



K A N S A S

DEPARTMENT OF HEALTH AND ENVIRONMENT

Application to Landfarm Petroleum Contaminated Soils Without a Permit Authorized by K.S.A. 65-3407c(a)(2)

SECTION 1. FACILITY INFORMATION (Site where contaminated soil was generated)

Facility Name _____

Address _____ City _____

County _____ State _____ Zip Code _____

Mailing Address (if different than above) _____

Contact Name _____ Phone _____

Legal Location of Soil Source _____
1/4 Section Township Range County

Coordinate Location in degrees decimal: Latitude _____, Longitude _____

SECTION 2. APPLICANT INFORMATION (Owner/Operator, General or Sub-Contractor performing the work)

Individual or Company Name _____

Address _____ City _____

County _____ State _____ Zip Code _____

Contact Name _____ Phone _____

Applicant Type (check all that apply) Soil Generator Consultant Soil Treatment Provider

Will you be performing the actual treatment? Yes No, If no who will be providing the actual treatment.

Individual or Company Name _____

Contact Name _____ Phone _____

BER Contact _____ Project Number _____

SECTION 3. LANDFARM TREATMENT SITE INFORMATION (Where soil will be treated)

The property owner of the proposed landfarm location must read and sign page 5 of this application titled *Landfarm Property Owner Consent Form*. The signed form must be submitted to the Bureau of Waste Management before any landfarming project will be approved.

Property Owner's Name _____

Mailing address _____ City _____

County _____ State _____ Zip Code _____

Legal location of the landfarm site _____
1/4 Section Township Range County

Coordinate Location in degrees decimal: Latitude _____, Longitude _____

Current land use of the proposed treatment site (check all that apply)

Agriculture _____ Commercial _____ Industrial _____ Residential _____ Other _____

Current land use of surrounding area (check all that apply)

Agriculture _____ Commercial _____ Industrial _____ Residential _____ Other _____

Are there any land use restrictions, zoning requirements, or local permits required? Yes__ No__

If yes, please describe and attach copies of any documentation. _____

Distance and direction to the nearest residence and/or business. _____

Are there any water wells located within a 2 mile radius of the proposed treatment site? Yes__ No__

If yes, please indicate their location on the required site location map.

What is the depth to groundwater? _____ Direction of groundwater flow (if known) _____

SECTION 4. CONTAMINATED SOIL INFORMATION

How many cubic yards of contaminated soil do you propose to remediate? _____

Type of contaminated soil (sand, silt, clay, silty clay, etc...) _____

What type of contaminant is the soil impacted with (check all that apply)

Gasoline ___ Diesel Fuel _____ Waste/Used Oil _____ Solvents _____ Other (specify) _____

In addition to the above information, contaminated soil must be analyzed by a Kansas certified lab prior to transportation of the soil to the proposed landfarm location. In general all soils contaminated with petroleum products should be analyzed for BTEX (Benzene, Toluene, Ethylbenzene, and Xylenes), 1,2-Dichloroethane and total lead. Soils contaminated with gasoline and or diesel fuel should also be analyzed for TPH by the OA-1 and OA-2 test methods respectively. Other types of contamination such as waste/used oil, crude oil, and solvent contamination may require additional testing. Questions regarding which test are required should be addressed to KDHE Bureau of Waste Management.

SECTION 5. LANDFARM OPERATING PLAN

The landfarm operating plan is a separate document you will attach to this application that demonstrate the applicants understanding and ability to manage the landfarming activities. At a minimum all plans should contain the following information. Please note that all landfarms which occur off-site from the contamination site will have target clean up levels of non-detect or a level equal to natural background levels, and will not be based on the KDHE RSK-MANUAL for TPH (GRO) or (DRO). The KDHE Bureau of Waste Management should be contacted prior to determination of background levels. Also, landfarming without a permit will only be authorized for temporary projects, which means all remediation plans should be designed to reduce contamination levels to the target level within two years.

1. **Background:** Describe how the contaminated soil was generated (Spill, Leaking UST, Pipeline break etc...) and explain any current KDHE involvement with the project, giving the names of KDHE representatives already involved.
2. **Site Map:** The site map should show the landfarms orientation and location with respect to nearby residential housing, commercial buildings, waters of the state, and domestic water wells within 2 mile of the site. This map should also be detailed enough that it could be used to locate the landfarm or contain additional directions to the site from the nearest highway. As a general guide landfarms should not be located within: 500 feet of a residence, business, domestic or public water supply; 200 feet from waters of the state and property lines; and 100 feet from a drainage swale, ditch, or other physical feature which channels overland flow.
3. **Site Preparation:** Describe the initial condition and use of the landfarm site and how the landfarm will be constructed; including details about grading, run-off/run-on control measures, and the depth at which contaminated soils will be placed etc...

- 4. Treatment and Management Procedures:** The treatment and management procedures should describe how and when the contaminated soils will be remediated. It should also detail the management objectives, method of evaluating those objectives, frequency of evaluation, and the actions to be taken to achieve the stated objectives. Management objectives typically include maintaining the optimum moisture content, pH, nutrient level, and oxygen level to promote microbial growth and subsequent degradation of the contaminant.

For soils impacted with gasoline only, turning the soil to aerate and volatilize the gasoline is a proven acceptable treatment method for attaining the non-detect remedial goal. Typically diesel fuel and other heavier hydrocarbons can not attain the target cleanup level by aeration alone. These landfarms require treatment and management procedures that attempt to optimize and enhance the growing environment of the biodegrading bacteria. In addition to providing oxygen by turning the soil, managing the landfarm to optimize moisture content, pH, and nutrient levels greatly increases the rate and extent of biodegradation, and should be incorporated into most landfarming projects other than those involving gasoline only.

It's important to remember that landfarming without a permit is considered a temporary biodegradation process which employs methods meant to accelerate the natural degradation of the contaminants.

- 5. Monitoring Plan:** How will you monitor the progress of the biodegradation process. In general the information you provide should include: frequency of sampling, method of sampling, number of samples, sample locations, parameters to be analyzed for, and analytical methods used.

SECTION 6. LANDFARM CLOSURE PLAN

The landfarm closure plan is a separate document you will attach to this application. At a minimum it should contain the following information.

- 1. Closure Activities:** Detail what will be done to close the site and return it to its original condition, such as regrading, seeding, or removal of the soil. Describe the proposed use of the land/soil once contamination has been reduced to acceptable levels. Explain the over all steps that will be taken to close the site.

Also, as part of the closure activities the KDHE Bureau of Waste Management must be notified at least 10 days prior to confirmation sampling so that a KDHE representative may be present to monitor the sampling and take split samples if so desired.

- 2. Confirmation Sampling:** Describe how closure confirmation samples will be taken include: method of sampling, number of samples, sample locations, parameters to be analyzed for, and analytical methods to be used. Confirmation sampling should be representative of the entire landfarm and should, at a minimum, be sampled at a rate of 1 sample per 300 cubic yards of soil. All soil samples to be tested for volatile contaminants should be taken as discrete grab samples. Samples to be tested for semi volatile and non-volatile contaminants may be composite samples.

Landfarm Property Owner Consent Form
(To be developed)

SECTION 7. CHECK LIST

Please make sure the following items are complete and attached before submitting this application.

- Site Map
- Analytical results from a Kansas certified lab
- Landfarm Operating Plan
- Landfarm Closure Plan
- Landfarm Property Owner Consent Form