Kansas Administrative Regulations

Department of Health and Environment

Article 29.—Solid Waste Management—Part 7. Municipal Solid Waste Landfills.

28-29-102. Location restrictions.

(a) Airport safety.

(1) Each owner or operator of a new MSWLF unit and existing MSWLF unit which is located within 10,000 feet (3,048 meters) of any airport runway end used by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway end used by only piston-type aircraft, shall demonstrate to the department that the unit is designed and operated so that the unit does not pose a bird hazard to aircraft.

(2) Each owner or operator proposing to site a new unit within a five-mile radius of any airport runway end used by turbojet or piston-type aircraft shall notify the affected airport and the federal aviation administration (FAA).

(3) The owner or operator shall place a copy of the demonstration in the operating record.

(4) For purposes of this subsection:

(A) "Airport" means public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

(B) "Bird hazard" means an increase in the likelihood of bird and aircraft collisions that may cause damage to the aircraft or injury to its occupants.

(b) Floodplains.

(1) Owners or operators of new MSWLF units and existing MSWLF units located in 100-year floodplains must demonstrate to the department that the unit will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment.

(2) The owner or operator shall place a copy of the demonstration in the operating record.

(3) For purposes of this subsection:

(A) "Floodplain" means the lowland and relatively flat areas adjoining inland waters, including flood-prone areas that are inundated by the 100-year flood.

(B) "100-year flood" means a flood that has a 1% or greater chance of recurring in any given year or a flood of a magnitude equalled or exceeded once in 100 years on the average over a significantly long period.

(C) "Washout" means the carrying away of solid waste by waters of the base flood.

(c) Wetlands.

(1) New MSWLF units shall not be located in wetlands, unless the owner or operator demonstrates to the department that:

(A) there is no practicable alternative to the proposed MSWLF that does not also involve wetlands;

(B) the construction and operation of the unit will not:

(i) cause or contribute to violations of any applicable Kansas water quality standard;

(ii) violate any applicable toxic effluent standard or prohibition under section 307 of the clean water act, 33 U.S.C. 1317;

(iii) jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the endangered species act of 1973; and

(iv) violate any requirement under the marine protection, research, and sanctuaries act of 1972 for the protection of a marine sanctuary;

(C) the unit will not cause or contribute to significant degradation of wetlands. The owner or operator shall demonstrate the integrity of the unit and its ability to protect ecological resources by addressing the following factors:

(i) erosion, stability, and migration potential of native wetland soils, muds and deposits used to support the unit;

(ii) erosion, stability, and migration potential of dredged and fill materials used to support the unit;

(iii) the volume and chemical nature of the waste managed in the unit;

(iv) impacts on fish, wildlife, and other aquatic resources and their habitat from release of the solid waste;

(v) the potential effects of catastrophic release of waste to the wetland and the resulting impacts on the environment; and

(vi) any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected;

(D) steps have been taken to attempt to achieve no net loss of wetlands, as defined by acreage and function, by first avoiding impacts to wetlands to the maximum extent practicable, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions, including restoration of existing degraded wetlands or creation of man-made wetlands; and

(E) sufficient information is available to make a reasonable determination with respect to these demonstrations.

(2) The owner or operator shall place a copy of the demonstration in the operating record.

(3) For purposes of this subsection, "wetlands" means those areas that meet the definition provided in the "Corps of Engineers Wetlands Delineation Manual - Technical Report Y-87-1," as published January, 1987 by the Department of the Army Waterways Experiment Station, Corps of Engineers.

(d) Fault areas.

(1) New MSWLF units shall not be located within 60 meters (200 feet) of a fault that has had displacement in holocene time unless the owner or operator demonstrates to the department that an alternative setback distance of less than 60 meters (200 feet) will prevent damage to the structural integrity of the unit and will be protective of human health and the environment.

(2) The owner or operator shall place a copy of the demonstration in the operating record.

(3) For the purposes of this subsection:

(A) "Fault" means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

(B) "Displacement" means the relative movement of any two sides of a fault measured in any direction.

(C) "Holocene" means the most recent epoch of the quaternary period, extending from the end of the pleistocene epoch to the present.

(e) Seismic impact zones.

(1) New MSWLF units shall not be located in seismic impact zones, unless the owner or operator demonstrates to the department that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.

(2) The owner or operator shall place a copy of the demonstration in the operating record.

(3) For the purpose of this subsection the following definitions shall apply:

(A) "Seismic impact zone" means an area with a 10% or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10g in 250 years.

(B) "Maximum horizontal acceleration in lithified earth material" means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90% or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

(C) "Lithified earth material" means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term shall not include human-made materials, including fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.

(f) Unstable areas.

(1) Owners or operators of new MSWLF units and existing units located in an unstable area shall demonstrate to the department that engineering measures have been incorporated into the unit's design to ensure that the integrity of the structural components of the MSWLF unit will not be disrupted. The owner or operator shall consider the following factors, at a minimum, when determining whether an area is unstable:

(A) on-site or local soil conditions that may result in significant differential settling;

(B) on-site or local geologic or geomorphologic features; and

(C) on-site or local human-made features or events both surface and subsurface.

(2) The owner or operator shall place a copy of the demonstration in the operating record.

(3) For purposes of this subsection:

(A) "Unstable area" means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the MSWLF structural components responsible for preventing releases from a landfill. Unstable areas may include poor foundation conditions, areas susceptible to mass movements, and karst terranes.

(B) "Structural components" means liners, leachate collection systems, final covers, run-on systems, run-off systems, and any other component used in the construction and operation of the MSWLF that is necessary for protection of human health and the environment.

(C) "Poor foundation conditions" means those areas where features exist which indicate that a natural or human-induced event may result in inadequate foundation support for the structural components of an MSWLF unit.

(D) "Areas susceptible to mass movement" means those areas of influence including areas characterized as having an active or substantial possibility of mass movement, where the movement of earth material at, beneath, or adjacent to the MSWLF unit, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement may include:

(i) landslides;

(ii) avalanches;

(iii) debris slides and flows;

(iv) soil fluction;

(v) block sliding; and

(vi) rock fall.

(E) "Karst terranes" means areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terranes may include:

(i) sinkholes;

(ii) sinking streams;

(iii) caves;

(iv) large springs; and

(v) blind valleys.

(g) Closure of existing MSWLF units.

(1) Existing units that cannot make the demonstration pertaining to airports, floodplains, or unstable areas, shall close by October 9, 1996, in accordance with K.A.R. 28-29-121 and conduct post-closure activities in accordance with K.A.R. 28-29-121.

(2) The deadline for closure required by subsection (g)(1) may be extended up to two years if the owner or operator demonstrates to the department that there is no:

(A) available alternative disposal capacity; and

(B) immediate threat to human health and the environment.

(h) Kansas historic preservation act. Each new MSWLF unit shall be located so as not to pose a threat of harm or destruction to the essential features of an irreplaceable historic or archaeological site that is listed pursuant to the Kansas historic preservation act, K.S.A. 75-2716 and 75-2724.

(i) Endangered species conservation act. Each new MSWLF unit shall be located so as not to:

(1) jeopardize the continued existence of any designated endangered species;

(2) result in the destruction or adverse modification of the critical habitat listed for such species; or

(3) cause or contribute to the taking of any endangered or threatened species of plant, fish or wildlife listed pursuant to the endangered species act 16 U.S.C. 1531, *et seq.,* or Kansas non-game and endangered species conservation act, K.S.A. 32-957, *et seq.* and K.S.A. 32-1009, *et seq*.

(j) Buffer zones.

(1) No part of a newly permitted MSWLF unit shall be located closer than 152 meters (500 feet) from an occupied dwelling, school, or hospital that was occupied on the date when the owner or operator first applied for a permit to develop the unit or the facility containing the unit, unless the owner of such dwelling, school, or hospital consents in writing.

(2) All newly permitted MSWLF units shall maintain a minimum 46 meters (150 feet) buffer from the edge of the planned MSWLF unit to the owner's or operator's property line.

(3) The owner or operator may petition the director for a reduction in the buffer zone distances, provided the county commission of the county in which the landfill is located approves the request.

(k) Navigable streams.

(1) A new MSWLF unit shall not be located within one-half mile of a navigable stream used for interstate commerce.

(2) For purposes of this subsection, "navigable stream" means any water defined as navigable water of the United States under 33 CFR Part 329 as in effect on July 1, 1993.

(3) The provisions of this subsection shall not apply to:

(A) lateral expansion onto land contiguous to a permitted MSWLF in operation on July 1, 1991; or

(B) renewal of an existing permit for a permitted MSWLF on July 1, 1991.

(l) Public drinking water supplies.

(1) No new MSWLF shall be located within one mile of a surface water intake source for a public water supply system.

(2) For purposes of this subsection:

(A) "Surface water" means any water defined under K.A.R. 28-15-11.

(B) "Public water supply system" means any system defined under K.A.R. 28-15-11. (Authorized by K.S.A. 1993 Supp. 65-3406; implementing K.S.A. 65-3401; effective Oct. 24, 1994.)

***** Authenticated Kansas Administrative Regulation *****