

401 KAR 47:205. Contents of the application for petroleum-contaminated soil treatment facilities.

RELATES TO: KRS 224.01, 224.10, 224.40, 224.43, 224.99, 322.010(3), 322A.010(3), 322A.080

STATUTORY AUTHORITY: KRS 224.10-100, 224.40-305

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100 requires the cabinet to promulgate rules and administrative regulations for the management, processing, or disposal of wastes. KRS 224.40-305 requires that persons engaging in the management, processing, or disposal of waste obtain a permit. This administrative regulation establishes the application requirements for a petroleum-contaminated soil treatment facility.

Section 1. Definitions.

- (1) "Certifying engineer" means a "professional engineer," as defined by KRS 322.010(3), who implements the petroleum-contaminated soil treatment facility construction quality assurance plan.
- (2) "Construction progress report" means the written notice from the applicant to the cabinet that the biopile liner system and the petroleum-contaminated soil treatment facility is completed.
- (3) "Petroleum-contaminated soil" means silt, sand, clay, gravel, or other earthen material; or asphalt, concrete, or absorbent materials containing hydrocarbon concentrations above the levels established in 401 KAR 48:205, Section 6, Table 3, but does not exhibit a hazardous characteristic or is not a listed hazardous waste as defined in 401 KAR Chapter 31.
- (4) "Petroleum-contaminated soil treatment facility" means a solid waste site or facility where petroleum-contaminated soil is treated to reduce contaminant concentrations to or below the levels established in 401 KAR 48:205, Section 6, Table 3.

Section 2. Objective and General Requirements.

- (1) This administrative regulation shall apply to petroleum-contaminated soil treatment facilities.
- (2) Designs, reports, and plans constituting the public practice of geology, as defined by KRS 322A.010(3), shall be developed by a person registered as established in KRS Chapter 322A, except as established in KRS 322A.080.

Section 3. Applicability and Exemptions.

- (1) Except as provided in subsection (2) of this section, this administrative regulation shall apply to all applicants for a petroleum-contaminated soil treatment facility.
- (2) Owners or operators of petroleum-contaminated soil treatment facilities operating under a Class III landfarming permit, in effect prior to October 6, 2011, shall be exempt from the requirements of 401 KAR 48:205 and this administrative regulation unless:
 - (a) The facility is required to perform groundwater corrective action in accordance with 401 KAR 48:300, Section 8;
 - (b) A major modification application is filed with the cabinet to expand the waste boundary, in which case the new area shall meet the requirements of 401 KAR 48:205 and this administrative regulation; or
 - (c) A renewal application is not approved pursuant to 401 KAR 47:130, Sections 5 through 7 and 47:160, Section 5.

Section 4. Application Procedures for Petroleum-contaminated Soil Treatment Facility Permits. In order to apply for a petroleum-contaminated soil treatment facility permit, the applicant shall first submit a completed and notarized form DEP 7128, Notice of Intent to Apply for a Petroleum Contaminated Soil Treatment Facility Permit (NOI).

- (1) The NOI shall contain names, addresses, telephone numbers, and contact information for the applicant;
 - (a) If the operator is not the owner of the property where the treatment facility will be located, the operator and owner shall be co-applicants; and
 - (b) If the applicant is a government agency, corporation, company, or partnership, include the name, address, telephone number, and contact information for the process agent or contact individual.
- (2) The NOI shall be signed in accordance with 401 KAR 47:160, Section 6.
- (3)
 - (a) Once the NOI is complete, the cabinet shall make a decision to approve or deny.
 - (b) If the cabinet approves the NOI, the applicant shall perform the geological site investigation in accordance with the approved plan contained in the permit application.
- (4)
 - (a) Once the geological site investigation is complete, the applicant shall submit a completed and notarized form DEP 7129, Application for a Petroleum Contaminated Soil Treatment Facility Permit which shall specify standards for the construction and operation of the petroleum-contaminated soil treatment facility in accordance with the requirements established in 401 KAR 48:205.
 - (b) The application shall be typed or printed legibly in permanent ink.
 - (c)
 1. The application shall contain the names, addresses, telephone numbers, and contact information for the applicant; and
 2. If the applicant is a government agency, corporation, company, or partnership, include the name, address, telephone number, and contact information for the process agent or contact individual.
 - (d)
 1. The applicant shall submit and sign the application in accordance with 401 KAR 47:160, Section 6; and
 2. If the operator is not the owner of the property where the treatment facility will be located, the operator and owner shall be co-applicants.
 - (e) The applicant shall deliver a copy of the application to the county or local governing body where the petroleum-contaminated soil treatment facility will be located prior to submittal to the cabinet.
 - (f) The contents of the application shall be accurate and complete upon cabinet determination to issue a solid waste permit.
 - (g) Issuance of construction and construction - operation permits:
 1.
 - a. The cabinet shall issue a construction permit for no more than five (5) years if, after completing the review of a complete petroleum-contaminated soil treatment facility permit application, the applicant for the permit has met the requirements for application in accordance with KRS 224 Subchapter 40; 401 KAR 47:207, 401 KAR 48:205, 48:206, 48:207, 48:208 and this administrative regulation.
 - b. The applicant shall maintain a construction permit in full force and effect until the facility has been constructed and approved by the cabinet.
 2. A construction - operation permit shall be issued by the cabinet if:
 - a. The applicant submits the completed and notarized form DEP 8064, Construction Progress Report for a Petroleum Contaminated Soil Treatment Facility:
 - (i) Certifying that the petroleum-contaminated soil treatment facility construction has been completed in accordance with the construction permit; and

- (ii) Including the findings of the certifying engineer regarding the quality assurance and quality control testing in the Construction Progress Report for a Petroleum Contaminated Soil Treatment Facility;
 - b. A representative of the cabinet inspects the site and verifies in writing within thirty (30) days of the inspection that the site has been developed according to plans and that necessary equipment is available to operate the site;
 - c. The financial assurance for closure as established in Section 9 of this administrative regulation has been obtained by the applicant; and
 - d. The applicant submits a certification by the certifying engineer that the facility is constructed in accordance with the approved plans and specifications.
- (5) In order to continue operating after March 1, 2013, an owner or operator of an existing petroleum-contaminated soil treatment facility operating under a current permit shall obtain a petroleum-contaminated soil treatment facility permit.
- (6) For a major modification to an existing petroleum-contaminated soil treatment facility permit as established in 401 KAR 47:130, Section 3 that:
 - (a) Does not increase the area monitored by the groundwater monitoring system as established in 401 KAR 48:300, Section 4 the owner or operator shall:
 - 1. Submit to the cabinet a completed and notarized form DEP 7129, Application for a Petroleum Contaminated Soil Treatment Facility Permit; and
 - 2. Comply with the permit application procedures as established in this section;
 - (b) Does increase the area monitored by the groundwater monitoring system as established in 401 KAR 48:300, Section 4 the owner or operator shall submit to the cabinet a completed and notarized:
 - 1. DEP 7128, Notice of Intent to Apply for a Petroleum Contaminated Soil Treatment Facility; and
 - 2. DEP 7129, Application for a Petroleum Contaminated Soil Treatment Facility Permit; and
 - (c) Comply with the permit application procedures as established in this section.

Section 5. Technical Contents of the Notice of Intent to Apply for a Petroleum Contaminated Soil Treatment Facility Permit. The form DEP 7128, Notice of Intent to Apply for a Petroleum Contaminated Soil Treatment Facility (NOI) shall contain the geological site investigation plan, which shall be used in compiling the information for the application for a petroleum-contaminated soil treatment facility permit, including:

- (1) An original current USGS seven and one-half (7.5) minute topographic quadrangle map showing:
 - (a) Latitude and longitude measurements for the entrance to the site;
 - (b) The current and proposed waste treatment areas;
 - (c) The property boundaries; and
 - (d) The area within one (1) mile of the proposed waste boundary;
- (2) A review of information pertaining to the area within one (1) mile of the proposed waste boundary, including:
 - (a) Geology including karst features, structural features, and lithologic description;
 - (b) Hydrogeology of the groundwater resources and aquifers that shall be monitored;
 - (c) Hydrology including streams, wetlands, and other surface water bodies; and
 - (d) Caves and excavations, including mined or quarried areas;
- (3) A rock coring plan that includes the following:
 - (a) The data needed to evaluate the geologic features to the level of the first confining layer below the uppermost aquifer and all geologic units hydraulically connected to the uppermost aquifer;
 - (b) The data to describe the site geology, the local aquifers that are hydrogeologically associated with the site, and the transmissivity of the aquifers; and

- (c) Relevant field data and appropriate test methods for determining hydrogeologic parameters;
- (4)
 - (a) Directions to be used for closure of the rock core borings using grout.
 - (b) The closure of the rock corings shall be acknowledged in writing by a professional engineer or registered geologist as established in KRS 322 and 322A;
- (5) The following minimum surveying accuracy to be used to determine the location of the rock corings and the soil borings during the subsurface investigation:
 - (a) One-tenth (0.1) of one (1) foot vertical; and
 - (b) One (1) foot horizontal;
- (6)
 - (a) A procedure for written documentation if the locations of actual subsurface borings or corings are adjusted in the field; and
 - (b) The adjusted excavation locations shall achieve the criteria of this section of this administrative regulation;
- (7)
 - (a) The geotechnical investigation map shall show the location of a minimum of four (4) rock core borings.
 - (b) For sites with more than fifty (50) acres, an additional rock core boring shall be required for each additional twenty-five (25) acres or part thereof.
 - (c) The placement of the rock core borings shall be dependent on site geologic features of the proposed site.
 - (d) Additional rock core borings shall be required when four (4) rock core borings fail to characterize the geology; and
- (8) Other informational sources researched for site specific attributes, including:
 - (a) Surface mining permits;
 - (b) Subsurface excavation and mining permits; and
 - (c) Records of the Kentucky Geological Survey and the Kentucky Department of Natural Resources.

Section 6. Technical Contents of the Permit Application for a Petroleum Contaminated Soil Treatment Facility. The following information shall be submitted on or with form DEP 7129, Application for a Petroleum Contaminated Soil Treatment Facility Permit:

- (1) Facility information including location, total acreage, and maximum soil treatment volume in cubic yards;
- (2) An original, current seven and one-half (7.5) minute United States Geological Survey quadrangle topographic map with the proposed facility boundary and the locations of all of the wells and springs listed in subsection (19) of this section clearly marked;
- (3) A site map drawn to scale and prepared by a professional engineer or land surveyor, licensed pursuant to KRS Chapter 322, showing:
 - (a) North arrow;
 - (b) Buffer zones;
 - (c) Buildings;
 - (d) Treatment areas;
 - (e) Storage areas;
 - (f) Access roads;
 - (g) Fences;
 - (h) Gates;
 - (i) Floodplains;
 - (j) Floodway;
 - (k) Wells and springs;
 - (l) Surface water bodies including ponds;

- (m) Property lines;
 - (n) Monitoring wells; and
 - (o) Surface water monitoring points;
- (4) A certified copy of the recorded deed and a copy of declaration of restrictions or easements affecting the proposed permit area;
- (5) A scaled deed map showing the current boundaries of all property proposed for the facility development and buffer zones, the ownership of these properties, and the ownership of properties adjacent to the proposed facility property boundary;
- (6)
- (a) The applicant shall provide a copy of the lease or proposed lease showing the operator's right of entry during construction, operation, and closure of the petroleum-contaminated treatment facility.
 - (b) The proposed lease shall be executed prior to permit issuance;
- (7) A narrative of the methods that the owner or operator shall use to comply with the following environmental performance standards established in 401 KAR 47:030:
- (a) Floodplain restrictions;
 - (b) Endangered and threatened species;
 - (c) Surface waters;
 - (d) Polychlorinated biphenyls;
 - (e) Air;
 - (f) Safety;
 - (g) Public nuisance; and
 - (h) Wetlands;
- (8) A narrative description of the liner design and quality assurance plan as established in 401 KAR 48:205, Section 3;
- (9) A detailed contingency plan for emergencies including fires, equipment failure, and provisions for temporary storage of waste;
- (10) A description of the type of hydrocarbons and contaminants in the petroleum-contaminated soil as listed in 401 KAR 48:205, Section 5, Table 1;
- (11) A description of the type of media that contains the hydrocarbons;
- (12)
- (a) Characterization of the petroleum-contaminated soil as required in 401 KAR 48:205, Section 5, to verify the information in subsection (11) of this section;
 - (b) Copies of the laboratory analysis reports prepared for waste characterization;
- (13) A written description of the waste inspection program to ensure that only permitted petroleum-contaminated soils are accepted for treatment as established in 401 KAR 48:205, Section 4;
- (14) A description of the treatment process and equipment to be used to meet the requirements established in 401 KAR 48:205, Section 6 including the following items:
- (a) Equipment to be used including manufacturer performance data;
 - (b) Use of fertilizers, inoculants, or enzymes;
 - (c) Monitoring plan including sampling frequency and analysis to verify the reduction of contaminants to or below the levels in 401 KAR 48:205, Section 6, Table 3;
 - (d) Estimated times to complete treatment;
 - (e) Sampling plan to document that treatment has been completed in accordance with 48:205, Section 6, Table 3; and
 - (f) Storage of soil meeting the treatment standards of 48:205, Section 6, Table 3;
- (15) Treated soil specifications for the constituents found during waste characterization that are not listed in 401 KAR 48:205, Section 6, Table 3;
- (16) A marketing and distribution plan for the treated media;
- (17) The design and specifications for the roofed structure containing a concrete pad or liner as established in 401 KAR 48:205, Section 3;

(18) The results from the geological site investigation required in the approved NOI shall include the following:

(a) A description of the regional bedrock geologic structure to include the regional stratigraphic strike and dip, the locations and attitudes of regional faults and folds, and regional jointing trends;

(b) A description of the site specific geologic structure to include:

1. Site specific stratigraphic strike and dip;
2. The locations and attitudes of faults or folds intersecting the site; and
3. The attitudes and spacing of joints;

(c) A brief description of the influence that fracture zones have on the movement of infiltrated water and groundwater;

(d) A minimum of two (2) geologic cross sections, using published data, bedrock outcrops, and rock coring information depicted on scaled drawings with vertical exaggeration, and shall include the following:

1. The seasonal high groundwater table; and
2. Rock outcrop occurrences; and

(e) A map depicting the property, the proposed limits of waste, and the area at least 1,500 feet from the limits of waste at a scale of one (1) inch equals 400 feet that shows the following:

1. Geologic units, and rock outcrops;
2. Surface depressions, sinkholes, and springs;
3. Faults, folds and structural contours;
4. Location of wells used for water withdrawal, and injection of fluids;
5. Location of rock core borings; and
6. Surface contours;

(19) The following hydrogeologic characterization:

(a)

1. The hydrologic characteristics of the uppermost aquifer and the geologic units hydraulically connected to it, including field test data for hydraulic conductivity, storage coefficient, and transmissivity; and groundwater hydraulic gradient and velocity.
2. The description of these characteristics shall be based on multiple well aquifer tests, piezometer nest evaluation, core evaluation, and other methods common to the practice of geology pursuant to KRS 322A.
3. In karst terrain, both diffuse and discrete flow conditions shall be characterized.
4. The groundwater quality characterization, as established in 401 KAR 48:300, Section 3 shall be included.
5. The application shall include data, procedures, and calculations used to determine these characteristics;

(b) Tracer studies. If the petroleum-contaminated soil treatment facility overlies fractured bedrock, weathered limestone, or dolomite bedrock; or where karst terrain cannot be avoided, the cabinet shall require tracer studies before finalizing the groundwater monitoring plan using springs as monitoring points as established in 401 KAR 48:300, Section 4; and

(c)

1. A survey and listing of residential springs and water wells within one (1) mile of the proposed waste treatment areas.
2. The survey shall determine the location of springs and wells, which shall be shown on a map with their approximate elevation, depth, name of owner, age, and usage of the spring or well, stratigraphic unit, well construction, static well levels, spring or well yield, and water quality;

(20)

- (a) Groundwater and surface water monitoring plans prepared in accordance with Section 7 of this administrative regulation.
- (b) Groundwater and surface water monitoring plans shall include identification and labeling of monitoring wells and surface water monitoring points on the site map required by subsection (4) of this section;
- (21) Certification that a copy of the application has been delivered to the governing body of the solid waste management area in which the petroleum-contaminated soil treatment facility will be located; and
- (22) A plan for the closure of the petroleum-contaminated soil treatment facility describing how the property will be restored or improved in accordance with 401 KAR 48:205, Section 7.

Section 7. Public Information Process for Petroleum-contaminated Soil Treatment Facilities. The cabinet and applicant shall comply with the public information requirements for petroleum-contaminated soil facilities established in 401 KAR 47:207.

Section 8. Surface Water and Groundwater Monitoring, Assessment Monitoring, and Corrective Action Plan.

- (1) The form DEP 7129, Application for a Petroleum Contaminated Soil Treatment Facility Permit, shall include a surface water and groundwater monitoring plan as established in 401 KAR 48:300, Sections 2 and 4.
- (2) As established in 401 KAR 48:300, Section 8, an owner or operator of a petroleum-contaminated soil treatment facility shall submit an assessment or corrective action plan, if required.

Section 9. Alternative Specifications. Alternative specifications may be used. If alternative specifications are used, they shall be used only after approval by the cabinet upon a certification by a professional engineer or, for geological studies, a professional engineer or a registered geologist, as established in KRS 322 and 322A, that the alternative specifications will result in performance with regard to safety, stability, and environmental protection equal to or better than that resulting from designs complying with the specifications of this administrative regulation.

Section 10. Financial Assurance.

- (1) The owner or operator shall comply with the closure financial assurance requirements established in 401 KAR 48:310 and KRS 224.40-650.
- (2) The amount of the closure financial assurance shall be equal to the closure cost estimate amount specified in the permit as established in 401 KAR 48:205, Section 7.

Section 11. Incorporation by Reference.

- (1) The following materials are incorporated by reference:
 - (a) "Notice of Intent to Apply for a Petroleum Contaminated Soil Treatment Facility Permit", DEP 7128, November 2016;
 - (b) "Application for a Petroleum Contaminated Soil Treatment Facility Permit", DEP 7129, November 2016; and
 - (c) "Construction Progress Report for a Petroleum Contaminated Soil Treatment Facility", DEP 8064, November 2016.
 - (2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division of Waste Management, 300 Sower Boulevard, Frankfort, Kentucky 40601, Monday through Friday, 8 a.m. to 4:30 p.m. This material is also available on the Division of Waste Management's Web site at eec.ky.gov/environmental-protection/waste.
- (37 Ky.R. 2778; 38 Ky.R. 290; 550; eff. 10-6-2011; TAm eff. 7-8-2016; TAm eff. 12-21-2016; Crt eff. 10-9-2018; TAm eff. 5-7-2019.)