

COHW

**GUIDELINES FOR PERMIT APPLICATION
DESIGN, AND OPERATION OF
CENTRALIZED & COMMERCIAL LANDFARMS**

(JULY 1993)

**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 for the preparation of a permit application for a commercial or centralized landfarm designed to treat oilfield solids classified as 1) exempt from Federal Resource Conservation and Recovery Act (RCRA) Subtitle C Regulations, or 2) nonhazardous by characteristic testing. Landfarm permits are reviewed and approved pursuant to the New Mexico Oil Conservation Division (OCD) Rule 711.

The applicant shall submit an "Application for Surface Waste Disposal Facility" accompanied by the information necessary to evaluate the application. All plans and specifications shall be submitted to and approved by the Oil Conservation Division prior to construction. Designs for construction and operation of the facility may deviate from the following specifications if it can be shown that the design and operation of the facility will not effect any present or foreseeable beneficial uses of protectable water and the facility is protective of public health and the environment.

The following procedures shall also be used as a guide for the treatment of contaminated solids at locations where a permit is not required such as at a production site or leak/spill location where the contaminated materials are solely from that individual site. OCD approval from the appropriate district office must be obtained prior to conducting onsite landfarm operations at individual well site locations.

An OCD Rule 711 permit does not relieve the applicant of liability should the operation result in actual pollution of surface or ground waters or the environment actionable under other laws and/or regulations. In addition, an OCD Rule 711 permit does not relieve the applicant of liability to comply with all other federal, state or rules and/or regulations.

GUIDELINES FOR APPLICATION FOR COMMERCIAL & CENTRALIZED LANDFARMS

(to use with the application form)

Check the appropriate box indicating whether the application is for a centralized or commercial disposal facility. A commercial facility is a facility that receives compensation for collection, disposal, evaporation, treatment, and/or storage of oil field related wastes. A centralized surface facility is a facility that is owned by a single company/proprietor and receives wastes from two or more sites owned by that same company/proprietor.

Note: All commercial landfarms must submit to the OCD a surety or cash bond in the amount of \$25,000, in a form approved by the Division, prior to commencing construction of the facility.

I. TYPE OF OPERATION

Indicate the major purpose(s) of the facility (ie. remediation of oil field solids) and briefly describe the processes occurring at the facility.

II. OPERATOR

Name of owner or legally responsible party, include the address, contact person and telephone number.

III. LOCATION OF LANDFARM

Give a legal description of the location by 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. Include on the map the appropriate highways or roads giving access to the facility.

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.



THE EXISTING
FACILITY HAS ALL THIS

BERMING AT THE
LOWEST SIDE WILL
TAKE CARE OF THIS
ADJACENT PROPERTY OWNED BY OPERATOR

PIPELINE IS MARKED
AND PROPOSED LAND FARM IS
OVER 20' TO THE WEST

BERMING IN THE
NORTH + NE SIDES WILL BE
CONSTRUCTED AND SMALL
BERM SURROUNDING THE LANDFARM

RANDOM CORE SAMPLES
QUARTERLY, 3' DEEP FOR AROMATICS
BTX

BEFORE STARTING
TAKE SAMPLE TO
COMPARE RANDOM
SAMPLES WITH

2. Fences & Signs: The facility shall be fenced and have a sign at the entrance. The sign shall be legible from at least fifty (50) feet and contain the following information: a) name of the facility, b) location by section, township and range, and c) emergency phone number.
3. Facility Buffer Zone: No contaminated soils should be placed within one-hundred (100) feet of the boundary of the facility unless it can be demonstrated that a smaller buffer zone will not adversely impact the adjacent properties.
4. Pipeline Buffer Zone: No contaminated soils should be placed within twenty (20) feet of any pipelines crossing the landfarm. In addition, no equipment should be operated within ten (10) feet of a pipeline. All pipelines crossing the facility should have surface markers identifying the location of the pipelines.
5. Facility Berming: The portion of the facility containing contaminated soils shall be bermed to prevent runoff and runoff. A berm should be constructed and maintained such that it is capable of containing precipitation from a one-hundred year flood for that specific region.
6. Treatment Zone Monitoring: Because a landfarm is designed to remediate contaminated soils and not transfer contaminants into the underlying native soil and/or groundwater, the applicant shall submit a plan to detect leaching of contaminants. If the native ground surface has a minimum of three feet of uncemented material (ie. soil) then a treatment zone monitoring program may be incorporated into the facility design to ensure contaminants are not leaching into the native soil/groundwater. The following procedures should be used to monitor a treatment zone not to exceed three (3) feet beneath the landfarm:
 - a. One (1) background soil sample should be taken from the center portion of the landfarm two (2) feet below the native ground surface prior to operation. The sample should be analyzed for total petroleum hydrocarbons (TPH), major cations/anions, volatile aromatic organics (BTX), and heavy metals using approved EPA methods.
 - b. A treatment zone not to exceed three (3) feet beneath the land farm should be monitored. A minimum of one random soil sample should be taken from each individual cell, with no cell being larger than five (5) acres, six (6) months after the first contaminated soils are received in the cell and then quarterly thereafter. The sample should be taken at two to three (2-3) feet below the native ground surface.

40
Hire people to help me

6. Successive lifts of contaminated soils should not be spread until a laboratory measurement of Total Petroleum Hydrocarbons (TPH) in the previous lift is less than 100 parts per million (ppm), and the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and the benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations shall be maintained at the facility. Authorization from the OCD shall be obtained prior to application of successive lifts.
7. Moisture should be added as necessary to enhance bioremediation and to control blowing dust. There shall be no ponding, pooling or run-off of water allowed. Any ponding of precipitation should be removed within seventy-two (72) hours of discovery.
8. Enhanced bio-remediation through the application of microbes (bugs) and/or fertilizers shall only be permitted after prior approval from the OCD. Request for application of microbes should include the location of the area designated for the bio-remediation program, composition of additives, and the method, amount and frequency of application.
9. No free liquids or soils with free liquids shall be accepted at the facility.
10. Comprehensive records of all material disposed of at the facility shall be maintained at the facility. The records for each load will include: 1) the generator, 2) the origin, 3) date received, 4) quantity, 5) Certification of exempt status or analysis for hazardous constituents if non-exempt, 6) transporter, and 7) exact cell location and any addition of microbes, moisture, fertilizers, etc.

C. **Characterization & Tracking of Wastes** - The operator of a landfarm must be able to distinguish between those oilfield contaminated solids which are exempt from RCRA Subtitle C (hazardous waste) regulations and those which are subject to the RCRA Subtitle C regulations. To aid the landfarm applicant in making those determinations and therefore prohibiting hazardous waste from entering the facility, all OCD permitted landfarms should operate under the following conditions:

1. The facility should be authorized to accept only:
 - a. Oilfield contaminated solids which are exempt from RCRA Subtitle C regulations. These wastes should be accompanied by a "Certification of Waste Status" from the generator.

ON SITE IS A
1000 GAL VACUUM
MANHOLE TO REMOVE
ANY PRECIPITATION

CONSULTING FIRMS
WOULD RECOMMEND

ALL STABILIZED + FREE
OF LIQUID

DATE, QUANTITIES

1. WASTES
RECEIVED ARE
EXEMPT NO
Hazardous
WASTES ARE
ACCEPTED

VIII. SPILL/LEAK PREVENTION & REPORTING (CONTINGENCY PLANS)

- Backhoe
Bobcat
AND 1000 GAL
VACUUM TRUCK
ON SITE
ALL DAY
TIME
- A. The disposal application shall contain a contingency plan that anticipates where any leaks/spill might occur. It should describe how the applicant proposes to guard against such accidents and detect them when they have occurred.
- B. The contingency plan shall 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.
- C. The disposal application shall describe how any ponding, pooling or runoff of precipitation will be removed from the landfarm and where its final disposition will be.
- D. The disposal application shall contain a contingency plan that describes what procedures will be taken to contain and mitigate any contaminants which are leached beneath the native surface of the landfarm. The precise method will depend upon the engineering design of the facility and the method used to detect leaching of contaminants (ie. monitoring a two foot treatment zone, installing a double-lined system with leak detection, etc.)
- E. The applicant shall commit to notify the OCD of any break, spill, blow out, or fire or any other circumstance that could constitute a hazard or contamination in accordance with OCD Rule 116.

IX. INSPECTION, MAINTENANCE & REPORTING

- TEST AMBIENT
AIR FOR H₂S
- A. Discuss proposed housekeeping practices and routine inspection procedures for all collection, storage, and disposal units. Include procedures for any units having leak detection systems with frequency of inspection, how records are to be maintained and OCD notification in the event of a leak is detected.
- B. The facility should be maintained to keep soils from blowing and to minimize odors from leaving the facility boundary. Discuss how this will be accomplished. Berms should be maintained in such a manner to prevent erosion. Inspections of the berms should be made after any rainfall or wind storms of consequence.
- C. All tank bottoms or miscellaneous hydrocarbons received at the facility shall be accompanied by a Form C-117-A.
- D. The applicant should commit to submitting all required analytical results, OCD forms and other specified reports referenced in the guidelines.

BAILEY INSPECTION
THE USE OF FRESH
WATER TO CONTROL
DUST + NATURAL
PRECIPITATION IS USUALLY
ENOUGH

- d. It is suggested that the applicant provide a recent chemical analysis of the ground water beneath or adjacent to the proposed site so that background information is available in case of leaks or charges of neighboring groundwater contamination. Include the name of the analyzing laboratory, sample location, date the sample was taken, and a well schematic.

2. Geologic Description of Landfarm Site: Provide the following information and attach or reference source information, as available (ie. driller's log):

- a. Soil type(s) - sand, clay, caliche, bedrock. Include a lithologic discription of all soil and rock members from ground surface down to the shallowest fresh water aquifer.
- b. Depth to, name of, and thickness of the shallowest fresh water aquifer.
- c. Composition of the aquifer material - alluvium, sandstone, basalt, etc.

3. Flood Protection: Provide information on:

- a. The flooding potential at the facility with respect to major precipitation and/or runoff events.
- b. Flood protection measures (berms, drainage channels, etc.) 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 adversely affect fresh water protected for present or reasonably foreseeable future use. Depending on the location and design of the landfarm, detailed technical information on site hydrologic and geologic conditions may be required to be submitted for the disposal permit evaluation. Check with the 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.

See map of site
location of well

See map of site
location of well

Operations
Removal & notification