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Joseph L. Taraba
University of Kentucky

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REGULATION OF HAZARDOUS WASTE DISPOSAL ON AGRICULTURAL LAND

Joseph L. Taraba
Assistant Extension Professor and Specialist for Agricultural Engineering

In the Commonwealth of Kentucky, the Division of Waste Management (DWM) of the Department ofNatural Resources and Environmental Protection (DNP & EP) has the responsibility of regulating the hazardous waste program. A policy statement from the DWM was issued on June 9, 1981, concerning wastes generated from agricultural operations, i.e., farming. In summary, the statutory definition of a hazardous waste does not apply to animal manures and crop residues that are returned to the soil as a fertilizer or as a soil conditioner. Further, it states a hazardous waste shall not apply to pesticides, herbicides or fertilizers or their respective containers when disposed under label instructions or in accordance with the federal Insecticide, Fungicide, and Rodenticide Act as amended (KRS 224.005(27)). The EPA has questioned whether this state exemption

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extends to the manufacturing of pesticides. It further says that the disposal of solid wastes, such as sludges from waste treatment facilities, garbage, refuse, or any other discarded material in solid, liquid, semi-solid, or contained gaseous forms is subject to solid waste disposal requirements. It is recommended that a person who plans to land spread a domestic or industrial sludge or sludge material onto a farm seek prior approval of the proposed method of operation from DWM. This will avoid future problems for the operation until the regulations are finalized. A summary of the requirements and a preliminary application form for sludge application to agricultural land are found in Attachments 3 and 4.

The following is the statement of policy from the Director of DMW.

The federal hazardous waste program is also clear as to generally exempting farmers. 40CFR262.51 states that a farmer disposing of waste pesticides from his own use which are hazardous wastes is not required to meet program requirements of those wastes provided he triple-rinses each emptied pesticide container and disposes of the pesticide residues on his own farm in a manner consistent with the disposal instructions on the pesticide label. Presumably, failure to meet the conditions of these exemptions would result in application of full state or federal program requirements and penalties, although this Division has never documented a situation in which such an extreme enforcement step appeared necessary.

A hazardous waste returned to the soil by land treatment processes is regulated pursuant to the provisions of 40CFR265.70 to 265.299, which are incorporated into the state hazardous waste program. These standards include waste analysis, limitations on growing food chain crops, monitoring, etc. (See Attachment 1.) Any farmer intending to allow land treatment disposal of hazardous waste on his land should check with the Division of Waste Management to make sure it is being done in accordance with applicable standards. Liability for cleanup can be sought against the landowner in cases of illegal hazardous waste disposal.
Garbage, refuse, or any other discarded materials in solid, liquid, semi-solid or contained gaseous form from agricultural operations are considered solid waste and are subject to solid waste disposal requirements. This Division is responsible for implementation of a regulatory program that will provide for the disposal of waste in a manner that will protect the public health and welfare, prevent the spread of disease and creation of nuisances, conserve natural resources and enhance the beauty and quality of our environment. 401KAR2:010 specifies the regulatory requirements for permitted disposal of solid wastes. (See Attachment 2.) Unpermitted disposal, either in the form of using or operating a disposal facility without a permit, is prohibited. These permit requirements are subject to one major exception that would apply to many agricultural operations. KRS224.260 provides that any person may dispose of waste from his own household upon his own land as long as such disposal does not create a nuisance or a hazard to health. This provision does not allow a landowner to use or even allow the use by others of an unpermitted open dump on his property. This Division has sought to impose fines and clean up orders on agricultural operations when, because of the size, or accessibility and use by neighbors of an open dump on their property by others for illegal, unpermitted disposal practices.

The Division has examined current research, other state programs and EPA technical publications regarding landspreading of solid waste. Farmers intending to allow landspreading of solid wastes on their land, especially if food chain crop production on that land is performed, should contact the Division of Waste Management for technical assistance. The Division is currently developing technical guidelines as well as regulations for permitting landspreading disposal practices. A number of counties have enacted ordinances limiting or controlling this practice, but the state regulations do not presently require a permit. However, under general statutory authority, the Division will seek to enjoin any landspreading operation that creates a nuisance or other substantial environmental impact. Persons planning to operate a solid waste landspreading facility should obtain approval of their proposed method of operation from the Division in advance to avoid future problems until regulations are finalized.

A summary of the requirements and a preliminary application form for sludge application to agricultural land are found in Attachments 3 and 4.
Subpart M: Land Application

§ 265.270 Applicability.

The regulations in this subpart apply to owners and operators of hazardous waste land treatment facilities, except as § 265.1 provides otherwise.

§ 265.271 [Reserved]

§ 265.272 General operating requirements.

(a) Hazardous waste must not be placed in or on a land treatment facility unless the waste can be made less hazardous or non-hazardous by biological degradation or chemical reactions occurring in or on the soil.

(b) Run-on must be diverted away from the active portions of a land treatment facility.

(c) Run-off from active portions of a land treatment facility must be collected.

(Comment: If the collected run-off is a hazardous waste under Part 261 of this Chapter, it must be managed as a hazardous waste in accordance with all applicable requirements of Part 261, 262, 263, and 265 of this Chapter. If the collected run-off is discharged through a point source to waters of the United States, it is subject to the requirements of Section 402 of the Clean Water Act, as amended.)

(d) The date for compliance with paragraphs (b) and (c) of this Section is 12 months after the effective date of this Part.

§ 265.273 Waste analysis.

In addition to the waste analyses required by § 265.13, before placing a hazardous waste in or on a land treatment facility, the owner or operator must:

(a) Determine the concentrations in the waste of any substances which exceed the maximum concentrations contained in Table I of § 261.24 of this Chapter that cause a waste to exhibit the EP toxicity characteristic.

(b) For any waste listed in Part 261, Subpart D, of this Chapter, determine the concentrations of any substances which caused the waste to be listed as a hazardous waste; and

(c) If food chain crops are grown, determine the concentrations in the waste of each of the following constituents: arsenic, cadmium, lead, and mercury, unless the owner or operator has written, documented data that show that the constituent is not present.

(Comment: Part 261 of this Chapter specifies the substances for which a waste is listed as a hazardous waste. As required by § 265.13, the waste analysis plan must include analyses needed to comply with §§ 265.281 and 265.282. As required by § 265.73, the owner or operator must place the results of the analyses in the operating record of the facility.)

§ 265.274-265.275 [Reserved]

§ 265.276 Food chain crops.

(a) An owner or operator of a hazardous waste land treatment facility on which food chain crops are being grown, or have been grown and will be grown in the future, must notify the Regional Administrator within 60 days after the effective date of this Part.

(Comment: The growth of food chain crops at a facility which has never before been used for this purpose is a significant change in process under § 122.23(c)(3) of this Chapter. Owners or operators of such land treatment facilities who propose to grow food chain crops after the effective date of this Part must comply with § 122.23(c)(3) of this Chapter.)

(b)(1) Food chain crops must not be grown on the treated area of a hazardous waste land treatment facility unless the owner or operator can demonstrate, based on field testing, that the property has received waste at high enough application rates so that dry crops grown for human consumption. For other food chain crops, the annual cumulative application rate does not exceed:

<table>
<thead>
<tr>
<th>Time period</th>
<th>Annual Cd application rate (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present to June 30, 1994</td>
<td>2.0</td>
</tr>
<tr>
<td>July 1, 1994 to Dec. 31, 1996</td>
<td>1.0</td>
</tr>
<tr>
<td>Beginning Jan. 1, 1997</td>
<td>0.5</td>
</tr>
</tbody>
</table>

(b)(2) The only food chain crop produced is animal feed.

(i) The pH of the waste and soil mixture must be 6.5 or greater at the time of waste application or at the time the compost is added to the land treatment facility. If the pH of the waste and soil mixture is less than 6.5, the cumulative cadmium application rate must not exceed the levels in Table I of this Section.

(ii) The pH of the waste and soil mixture must not be less than 6.5 greater than 1.5 less than 6.5 for waste containing cadmium at concentrations of 2 mg/kg (dry weight) or less.

(iii) The cumulative application of cadmium from waste does not exceed the levels in Table I of this Section for food chain crops.

(c) Food chain crops must not be grown on a land treatment facility unless all requirements of paragraph (b)(1) through (iv) of this Section or all requirements of paragraph (c)(2)(i) through (iv) of this Section are met.

(1) The pH of the waste and soil mixture must be 6.5 or greater at the time of each waste application, except for waste containing cadmium at concentrations of 2 mg/kg (dry weight) or less.

(2) The cumulative application of cadmium from waste does not exceed the levels in Table I of this Section for food chain crops.

(d) Food chain crops must not be grown on the treated area of a hazardous waste land treatment facility unless the owner or operator can demonstrate, based on field testing, that the property has received waste at high enough application rates so that dry crops grown for human consumption. For other food chain crops, the annual cumulative application rate does not exceed:

<table>
<thead>
<tr>
<th>Soil cation exchange capacity (meq/100g)</th>
<th>Maximum cumulative application (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5</td>
<td>5</td>
</tr>
<tr>
<td>Greater than 15</td>
<td>20</td>
</tr>
</tbody>
</table>

(Comment: As required by § 265.73, if an owner or operator grows food chain crops on his land treatment facility, he must place the information developed in this Section in the operating record of the facility.)

§ 265.277 [Reserved]

§ 265.278 Unsatuated zone (zone of aeration) monitoring.

(a) The owner or operator must have in writing, and must implement, an unsaturated zone monitoring plan which is designed to:

(1) Detect the vertical migration of hazardous waste and hazardous waste constituents under the active portion of the land treatment facility, and

(2) Provide information on the background concentrations of the hazardous waste and hazardous waste constituents in similar, but untreated soils nearby. This background monitoring must be conducted before or in conjunction with the monitoring required under paragraph (a)(1) of this Section.

(b) The unsaturated zone monitoring plan must include, at a minimum:

(1) Soil monitoring using soil cores, and
(2) Soil-pore water monitoring using devices such as lysimeters.

(c) To comply with paragraph (a)(1) of this Section, the owner or operator must demonstrate in his unsaturated zone monitoring plan that:

1. The depth at which soil and soil-pore water samples are to be taken is below the depth to which the waste is incorporated into the soil;

2. The number of soil and soil-pore water samples to be taken is based on the variability of:
   - The hazardous waste constituents (as identified in § 265.273(a) and (d)) in the waste and in the soil; and
   - The soil type(s); and

3. The frequency and timing of soil and soil-pore water sampling is based on the frequency, time, and rate of waste application, proximity to ground water, and soil permeability.

(d) The owner or operator must keep at the facility his unsaturated zone monitoring plan, and the rationale used in developing this plan.

(e) The owner or operator must analyze the soil and soil-pore water samples for the hazardous waste constituents that were found in the waste during the waste analysis under § 265.273(a) and (b).

(Comment: As required by § 265.73, all data and information developed by the owner or operator under this Section must be placed in the operating record of the facility.)

§ 265.279 Recordkeeping.

The owner or operator of a land treatment facility must keep records of the application dates, application rates, quantities, and location of each hazardous waste placed in the facility, in the operating record required in § 265.73.

§ 265.280 Closure and post-closure.

(a) In the closure plan under § 265.112 and the post-closure plan under § 265.118, the owner or operator must address the following objectives and indicate how they will be achieved:

1. Control of the migration of hazardous waste and hazardous waste constituents from the treated area into the ground water:
   - Control of the release of contaminated run-off from the facility into surface water;
   - Control of the release of airborne particulate contaminants caused by wind erosion;

2. Compliance with § 265.276 concerning the growth of food-chain crops.

(b) The owner or operator must consider at least the following factors in addressing the closure and post-closure care objectives of paragraph (a) of this Section:

1. The type and amount of hazardous waste and hazardous waste constituents applied to the land treatment facility;

2. The mobility and the expected rate of migration of the hazardous waste and hazardous waste constituents;

3. Site location, topography, and surrounding land use, with respect to the potential effects of pollutant migration (e.g., proximity to ground water, surface and drinking water sources);

4. Climate, including amount, frequency, and pH of precipitation;

5. Geological and soil profiles and surface and subsurface hydrology of the site, and soil characteristics, including cation exchange capacity, total organic carbon, and pH;

6. Unsaturated zone monitoring information obtained under § 265.278;

7. Type, concentration, and depth of migration of hazardous waste constituents in the soil as compared to their background concentrations.

(c) The owner or operator must consider at least the following methods in addressing the closure and post-closure care objectives of paragraph (a) of this Section:

1. Removal of contaminated soils;

2. Placement of a final cover, considering:
   - Functions of the cover (e.g., infiltration control, erosion and run-off control, wind erosion control); and
   - Characteristics of the cover, including material, final surface contours, thickness, porosity and permeability, slope, length of run of slope, and type of vegetation on the cover;

3. Collection and treatment of run-off;

4. Diversion structures to prevent surface water run-on from entering the treated area;

5. Monitoring of soil, soil-pore water, and ground water.

(d) In addition to the requirements of § 265.117, during the post-closure care period, the owner or operator of a land treatment facility must:

1. Maintain any unsaturated zone monitoring system, and collect and analyze samples from this system in a manner and frequency specified in the post-closure plan.

2. Restrict access to the facility as appropriate for its post-closure use;

3. Assure that growth of food chain crops complies with § 265.276.

§ 265.281 Special requirements for ignitable or reactive waste.

Ignit able or reactive wastes must not be land treated, unless the waste is immediately incorporated into the soil so that (1) the resulting waste mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under §§ 261.21 or 261.23 of this Chapter, and (2) § 265.17(b) is complied with.

§ 265.282 Special requirements for incompatible wastes.

Incompatible wastes, or incompatible wastes and materials (see Appendix V for examples), must not be placed in the same land treatment area, unless § 265.17(b) is complied with.
KENTUCKY SOLID WASTE REGULATIONS

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DEPARTMENT FOR NATURAL RESOURCES
AND ENVIRONMENTAL PROTECTION
Bureau of Environmental Quality
Division of Solid Waste

Relates to KRS Chapter 224

Pursuant to KRS 13.082 and 224.033(17)

Necessity and Function: This regulation is needed to implement the responsibilities vested in this department which pertain to solid waste disposal. This regulation prescribes general and special requirements for construction and operation of landfills.

Supersedes: SW-1, SW-2, SW-3, and SW-4

Section 1. DEFINITIONS

(1) "Applicant" means any person making application for a permit to operate a landfill.

(2) "Construction permit" means a permit for:
   (a) a landfill not previously permitted;
   (b) a permitted landfill which seeks substantial modifications in the scope of its permitted activities; and
   (c) a landfill whose permit has lapsed: and not renewed within 60 days.

(3) "Department" means the Kentucky Department for Natural Resources and Environmental Protection.

(4) "Landfill" means a solid waste disposal site or facility.

(5) "Operator" means any person responsible for the construction and/or operation of a landfill.

(6) "Person" means any individual, public, or private corporation, political subdivision, government agency, municipality, industry, partnership, association, firm, or other entity whatsoever.
(7) "Permit" means permission, in whatever form, by the department to construct and/or operate a landfill.

(8) "Putrescible" means organic solid waste subject to decomposition by bacteria, fungi and oxidation, except trees, brush and, the like not requiring daily cover.

(9) "Sanitary landfill" means a landfill at which putrescible and other solid wastes may be disposed.

(10) "Salvage" means reusable materials.

(11) "Solid waste" means all putrescible and nonputrescible refuse in solid form. Solid waste includes but is not limited to garbage, rubbish, ashes, incinerator residue, street refuse, dead animals, demolition wastes, construction wastes, solid commercial and industrial wastes, and special wastes including explosives, pathological wastes and radioactive materials.

(12) "Solid waste disposal site or facility" means any place at which solid waste is disposed of by incineration, landfilling or any other approved method.

Section 2. Sections 1 to 13 of this regulation apply to all landfills. Landfills having permits shall meet the changed requirements relating to design and construction within six months of the effective date of this regulation. Within 90 days of the effective date of this regulation, landfills with permits shall comply with changed requirements relating to the operation of the landfills.

Section 3. APPLICATION — to construct and/or operate a landfill.

(1) Where made — Applications shall be submitted to:

Division of Solid Waste
Department for Natural Resources and
Environmental Protection
Frankfort, Kentucky 40601

(2) A preliminary site analysis may be submitted to the department for review and comment.

(3) Plan Preparation and Submittal
   (a) Plans for landfills and amendments to plans shall be designed by a registered professional engineer.

   (b) Plans, specifications and other required information shall be submitted in triplicate. Additional copies shall be provided upon request. Amendments thereto shall also be submitted in triplicate.

(4) Content — All applications shall contain the following information:
   (a) The applicant's business name, address and phone number. If the applicant is a partnership, the names and addresses of each partner shall be included.
   (b) The name and address of the person having title to the land on which the landfill will be located. If such person is other than the applicant, a copy of the applicant's lease shall be included. Each lease shall contain a right of re-entry for a period of two (2) years following the closing of a landfill. All renewed leases shall be subject to the same requirement. The department shall be provided with a copy of all renewed leases.
   (c) A seven and one-half minute (7.5) United States Geological Survey Topographical Map with the location of the landfill shown thereon.
   (d) Detailed plans which shall include a plot plan. The plot plan shall be drawn to scale with contour intervals sufficient to reveal the character of the site. Existing conditions and proposed features shall be shown on the plot plan or supplemental plans: e.g., existing and final contours, borrow and fill areas, surface water controls and special drainage devices, on-site roads, fencing, access gates, structures, cell placement and the like.
   (e) A complete description of the sequence of the waste disposal operations.
   (f) A description of soil conditions.
   (g) Upon request, the following shall be provided:
2. The types of wastes which will be disposed at the landfill; the sources which generate said wastes; a chemical description of particular wastes, and the anticipated volume of particular wastes.

3. Typical cross-sections shall be provided for operations relating to road building, earth moving, waste disposal operations, and the like.

4. Such additional information as the department deems necessary for a determination regarding the issuance of a permit.

Section 4. PERMIT ISSUANCE
(1) No construction permit shall be issued until the requirements of KRS 224.855 have been satisfied.

(2) Prior to any advertisement intended to satisfy the publication requirement of KRS 224.855, a written statement should be obtained from the department that it has received a complete application.

Section 5. PERMIT CONDITIONS
(1) Permits may be conditioned upon special limitations not found in this regulation. Limitations shall be in writing and treated as a part of the permit.

(2) No modification in the construction or manner of operation of a landfill shall be made unless prior written approval is obtained from the department.

(3) A permit is a transferable by the holder thereof to another person. Any person who acquires a landfill with the intent to operate it shall submit a new application to this department.

Section 6. PERMIT BECOMES EFFECTIVE
(1) If not conditioned upon construction or other improvements, a permit is effective upon issuance. If improvements are a condition of a permit’s issuance, it shall be treated as a permit to construct.

(2) A permit to construct shall automatically become an operational permit when:

(a) The applicant notifies, in writing, the department that construction has been completed; and

(b) a departmental representative inspects the site and determines that the site has been developed according to plans and that necessary equipment is on the site. Said determination shall be in writing.

Section 7. PERMIT TERMINATION AND RENEWAL
(1) A permit shall automatically terminate at the end of one year. A shorter period may be specified.

(2) A permit may be renewed provided all violations cited in any notice-of-noncompliance have been corrected or the department has received and approved a compliance schedule for bringing such landfill into compliance at the earliest possible date. Approval of a compliance schedule shall not constitute a waiver of the department’s right to initiate enforcement action for a landfill’s non-compliance with KRS Chapter 224 and this regulation.
(3) Renewal requests shall be made not less than six weeks prior to the date any permit expires.

(4) The department may require persons requesting permit renewal to provide new or updated information necessary for re-evaluating a landfill's suitability for continued operation.

Section 8. DENIAL OF A PERMIT
A permit may be denied for any of the following reasons:
(1) Failure to submit an adequate application.
(2) Failure to comply with local zoning requirements.
(3) Failure to comply with general or special design criteria.
(4) Failure to provide on-site requirements.
(5) Inability to guarantee adequate operating equipment.
(6) Insufficient provisions for cover material.
(7) To protect public health and welfare.
(8) To prevent a public nuisance.
(9) Failure to comply with any other requirement of KRS Chapter 224 and regulations promulgated thereunder.

Section 9. LANDFILL LOCATION
(1) No landfill shall be exposed to a once in five year flood. Landfills exposed to a once in one hundred year flood, shall be protected. Where applicable, empirical data shall be used to determine the frequency of flood exposure. Where published data is not available, the frequency of flood exposure shall be established by the unit hydrograph technique.
(2) Landfills subject to a high ground water table shall be restricted to sites which:
   (a) provide greater than two feet of compacted earth between deposited solid waste and the maximum water table;
   (b) include measures to prevent contamination of ground water; and
   (c) provide monitoring facilities.
(3) Landfills shall provide not less than two feet of compacted earth between deposited solid waste and bed rock.
(4) Landfill locations shall conform to applicable local zoning laws or ordinances.

Section 10. DESIGN CRITERIA
(1) Landfills shall be designed to prevent pollution to ground and surface waters. If not directly connected to natural lakes, rivers or streams — water-filled areas may be filled with inert materials. Prior written approval shall be obtained from the department for all such materials.
   (2) The sub-soil structure shall be such that solid waste will not contaminate ground waters or streams in the area, unless approved procedures to prevent contamination are utilized.
   (3) Surface contours shall minimize runoff onto or through the operational or completed fill area. Grading, diking, terracing, diversion ditches, etc. may be required by the department.
   (4) Disposal of wastes presenting special problems shall be separately considered in design of the landfill.
   (5) A buffer zone between the fill area and adjacent land shall be provided.
   (6) Adequate cover shall be available to cover solid wastes at intervals sufficient to prevent fire hazards, unsightly appearance, rodent harborage and for final cover.
   (7) Where stacking of disposal cells is the proposed method of disposal, soil stability shall be considered.

Section 11. OPERATION OF LANDFILL S
(1) Landfills shall be operated in conformity with any special permit limitations and this regulation at all times.
(2) Landfill operations shall be performed in a manner which precludes the occurrence of applicable problems considered in Section 10, DESIGN CRITERIA.
(3) There shall be no burning of solid waste. Any burning shall be immediately extinguished. Wastes having a high temperature shall not be deposited in the fill. Such materials shall be deposited at a location safely removed from the normal fill area and shall be covered with earth to prevent ignition or burning.
(4) Liquids or hazardous substances shall not be discharged to or placed in a landfill unless written approval has been obtained from the department. Disposal of liquids may be permitted subject to special provisions which may vary from site to site.
(5) When necessary, interior fences may be used to prevent litter from blowing from the landfill. The permitted area shall be policed to collect all scattered material.
(6) The grounds in and about a landfill shall not be allowed to become a nuisance.

(7) No putrescible waste shall be deposited at other than a sanitary landfill.

(8) Salvage and recycling operations shall not be permitted in conjunction with a landfill except under the following conditions:
   (a) Operations shall be conducted in a sanitary manner;
   (b) Operations shall be confined to an area remote from the operating face of the fill;
   (c) Operations shall not interfere with, or otherwise delay the fill operation;
   (d) All materials shall be removed from the landfill site daily or handled in a manner that will not create a nuisance, rodent harborage, or unsightly appearance.

(9) Landfills accepting solid waste from the general public shall be adequately fenced with an entrance gate that may be locked. Days and time of operation shall be clearly posted.

(10) Those areas of a landfill that will receive no additional deposits of solid waste shall receive final cover pursuant to Section 13 (2) not less than once annually. More frequent application of final cover may be required.

(11) Those areas of a landfill that have received the application of final cover shall be revegetated pursuant to Section 13, (3) REVEGETATION, not less than once annually.

Section 12. INSPECTIONS
(1) Following inspections by the department, a written notice of any non-compliance shall be provided the person(s) responsible for operations.

(2) The operator shall immediately initiate corrective action to bring his operation into compliance with state law and regulations.

Section 13. CLOSING A LANDFILL
(1) Before earth moving equipment is removed from the site, an inspection of the entire site shall be made by the department to determine compliance with approved plans and specifications. This department must be notified thirty (30) days prior to the last intended use of a sanitary landfill.

(2) Final cover means a compacted layer of not less than two feet of material in addition to any other cover required on a daily or interim basis. Final cover shall be graded as provided in the approved plan and to prevent ponding. For a period of two years, the surface of final cover shall be maintained at the proper elevation.

(3) Revegetation. After grading, final cover shall be fertilized, seeded, and/or planted with legumes and perennial grasses. In order to obtain soil stabilization, the permittee shall be required to repeat this process until vegetation is obtained.

(4) Other necessary corrective work shall be performed before the landfill project is accepted as closed.

Section 14. SANITARY LANDFILLS -- SPECIAL REQUIREMENTS
This section applies special requirements to sanitary landfills additional to those found in Section 1 to 13.

(1) The plans shall include grades for proper drainage of each lift and a typical cross section of a lift.

(2) Cover material shall be of such character that it can be compacted to provide a tight seal and shall be free of putrescible materials and large objects.

(3) The following improvements shall be made before a sanitary landfill site is placed in operation.
   (a) All weather road(s) shall be provided within the site for vehicular movement. Separate areas within the site may be provided to allow for wet or dry weather operation and access. When necessary to prevent dust nuisance, roads within the site shall be surfaced or treated.
   (b) A shelter shall be provided which is accessible to operating personnel. The shelter shall be screened and provided with heating facilities and adequate lighting. Safe drinking water, sanitary hand washing and toilet facilities shall be available at or near the site.
   (c) Arrangements shall be made for fire protection services. A fire protection district or other public fire protection service is acceptable. When such a service is not available, alternate arrangements shall be made.
(4) Sanitary landfill operations shall be in accordance with approved plans and the following additional requirements:

(a) A landfill operation shall be under the direction of a responsible individual on location during operating hours.

(b) Access to the site shall be permitted only when operating personnel are on the site.

(c) Dumping of solid waste on the site shall be confined to the smallest practical area.

(d) Unloading shall be supervised.

(e) Provision must be made for public deposit of solid waste in a container, at or near the entrance to the landfill, during the hours that the landfill is closed.

(f) Provision shall be made for routine operational maintenance of equipment at the landfill site and for prompt repair or replacement of landfill equipment.

(g) Insect and rodent control measures shall be required by the department.

(h) Non-combustible and nonputrescible waste such as boilerhouse cinders, broken paving, or materials resulting from construction or demolition operations may be disposed of at a landfill without daily cover.

(i) As rapidly as solid waste is admitted to the site, it shall be spread and compacted in shallow layers of approximately two or three feet in compacted depth depending upon the type of material and the compaction equipment. The completed cell shall consist of the solid waste admitted and compacted during one working day, regardless of overall height and area covered. When not excluded from the site, large bulky items shall be deposited in a manner approved by the department.

(5) Cover material shall be applied daily to prevent fly and rodent attraction and breeding, blowing litter, release of odors, and fire hazards. Cover shall be applied as follows:

(a) Daily Cover. A compacted layer of at least six inches of material shall be used to cover all exposed solid waste at the end of each working day. Surfaces that will not receive an additional depth of refuse or final cover within 60 days shall receive an interim compacted layer of cover of at least one (1) foot.

(b) All daily and interim cover depths shall be maintained until the landfill is closed.

(6) The area of the landfill being actively worked as well as the entire site shall be graded as frequently as necessary to prevent erosion or washing of the fill, to drain rain water from the fill and to prevent standing water. No surface water shall drain to the fill area.

Adopted: March 13, 1975

Approved as to form and legality:

Perry R. White, Jr., General Counsel
Kentucky Department for Natural Resources and Environmental Protection

Effective: 12:00 Noon 3/11/75