

7045.0630 SURFACE IMPOUNDMENTS.

Subpart 1. **Scope.** This part applies to owners and operators of facilities that use surface impoundments to treat, store, or dispose of hazardous waste, except as part 7045.0552 provides otherwise.

Subp. 1a. **Design and operating requirements.** Design and operating requirements are as follows:

A. The owner or operator of each new surface impoundment unit on which construction commences after January 29, 1992, each lateral expansion of a surface impoundment unit on which construction commences after July 29, 1992, and each replacement of an existing surface impoundment unit that is to commence reuse after July 29, 1992, must install two or more liners and a leachate collection and removal system between such liners, and operate the leachate collection and removal system, in accordance with part 7045.0532, subpart 3, item C, unless exempted under part 7045.0532, subpart 3, item J or K. "Construction commences" and "existing facility" are defined in part 7045.0020.

B. The owner or operator of each unit referred to in item A must notify the commissioner at least 60 days before receiving waste. The owner or operator of each facility submitting notice must file a Part B application within six months of the commissioner's receipt of the notice.

Subp. 2. **General operating requirements.**

A. A surface impoundment must maintain enough freeboard to prevent any overtopping of the dike by overfilling, wave action or a storm. There must be at least 60 centimeters (two feet) of freeboard. Any point source discharge from a surface impoundment to waters of the United States is subject to the requirements of the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1342, as amended. Spills may be subject to the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1312, as amended.

B. Surface impoundments that are newly subject to RCRA section 3005(j)(1) due to the promulgation of additional listings or characteristics for the identification of hazardous waste must be in compliance with subpart 1a not later than 48 months after the promulgation of the additional listing or characteristic. This compliance period shall not be cut short as the result of the promulgation of land disposal prohibitions under Code of Federal Regulations, title 40, part 268, as amended, or the granting of an extension to the effective date of a prohibition pursuant to Code of Federal Regulations, title 40, section 268.5, as incorporated in part 7045.1390, within this 48-month period.

Subp. 2a. Action leakage rate.

A. The owner or operator of surface impoundment units subject to subpart 1a, item A, must submit a proposed action leakage rate to the commissioner when submitting the notice required under subpart 1a, item B. Within 60 days of receipt of the notification, the commissioner will establish an action leakage rate, either as proposed by the owner or operator or modified using the criteria in this subpart, or extend the review period for up to 30 days. If no action is taken by the commissioner before the original 60-day or extended 90-day review periods, the action leakage rate will be approved as proposed by the owner or operator.

B. The commissioner shall approve an action leakage rate for surface impoundment units subject to subpart 1a, item A. The action leakage rate is the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding one foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the leak detection system, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the leak detection system, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

C. To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly or monthly flow rate from the monitoring data obtained under subpart 5, item B, to an average daily flow rate (gallons per acre per day) for each sump. Unless the commissioner approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period, and if the unit closes in accordance with subpart 6, item C, monthly during the postclosure care period when monthly monitoring is required under subpart 5, item B.

Subp. 2b. Response actions.

A. The owner or operator of surface impoundment units subject to subpart 1a, item A, must submit a response action plan to the commissioner when submitting the proposed action leakage rate under subpart 2a. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in item B.

B. If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:

(1) notify the commissioner in writing of the exceedence within seven days of the determination;

(2) submit a preliminary written assessment to the commissioner within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

(3) determine to the extent practicable the location, size, and cause of any leak;

(4) determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

(5) determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and

(6) within 30 days after the notification that the action leakage rate has been exceeded, submit to the commissioner the results of the analyses specified in subitems (3) to (5), the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the commissioner a report summarizing the results of any remedial actions taken and actions planned.

C. To make the leak and/or remediation determinations in item B, subitems (3) to (5), the owner or operator must:

(1) (a) assess the source of liquids and amounts of liquids by source;

(b) conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

(c) assess the seriousness of any leaks in terms of potential for escaping into the environment; or

(2) document why such assessments are not needed.

Subp. 3. **Containment system.** All earthen dikes must have a protective cover, such as grass, shale, or rock, to minimize wind and water erosion and to preserve their structural integrity.

Subp. 4. **Waste analysis and trial tests.** In addition to the waste analyses required by part 7045.0564, whenever a surface impoundment is to be used to chemically treat a hazardous waste which is substantially different from waste previously treated in that impoundment or to chemically treat hazardous waste with a substantially different process than any previously used in that impoundment, the owner or operator shall, before treating the different waste or using the different process, conduct waste analyses and trial treatment tests to show that this treatment will comply with part 7045.0562, subpart 2. In the alternative, the owner or operator may obtain written, documented information on similar

treatment of similar waste under similar operating conditions to show that this treatment will comply with part 7045.0562, subpart 2. As required by part 7045.0564, the waste analysis plan must include analyses needed to comply with subparts 7 and 8. As required by part 7045.0584, the owner or operator shall place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility.

Subp. 5. Monitoring and inspection.

A. The owner or operator shall inspect:

(1) the freeboard level at least once each operating day to ensure compliance with subpart 2; and

(2) the surface impoundment, including dikes and vegetation surrounding the dike, at least once a week to detect any leaks, deterioration, or failures in the impoundment. As required by part 7045.0556, subpart 5, the owner or operator shall remedy any deterioration or malfunction found.

B. The owner or operator shall determine leaks as follows:

(1) An owner or operator required to have a leak detection system under subpart 1a, item A, must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

(2) After the final cover is installed, the amount of liquids removed from each leak detection system sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semiannually. If at any time during the postclosure care period the pump operating level is exceeded at units on quarterly or semiannual recording schedules, the owner or operator must return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

(3) "Pump operating level" is a liquid level proposed by the owner or operator and approved by the commissioner based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump. The timing for submission and approval of the proposed pump operating level will be in accordance with subpart 2a, item A.

Subp. 6. Closure and postclosure care. The requirements of closure and postclosure care are as follows:

A. At closure, the owner or operator may elect to remove from the impoundment or decontaminate any standing liquids, waste and waste residues, contaminated containment

system components including liners, if any, underlying and surrounding contaminated soil, and structures and equipment contaminated with waste and leachate.

B. If the owner or operator removes or decontaminates all the impoundment materials described in item A, the impoundment is not further subject to the requirements of parts 7045.0552 to 7045.0649. At closure and throughout the operating period, unless the owner or operator can demonstrate that any waste removed from the surface impoundment is not a hazardous waste, he or she becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of parts 7045.0205 to 7045.0397 and 7045.0552 to 7045.0649.

C. If the owner or operator does not remove or decontaminate all the impoundment materials described in item A, he or she shall close the impoundment and provide postclosure care as for a landfill under parts 7045.0594 to 7045.0606 and 7045.0638, subpart 4, including the following:

- (1) eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues;

- (2) stabilize remaining wastes to a bearing capacity sufficient to support the final cover; and

- (3) cover the surface impoundment with a final cover designed and constructed to provide long term minimization of the migration of liquids through the closed impoundment, function with minimum maintenance, promote drainage and minimize erosion or abrasion of the cover, accommodate settling and subsidence so that the cover's integrity is maintained, and have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

D. In addition to the requirements of parts 7045.0594 to 7045.0606 and 7045.0638, subpart 4, during the postclosure care period, the owner or operator of a surface impoundment in which wastes, waste residues, or contaminated materials remain after closure in accordance with item C shall:

- (1) maintain the integrity and effectiveness of the final cover, including making repairs to the cover as necessary to correct the effects of settling, subsidence, erosion, or other events;

- (2) maintain and monitor the leak detection system in accordance with subpart 5, item B, and comply with all other applicable leak detection system requirements;

- (3) maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of part 7045.0590; and

- (4) prevent run-on and runoff from eroding or otherwise damaging the final cover.

The closure requirements under part 7045.0638, subpart 4, will vary with the amount and nature of the residues remaining, if any, and the degree of contamination of the underlying and surrounding soil. The commissioner may vary postclosure requirements, according to part 7045.0602, subpart 1.

Subp. 7. **Special requirements for ignitable or reactive wastes.** Ignitable or reactive waste must not be placed in a surface impoundment unless the waste and the impoundment satisfy all applicable requirements of part 7045.1390, and:

A. the waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under parts 7045.0131, subpart 2 or 5; and 7045.0562, subpart 2 is followed; or

B. the surface impoundment is used solely for emergencies.

Subp. 8. **Special requirements for incompatible wastes.** Incompatible waste, or incompatible wastes and materials, must not be placed in the same surface impoundment unless part 7045.0562, subpart 2, is followed. For examples of potentially incompatible wastes, or incompatible waste and materials, see part 7045.0643, subpart 1, item D.

Subp. 9. **Air emission standards.** The owner or operator must manage all hazardous waste placed in a surface impoundment in accordance with parts 7045.0645 and 7045.0648.

Statutory Authority: *MS s 116.07; 116.37*

History: *9 SR 115; L 1987 c 186 s 15; 13 SR 577; 15 SR 1877; 16 SR 2239; 18 SR 1886; 20 SR 715; 33 SR 2042*

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