 19.15.2.53 NMAC only.  
(2) Other definitions.  
(c) A composite liner is a liner that may consist of multiple layers of geosynthetics and low-permeability soils. The different layers of a composite liner may have different material properties and may be applied at different stages of landfill liner installation. ~~Composite liners are treated in a model in exactly the same way that a regular single layer liner is treated.~~

(f) A landfarm lift is an accumulation of soil or drill cuttings predominately contaminated by petroleum hydrocarbons which is placed into a landfarm cell for treatment.

**E.** Siting and operational requirements applicable to all permitted facilities. Except as otherwise provided in 19.15.2.53 NMAC:

(2) No surface waste management facility shall be located:

(b) within an existing wellhead protection area or 100-year floodplain;

(11) Operators shall comply with the spill reporting and corrective action provisions of ~~19.15.4.19 or~~ 19.15.3.116 NMAC.

(12) Each operator shall have an inspection and maintenance plan that includes the following:

(a) ~~monthly~~ weekly inspection of all leak detection sumps and systems including sampling if fluids are present, with analyses of any fluid samples furnished to the division, and maintenance of records of inspection dates, the inspector and the status of the leak detection system;

(b) ~~semi-annual~~ quarterly inspection and sampling of all monitor wells as required, with analyses of ground water furnished to the division; and maintenance of records of inspection dates, the inspector and the status of ground water monitoring wells;

(13) Each operator shall have a plan to control run-on water onto the site and run-off water from the site, such that:

(a) the run-on and run-off control systems shall prevent flow onto the facility's active portion during the peak discharge from a ~~100-year~~ 25-year, 24-hour storm event;

~~(b) run-off from the facility's active portion shall not be allowed to discharge any pollutant to the waters of the state or United States that violates any state water quality standards.~~

(b)(c) run-off from the facility's active portion shall not be allowed to discharge any pollutant to the waters of the state or United States that violates any state water quality standards.

**F.** Specific requirements applicable to landfills.

(2) Ground water monitoring program. If fresh ground water exists at the site, the operator shall, ~~unless otherwise approved by the Division,~~ establish a ground water monitoring program, approved by the division's environmental bureau, that shall include a ground water monitoring work plan, a sampling and analysis plan, and a ground water monitoring system. The ground water monitoring system shall consist of a sufficient number of wells, installed at appropriate locations and depths, to yield ground water samples from the uppermost aquifer that:

(4) Liner specifications and requirements.

(b) Additional requirements for geomembranes:

(iii) Field seams in geosynthetic material shall be thermally seamed (hot wedge) with a double track weld to create an air pocket for non-destructive air channel testing. In areas where double track welding cannot be achieved, the operator may propose alternative thermal seaming methods. A stabilized air pressure of 35 psi +/- one percent, shall be maintained for at least five minutes. Liners shall be overlapped four to six inches before seaming, and seams shall be oriented parallel to the line of maximum slope; i.e., oriented along, not across, the slope. The number of field seams in corners and irregularly shaped areas shall be minimized. Factory seams shall be used where possible. There shall be no horizontal seams within five feet of the toe of the slope. Qualified personnel shall perform all field seaming.

**G. Specific requirements applicable to landfarms.**

(1) Waste acceptance criteria. Only soils and drill cuttings predominantly contaminated by petroleum hydrocarbons may be placed in a landfarm. The division may approve placement of tank bottoms in a landfarm if the operator demonstrates that the tank bottoms do not contain economically recoverable petroleum hydrocarbons or that no treatment plant capable of extracting any recoverable petroleum hydrocarbons exists within reasonable proximity. All waste placed in any landfarm shall be sufficiently free of liquid content to pass the paint filter test and shall not have a chloride concentration exceeding 1000 mg/kg. The person tendering waste for treatment at a landfarm shall certify, on form C-138, that representative samples of the waste have been subjected to the paint filter test and tested for chloride content, and that the samples have been found to conform to these requirements. The landfarm's operator shall not accept waste for landfarm treatment unless accompanied by this certification.

(2) Background testing. Prior to beginning operation of a new landfarm or to opening a new cell at an existing landfarm, the operator shall take, at a minimum, four background soil samples from each landfarm cell, three feet below the original ground surface, to establish background concentrations. The operator shall analyze the background soil samples for total petroleum hydrocarbons (TPH), as determined by EPA Method 418.1 (or other EPA method approved by the division), benzene, toluene, ethyl benzene and xylenes (BTEX), as determined by EPA SW-846 Method 8021B, chlorides, and other constituents listed in Subsections A and B of 20.6.2.3103 NMAC, using approved United States Environmental Protection Agency (EPA) methods.

(3) Operation and waste treatment.

(d) The operator shall biopile or spread and disk all contaminated soils in eight six inch or less lifts within 72 hours of receipt. ~~The division's environmental bureau may approve other treatment procedures if the operator demonstrates that they provide equivalent protection for fresh water, public health, safety and the environment.~~

(j) ~~The division's environmental bureau may approve other treatment procedures if the operator demonstrates that they provide equivalent protection for fresh water, public health, safety and the environment.~~

(4) Treatment zone monitoring. The operator shall spread contaminated soils on the surface in six-inch or less lifts. The operator shall conduct treatment zone monitoring to ensure that the TPH concentration of each lift, as determined by EPA SW-846 Method 8015M or EPA Method 418.1 (or other EPA methods approved by the division), does not exceed 2500 mg/kg and that the chloride concentration, as determined by EPA Method 300.1, does not exceed 1000 mg/kg, prior to adding an additional lift. The maximum thickness of treated soils in any landfarm cell shall not exceed two feet. When that thickness is reached, the operator shall not place additional oil field waste in the landfarm cell until it has demonstrated by monitoring the treatment zone at least semi-annually that the contaminated soil has been treated to the standards specified in Paragraph 6 of Subsection G of 19.15.1.53 NMAC or the contaminated soils have been removed.

(6) Treatment zone closure performance standards.

(c) The gasoline range organics (GRO) and diesel range organics (DRO) combined fraction, as determined by EPA SW-846 Method 8015M, shall not exceed 500 mg/kg. The total extractable

petroleum hydrocarbon fractions, as determined by EPA Method 418.1 (or other EPA method approved by the division), shall not exceed 1000 mg/kg.

(7) Disposition of treated soils.

(b) If the operator cannot achieve the closure performance standards specified in Paragraph (6) of Subsection G of 19.15.1.53 NMAC within five years or as extended by the division, then the operator shall remove all contaminated soil from the landfarm cell and properly dispose of it at a division-approved landfill, or reuse or recycle it in a manner approved by the division. The operator may request approval of an alternative soil closure standard from the division, provided that the operator shall give public notice of an application for alternative soil closure standards in the manner provided in Paragraph (4) of Subsection C of 19.15.2.53 NMAC. The division may grant the request administratively if no person files an objection thereto within 30 days after publication of notice; otherwise the division shall set the matter for hearing.

(8) Environmentally acceptable bioremediation endpoint approach.

(a) A landfarm operator may utilize an environmentally acceptable bioremediation endpoint approach to landfarm management in lieu of compliance with the requirements of Subparagraphs (a) through (c) of Paragraph (6) of Subsection G of 19.15.2.53 NMAC. The bioremediation endpoint in soil occurs when TPH is reduced to a minimal concentration as a result of bioremediation and is dependent upon the bioavailability of residual hydrocarbons. An environmentally acceptable bioremediation endpoint occurs when the TPH concentration has been reduced by at least 80% by a combination of physical, biological and chemical processes and the rate of reduction in TPH concentration is essentially zero. The environmentally acceptable bioremediation endpoint in soil is determined statistically by the operator's demonstration that the rate of reduction in TPH concentration is essentially zero.

(c) In addition to the other operational requirements specified in subsection G of 19.15.2.53 NMAC, the operator utilizing an environmentally acceptable bioremediation endpoint approach shall comply with the following:

(ii) Characterization of contaminated soil. The operator shall submit a description of the procedures that it will follow to characterize each lift of contaminated soil or drill cuttings, prior to treating each lift of contaminated soil or drill cuttings, for: petroleum hydrocarbon loading factor; TPH; BTEX; chlorides; constituents listed in Subsections A and B of 20.6.2.3103 NMAC; contaminated soil moisture; contaminated soil pH; total organic carbon (TOC); and API gravity of the petroleum hydrocarbons.

**H.** Small landfarms. Small landfarms as defined in Subparagraph (e) of Paragraph (1) of Subsection A of 19.15.2.53 NMAC are exempt from 19.15.2.53 NMAC except for the following requirements:

(3) Waste management standards. The operator shall biopile or spread and disk all contaminated soils in six inch or less lifts within 72 hours of receipt. The operator shall conduct treatment zone monitoring to ensure that the TPH concentration of each lift, as determined by EPA SW-846 method 8015M or EPA method 418.1 (or other EPA method approved by the division), does not exceed 2500 mg/kg and that the chloride concentration, as determined by EPA method 300.1, does not exceed 1000 mg/kg, prior to adding an additional lift. The maximum thickness of treated soils in any landfarm cell shall not exceed two feet. When that thickness is reached, the operator shall not place additional oil field waste in the small landfarm. The operator shall treat the soils by disking at least once a month and by watering and addition of bioremediation enhancing materials when needed.

(5) Small landfarm closure:

(a) Closure performance standards and disposition of soils.

(iii) TPH, as determined by EPA SW-846 method 418.1 (or other EPA method approved by the division), shall not exceed 1000 mg/kg. The GRO and DRO combined fraction, as determined by EPA SW-846 Method 8015M, shall not exceed 500 mg/kg.

I. Specific requirements applicable to evaporation, storage, treatment and skimmer ponds.

(2) Construction, standards.

(i) A leak detection system shall be placed between the lower and upper geomembrane liners and shall consist of two feet of compacted soil with a saturated hydraulic conductivity of  $1 \times 10^{-5}$  cm/sec or greater to facilitate drainage. The leak detection system shall consist of a properly designed drainage and collection and removal system placed above the lower geomembrane liner in depressions and sloped so as to facilitate earliest possible leak detection. All piping used shall be designed to withstand chemical attack from waste or leachate, structural loading from stresses and disturbances from overlying waste, waste cover materials, equipment operation, expansion or contraction, and to facilitate clean-out maintenance. The material placed between the pipes and laterals shall be sufficiently permeable to allow the transport of the fluids to the drainage pipe. The slope of the interior sub-grade and of all drainage lines and laterals shall be at least a two percent grade, *i.e.*, two feet vertical drop per 100 horizontal feet. The piping collection network shall be comprised of solid and perforated pipe having a minimum diameter of four inches and a minimum wall thickness of schedule 80. A solid side-wall riser drainage pipe shall be sealed to convey any collected fluids to a collection, observation and disposal system to a corrosion proof sump located outside the perimeter of the landfill, for observation. Alternative methods may be installed as approved by the division.

J. Closure and post closure.

(1) Facility closure by operator. The operator shall notify the division's environmental bureau at least 60 days prior to cessation of operations at the facility and provide a proposed schedule for closure. Upon receipt of such notice and proposed schedule, the division shall review the current closure plan for adequacy and inspect the facility. The division shall notify the operator within 60 90 days after the date of cessation of operations specified in the operator's closure notice of any modifications of the closure plan and proposed schedule or additional requirements that it determines are necessary for the protection of fresh water, public health, safety or the environment. If the division does not notify the operator of additional closure requirements within 90 days as provided, the operator may proceed with closure in accordance with the approved closure plan; provided that the director of the division may, for good cause, extend the time for the division's response for an additional period not to exceed 60 days by written notice to the operator. The operator shall be entitled to a hearing concerning any modifications or additional requirements the division seeks to impose if it files an application for a hearing within 10 days after receipt of written notice of the proposed modifications or additional requirements. Closure shall proceed in accordance with the approved closure plan and schedule and any modifications or additional requirements imposed by the division. During closure operations the operator shall maintain the facility to protect fresh water, public health, safety and the environment. Upon completion of closure, the operator shall re-vegetate the site unless the division has approved an alternative site use plan as provided in paragraph (5) of Subsection J of 19.15.2.53 NMAC. Re-vegetation shall consist of establishment of a vegetative cover over at least 70% of the site, consisting of at least two native plant species and not including noxious weeds, and maintenance of that cover through two successive growing seasons. The division may approve re-vegetation with non-native plants if seed for native plant species are not commercially available or the operator demonstrates that re-vegetation with native plant species is impracticable.