

MEMORANDUM

TO:

REE's, Deputy REE's, Division of Hazardous Waste Staff, Division of Water Pollution Control Staff

FROM:

William F. Cass, Director, DHW [Signed]
Thomas McMahon, Director, DWPC [Signed]

DATE: March 31, 1983

SUBJECT: Policy on the Design and Operation of Sludge Landfills

Background

The Department's Sludge Disposal Policy of July 15, 1980, has classified non-hazardous sludge or sludge ash from wastewater treatment plants as "sewage" if landfilled on a site owned by a wastewater treatment facility with a valid NPDES or groundwater discharge permit. The design and operation of such a sludge-only landfill is therefore exempt from regulation under G.L. Chapter 111, Section 150A. Instead, sludge-only landfills on sites owned or controlled by treatment works with permitted wastewater discharges are subject only to the Massachusetts Clean Waters Act (G.L. Chapter 21, Sections 26-53) and G.L. Chapter 83, Section 7, which authorizes DEQE to order a sewage treatment plant to improve its works or operation in order to prevent or abate water pollution.

Such sludge-only disposal facilities are not subject to the site assignment requirements of Chapter 111, Section 150A. However, the public hearing on the land taking for a publicly owned wastewater treatment facility (as held by the Department pursuant to Chapter 83, Section 6) provides a forum comparable to a site assignment hearing. The Division of Water Pollution Control has adopted a policy which delineates the procedure for board of health participation through the Construction Grants process and the Chapter 83, Section 6 hearing.

The Division of Hazardous Waste and the Division of Water Pollution Control recognize that sludge-only landfills present environmental threats similar to those posed by sanitary landfills. To reduce the possibility of groundwater, surface water, and air quality degradation, sludge-only landfills should be designed and operated according to standards applicable to sanitary landfills. Such conformance is required for publicly owned treatment works (POTWs) on the federal level by 40 CFR 257 (Criteria for the Classification of Solid Waste Disposal Facilities), promulgated by EPA jointly under the Resource Conservation and Recovery Act (RCRA) and the Clean Water Act. The criteria prescribe performance standards for disposal facilities which address eight broad categories of environmental and public health effects. In addition, at the state level,

G.L. Chapter 21, Section 43 prohibits the discharge of pollutants to ground or surface waters without a valid permit; thus, unless a sludge disposal facility is permitted to discharge pollutants, it should be designed to control and collect leachate.

Solid waste landfills are regulated by the Department under the authority of Chapter 111, Section 150A. The current sanitary landfill regulations are being revised to conform to the RCRA criteria and to reflect present state-of-the-art. During this interim period, the Department is requiring new sanitary landfill design and operational plans to embody RCRA concepts. Similar standards should apply to sludge-only landfills on sites owned by wastewater treatment facilities in order ensure consistent environmental protection and to achieve compliance with the federal and state laws described above.

Policy

The design and operation of sludge landfills on sites owned by municipal or private wastewater treatment facilities shall conform to the RCRA standards of 40 CFR Part 257. In particular, sludge landfills shall:

1. Not cause or exacerbate flooding or surface water contamination if located within the 100 year floodplain;
2. Not cause or contribute to the taking of any endangered species;
3. Not contaminate surface waters or discharge pollutants to surface waters without a valid NPDES permit;
4. Not discharge pollutants to groundwaters without a valid subsurface discharge permit;
5. Comply with the EPA solid waste facility safety standards of 40 CFR Part 257.3-8, and;
6. Cover sludge on a daily basis with soil or other suitable cover material, unless the Department has specified in writing an alternate frequency of covering based on sludge odor and pathogen potential, or other considerations.

For the purpose of this policy, existing unlined sludge-only landfills shall be regarded as in compliance with the RCRA groundwater protection standard and the state Clean Waters Act if the sludge disposal operation is not contaminating groundwater beyond the “solid waste boundary” as defined in 40 CFR Part 257. The Department may require any existing sludge disposal operation to implement a groundwater monitoring program to determine compliance with this criterion.

The requisite frequency of cover application shall be determined by the Department on a case-by-case basis. Factors to be considered should include sludge composition/characteristics, disposal site design, disposal site location, and cover material.

The Department, when approving plans for new sludge-only landfills on sites owned by wastewater treatment works, shall require compliance with the RCRA criteria of 40 CFR Part 257. To ensure compliance with the RCRA groundwater protection standard and Section 43 of Chapter 21, new sludge landfills shall be artificially lined with natural or synthetic materials, and any leachate generated shall be collected and treated. Groundwater monitoring shall also be required by the Department if there is a hydrogeologic relationship between the disposal site and an important groundwater or surface water resource.

Implementation

Sludge landfill operations proposed as part of wastewater facility plans shall be reviewed by the appropriate regional solid/hazardous waste and water pollution control staff. A mechanism for such review is provided through the construction grants process which requires that the Regional Engineer of jurisdiction review and approve plans for a sludge landfill prior to the Division of Water Pollution Control's Step 3 Construction Grant offer for a sludge-only landfill. Sludge landfills proposed as part of a private wastewater treatment facility plans undergo a comparable review procedure.

As such, plans for the disposal of sludge on sites owned by public or private wastewater treatment works shall not be approved by the Department until regional staff have reviewed the disposal plans for consistency with this policy, and the Regional Engineer has approved the plans accordingly.

All operating sludge-only landfills subject to this policy shall be inspected for compliance with the RCRA standards as well as any plan approval or discharge permit conditions. Inspections shall be conducted by solid/hazardous waste staff or water pollution control staff cross-trained for such purpose.

Applicability

This policy is applicable to all non-hazardous sludge-only disposal facilities located on property owned or controlled by a permitted wastewater treatment plant. The disposal of waste materials other than the residues from a wastewater treatment process on a site owned or controlled by a treatment facility owner shall be subject to Chapter 111, Section 150A and 310 CMR 19.00 (the Department's sanitary landfill regulations). This policy is also not applicable to the land disposal of sludges or residues subject to regulation pursuant to 310 CMR 30.000 (the Department's Hazardous Waste Management Regulations).

Effective Date

This policy is effective immediately. Any revisions to this policy will be so labeled. Any questions on the interpretation or implementation of this policy may be referred to Ron Lyberger or Glenn Gilmore.