Kansas Administrative Regulations

Department of Health and Environment

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

28-29-108. Operating standards.

(a) Excluding the receipt of hazardous waste. Owners or operators of all MSWLF units shall implement a program at the facility for detecting and preventing the disposal of regulated hazardous wastes as defined pursuant to K.A.R. 28-31-3 and K.A.R. 28-31-4, and polychlorinated biphenyls (PCB) wastes as defined in 40 CFR part 761, as in effect on July 1, 1996. This program shall include the following, at a minimum:

(1) random inspections of incoming loads, unless the owner or operator takes other steps to ensure that incoming loads do not contain regulated hazardous wastes or PCB wastes;

(2) records of any inspections;

(3) training of facility personnel to recognize regulated hazardous waste and PCB wastes; and

(4) notification of the department if a regulated hazardous waste or PCB waste is discovered at the facility.

(b) Daily cover.

(1) A uniform layer of at least 0.15 meter (six inches) of soil material shall be placed on all exposed waste at the end of each day of operation.

(2) Alternative materials or procedures, including the removal of daily cover before additional waste placement, may be used, if the alternative materials or procedures achieve performance equivalent to the requirements of paragraph (b)(1) in the following areas:

(A) prevention of blowing debris;

(B) minimization of access to the waste by vectors;

(C) minimization of the threat of fires at the open face;

(D) minimization of odors; and

(E) shedding precipitation.

(3) Each owner or operator wishing to use alternative materials for daily cover shall obtain approval from the department before application.

(c) Intermediate cover.

(1) All waste that is not to be covered within 60 days of placement by another lift of waste or final cover in accordance with K.A.R. 28-29-121 shall have a cover consisting of 0.30 meter (one foot) of compacted soil material. In addition, any MSWLF unit that will not receive any waste for an entire growing season shall be seeded.

(2) All areas with intermediate cover shall be graded so as to facilitate drainage of runoff and minimize infiltration and standing water.

(3) The grade and thickness of intermediate cover shall be maintained until the placement of additional wastes or the final cover. All cracks, rills, gullies, and depressions shall be repaired to prevent access to the solid waste by vectors, to minimize infiltration and to prevent standing water.

(d) Disease vector control.

(1) Each owner or operator of a MSWLF unit shall prevent or control on-site populations of disease vectors using techniques appropriate for the protection of human health and the environment.

(2) For purposes of this subsection, "disease vectors" means any rodents, flies, mosquitoes, or other animals, including insects, capable of transmitting disease.

(e) MSWLF gas monitoring.

(1) Each owner or operator of a MSWLF unit that receives putrescible waste or industrial wastes that have the potential to generate explosive gases shall establish and conduct an explosive gases monitoring program to ensure that dangerous levels of explosive gases do not occur within facility structures or at the surface or subsurface facility boundary.

(2) The monitoring program shall ensure that these conditions are met:

(A) the concentration of methane gas generated by the facility does not exceed 25% of the lower explosive limit for methane in facility structures, excluding gas control or recovery system components;

(B) the concentration of methane gas does not exceed the lower explosive limit for methane at the facility property boundary; and

(C) potential gas migration pathways are identified.

(3) The minimum monitoring frequency for explosive gases shall be quarterly and shall be based on the following factors:

(A) soil conditions;

(B) the hydrogeologic conditions surrounding the facility;

(C) the hydraulic conditions surrounding the facility; and

(D) the location of facility structures and property boundaries.

(4) If methane gas levels exceeding the limits specified in paragraph (e)(2) are detected, the owner or operator shall perform all of the following:

(A) immediately assess the potential danger posed to human health and the environment and take all necessary steps to ensure protection of human health;

(B) within seven days of detecting a gas level exceeding the limit, notify the department and place in the operating record the methane gas levels detected and a description of the steps taken to protect human health;

(C) within 60 days of detecting a gas level exceeding the limit, develop and submit to the department a remediation plan, which provides for the installation of an active or passive gas management system; and

(D) upon approval of the department, implement the remediation plan.

(f) MSWLF gas management standards.

(1) Standards for gas venting systems.

(A) All materials used in gas venting systems shall be resistant to chemical reaction with the constituents of the gas.

(B) The gas venting system shall be capable of venting all gas down to the water table or bottom of the liner, whichever is higher.

(C) Gas venting systems shall be installed only outside the perimeter of the unit, unless it can be shown that gas venting inside the perimeter of the unit will not interfere with the liner, leachate collection system, cover, or monitoring equipment.

(2) Standards for gas collection systems.

(A) Gas collection systems may be installed either within the perimeter of the unit or outside the unit.

(B) The owner or operator shall design and operate gas collection systems so that the standards of paragraph (e)(2) are met.

(C) Gas collection systems shall transport gas to a central point or points for processing for beneficial uses or disposal, in accordance with the requirements of subsection (g) of this regulation.

(D) Gas collection systems shall be designed to function for the entire design period. The design may include changes in the system to accommodate changing gas flow rates or compositions.

(E) All materials and equipment used in the construction of gas collection systems shall be rated by the manufacturer as safe for use in hazardous or explosive environments and shall be resistant to corrosion by constituents of the MSWLF gas.

(F) Gas collection systems shall be designed and constructed to withstand all MSWLF operating conditions, including settlement.

(G) Gas collection systems and all associated equipment including compressors, flares, monitoring installations, and manholes shall be considered part of the facility.

(H) Provisions shall be made for collecting and draining gas condensate to the leachate management system or another management system approved by the department.

(I) A gas collection system shall not compromise the integrity of the liner or of the leachate collection or cover systems.

(J) The portion of each gas collection system used to convey the gas collected from one or more units for processing and disposal shall be tested to be airtight to prevent the leaking of gas from, or entry of air into, the collection system.

(K) The gas collection system shall be operated until the waste has stabilized enough to no longer produce methane in quantities that exceed the minimum allowable concentrations set out in paragraph (e)(2) of this regulation.

(L) Each gas collection system shall be equipped with a mechanical device, capable of withdrawing gas, or shall be designed so that a mechanical devi ce can be easily

installed at a later time, if necessary, to meet the allowable concentrations set out in paragraph (e)(2).

(g) MSWLF gas processing and disposal system.

(1) Each MSWLF with a permanent gas collection system shall evaluate the feasibility of processing of MSWLF gas for use.

(2) The following MSWLF gas processing devices and disposal systems shall remain under the control of the owner or operator and shall be considered part of the facility:

(A) compressors;

(B) blowers;

(C) raw gas monitoring systems;

(D) devices used to control the flow of gas from the unit;

(E) flares;

(F) gas treatment devices; and

(G) air pollution control devices and monitoring equipment.

(3) All gas discharges and gas processing and disposal systems shall conform with all local, state, and federal air quality requirements.

(h) Air criteria.

(1) Open burning shall be prohibited, except in accordance with K.A.R. 28-19-47.

(2) Methane, non-methane organic compounds, and other regulated emissions shall conform with all local, state, and federal air quality requirements.

(i) Boundary control.

(1) Access to the open face area of the unit and all other areas within the boundaries of the facility shall be restricted at all times to prevent unauthorized entry.

(2) A permanent sign shall be posted at the entrance to the facility stating that disposal of hazardous waste is prohibited and that, unless the waste is a predetermined class of special waste as set forth in K.A.R. 28-29-109(d) and approved for disposal by the MSWLF, special wastes shall be accompanied by a disposal authorization issued by the department. The sign shall also include the following information:

(A) solid waste disposal area permit number;

(B) hours of operation;

(C) penalty for unauthorized trespassing and dumping;

(D) name and telephone number of the appropriate emergency response agencies who shall be available to deal with emergencies and other problems, if different from the owner or operator; and

(E) name, address, and telephone number of the company operating the facility.

(j) Surface water drainage.

(1) Each owner or operator of a MSWLF unit shall design, construct, and maintain the following:

(A) a run-on control system to prevent flow onto the active portion of the MSWLF during the peak discharge from a 24-hour, 25-year storm; and

(B) a runoff control system from the active portion of the MSWLF to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(2) Each surface water control structure shall be operated until the final cover is placed and erosional stability is provided by the vegetative or other cover.

(3) Diversion of runoff from undisturbed areas.

(A) Runoff from undisturbed areas shall be diverted around disturbed areas, unless the owner or operator shows that it is impractical based on site-specific conditions.

(B) Diversion facilities shall be designed to prevent runoff from the 25-year, 24-hour precipitation event from entering disturbed areas.

(C) Runoff from undisturbed areas that becomes commingled with runoff from disturbed areas shall be handled as runoff from disturbed areas and managed in accordance with paragraph (j)(1)(B) above.

(4) The facility shall not cause the discharge of a nonpoint source of pollution to waters of the United States, including wetlands, that violates any requirement of an area-wide or statewide water quality management plan that has been approved under 33 U.S.C. sections 1288 or 1329.

(5) The facility shall not cause a discharge of pollutants into waters of the United States, including wetlands, that violates any requirements of 33 U.S.C. 1251, et seq., 1994 edition.

(k) Liquids restrictions.

(1) Bulk or noncontainerized liquid waste shall not be placed in MSWLF units unless either of these conditions is met:

(A) the waste is residential waste other than septic waste; or

(B) the waste is leachate or gas condensate derived from the MSWLF unit, and the MSWLF unit, whether it is a new or existing unit, is designed with a liner and leachate collection system as described in K.A.R. 28-29-103(e), or K.A.R. 28-29-104(e)(1)(A) or (B).

(2) Containers holding liquid waste shall not be placed in a MSWLF unit unless any of these conditions is met:

(A) the container is a small container similar in size to that normally found in residential waste;

(B) the container is designed to hold liquids for use other than storage; or

(C) the waste is residential waste.

(3) For purposes of this subsection, these provisions shall apply:

(A) "liquid waste" means any waste material that is determined to contain "free liquids" as defined by method 9095A, revision 1, paint filter liquids test, as described in "test methods for evaluating solid waste, physical/chemical methods," EPA Pub. No. SW-846, dated December, 1996; and

(B) "gas condensate" means the liquid generated as a result of gas collection and recovery process or processes at the MSWLF unit.

(l) Survey controls.

(1) The boundaries of all waste disposal units, property boundaries, disturbed areas, and the permit area for facilities subject to this part shall be surveyed and marked by a professional land surveyor. All stakes shall be clearly marked, inspected annually, and replaced if missing or damaged.

(2) Control monuments shall be established to check vertical elevations. The control monuments shall be established and maintained by a professional land surveyor.

(m) Compaction.

(1) All wastes shall be deposited in the smallest practical area and shall occur at the lowest part of the active face. Wastes may be deposited at locations other than the lowest part of the active face, if site conditions do not allow deposition of wastes at the lowest part of the active face, or if locations other than the lowest part of the active face are in the approved facility operational plan.

(2) All wastes shall be compacted to the highest achievable density necessary to minimize void space and settlement, unless precluded by extreme weather conditions.

(n) Phasing of operations.

(1) Waste shall be placed in a manner and at such a rate that mass stability is provided during all phases of operation. Mass stability shall mean that the mass of the waste deposited will not undergo settling or slope failure that interrupts operations at the facility or causes damage to any of the various MSWLF operations or structures, including the liner, leachate or drainage collection system, gas collection system, or monitoring system.

(2) The phasing of operations at the facility shall be designed in such a way as to allow the sequential construction, filling, and closure of discrete units or parts of units.

(3) The owner or operator shall design and sequence the waste placement operation in each discrete unit or parts of units to allow the wastes to be built up to each unit's planned final grade as quickly as possible.

(o) Size and slope of working face.

(1) The working face of the unit shall be no larger than is necessary, based on the terrain and equipment used in waste placement, to conduct operations in a safe and efficient manner.

(2) The slopes of the working face area shall be no steeper than 2:1, horizontal:vertical, unless the waste is stable at steeper slopes.

(p) Salvaging.

(1) Salvaging operations shall not cause any of the following:

(A) interfere with the operation of the waste disposal facility;

(B) result in a violation of any standard in this regulation; or

(C) delay the construction or interfere in the operation of any of the following:

(i) the liner;

(ii) leachate collection system;

(iii) daily, intermediate, or final cover; or

(iv) any monitoring devices.

(2) All salvaging operations shall be confined to an area remote from the working face of the MSWLF and be performed in a safe and sanitary manner in compliance with the requirements of this subsection.

(3) Salvageable materials may be accumulated on-site by a MSWLF owner or operator, if they are managed in a manner that will not create a nuisance, harbor vectors, cause offensive odors, or create an unsightly appearance.

(4) Scavenging at MSWLFs shall be prohibited.

(q) Recordkeeping.

(1) The owner or operator of a MSWLF unit shall record and retain on-site for a period of five years, in an operating record, the following information as it becomes available:

(A) location restriction demonstrations required under K.A.R. 28-29-102 of this part;

(B) inspection records, training procedures, and notification procedures required under K.A.R. 28-29-108(a);

(C) gas monitoring results from monitoring and any remediation plans required by K.A.R. 28-29-108(e);

(D) MSWLF unit design documentation for placement of leachate or gas condensate in a MSWLF unit as required under K.A.R. 28-29-108(k);

(E) demonstrations, certifications, findings, monitoring, testing, or analytical data required by K.A.R. 28-29-111 through K.A.R. 28-29-114;

(F) closure and post-closure care plans and any monitoring, testing, or analytical data as required by K.A.R. 28-29-121 and K.A.R. 28-29-122;

(G) cost estimates and financial assurance documentation required by K.S.A. 1996 Supp. 65-3407(h), as amended by L. 1997, Ch. 140, Sec. 4;

(H) demonstrations for the small landfill exemption as required by K.A.R. 28-29-103;

(I) demonstrations that the liner meets the liner standards as required in K.A.R. 28-29-104 (e)(1)(A) or (B); and

(J) a copy of the current facility permit, including all approved plans and specifications.

(2) All information contained in the operating record shall be furnished upon request to the department or made available at any reasonable times for inspection by the department.

(r) Other operating standards.

(1) In order to achieve and maintain compliance with the requirements of these regulations, adequate equipment shall be available for use at the facility during all hours of operation.

(2) All utilities, including heat, lights, power and communications equipment, and sanitary facilities, necessary for operation in compliance with the requirements of this regulation shall be available at the facility at all times.

(3) The owner or operator shall maintain and operate all systems and related appurtenances and structures in a manner that facilitates proper operations in compliance with this regulation.

(4) The owner or operator shall implement methods for controlling dust to minimize wind dispersal of particulate matter.

(5) The facility shall be designed, constructed, and maintained to minimize the level of equipment noise audible outside the facility.

(6) The owner or operator shall make arrangements for fire protection services when a fire protection district or other public fire protection service is available. When such a service is not available, the owner or operator shall institute alternate fire protection measures.

(7) The owner or operator shall patrol the facility to check for litter accumulation and take all necessary steps to minimize blowing litter, including the use of screens. All litter shall be collected and placed in the fill or in a secure, covered container for later disposal.

(8) The owner or operator shall implement a plan for litter control for all vehicles on the permitted facility site.

(9) An operational safety program shall be provided for employees at each MSWLF facility.

(10) MSWLF access roads shall be of all-weather construction and shall be negotiable at all times by trucks and other vehicles.

(11) Access to MSWLFs shall be limited to hours when an attendant or operating personnel are at the site.

(12) The owner or operator of each MSWLF shall maintain a log of commercial or industrial solid wastes received, including sludges, barreled wastes, and special wastes.

(A) The log shall indicate the source and quantity of waste and the disposal location.

(B) The areas used for disposal of these wastes and other large quantities of bulk wastes shall be clearly shown on a site map and referenced to the boundaries of the tract or other permanent markings.

(13) Sludges, industrial solid wastes, or special wastes shall not be disposed in a MSWLF until the department has been notified and has issued a disposal authorization including specific arrangements for handling of the wastes.

(s) Operating flexibility.

(1) The operator of any unit that has been granted a small landfill exemption under K.A.R. 28-29-103 may request from the director approval for alternatives to the following operating requirements:

(A) daily cover;

(B) MSWLF gas monitoring; and

(C) record keeping.

(2) Each alternate requirement approved by the director shall meet the following requirements:

(A) consider the unique characteristics of small communities;

(B) take into account climatic and hydrogeologic conditions; and

(C) be protective of human health and the environment.

(Authorized by K.S.A. 1996 Supp. 65-3406, as amended by L. 1997, Ch. 139, Sec. 1; implementing K.S.A. 65-3401, as amended by L. 1997, Ch. 140, Sec. 1; effective Oct. 24, 1994; amended July 10, 1998.)

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