

Legislative Analysis



LANDFILL RESEARCH, DEVELOPMENT, AND DEMONSTRATION PROJECTS

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House Bill 5148 (Substitute H-2)
Sponsor: Rep. Phil Pavlov

House Bill 5149 (Substitute H-4)
Sponsor: Rep. Daniel Acciavatti
Committee: Natural Resources, Great Lakes, Land Use, and Environment

First Analysis (10-5-05)

BRIEF SUMMARY: House Bill 5148 would allow for the establishment of landfill research, development, and demonstration projects (RDDPs). House Bill 5149 would revise the definition of “receiving facility” under Part 117 of the Natural Resources and Environmental Protection Act.

FISCAL IMPACT: Neither bill would have a fiscal impact on the state or local governmental units.

THE APPARENT PROBLEM:

Last year, the U.S. Environmental Protection Agency issued final regulations (40 CFR 258.4) permitting states to issue research, development, and demonstration (RD&D) permits for municipal solid waste landfills. The regulations permit states to allow variances from certain requirements related to the operation of municipal solid waste landfills (including restrictions on the types of liquids that may be placed in a landfill) for landfills utilizing new or innovative methods in the disposal of solid waste. One type of allowable project is the construction of a bioreactor landfill, which is a type of landfill where air or liquid (such as septage waste) is injected into the waste mass to accelerate or enhance degradation and biostabilization. Currently, there is an effort underway to construct a bioreactor landfill at the Smiths Creek landfill in St. Clair County. Local officials have noted that population increases (and corresponding development) expected in the coming years will result in generation of more solid and septage waste in the area. This has the potential to strain the capacity of area landfills, and it raises environmental, public health, and quality of life concerns, as the proper disposal of solid and septage waste becomes increasingly difficult. Bioreactor landfills have the potential to address these twin issues of waste management and it has been suggested that the state issue research, development, and demonstration permits pursuant to federal regulations.

THE CONTENT OF THE BILLS:

House Bill 5148 would add a new section to Part 115 (Solid Waste Management) of the Natural Resources and Environmental Protection Act allowing for the establishment of landfill research, development, and demonstration projects (RDDPs). This would permit

the establishment of an RDDP for a bioreactor landfill. House Bill 5149 would amend Part 117 (Septage Waste Servicers) to include an RDDP as a facility authorized to receive septage waste and to exclude an RDDP from certain license and permitting requirements.

House Bill 5148

The bill would amend Part 115 (Solid Waste Management) to allow for the establishment of landfill research, development, and demonstration projects (RDDPs) for new or existing Type II landfill units or for a lateral expansion of a Type II landfill unit, under a construction permit issued by the Department of Environmental Quality under Part 115 of NREPA. An RDDP would generally be subject to the same requirements related to permitting, operation, closure, post-closure, financial assurance, and fees as other Type II landfills or landfill units under Part 115 and related administrative rules.

Application and Permit

An application for a RDDP construction permit would have to include the following information, in addition to information required for other Type II landfill construction applications: (1) a description of the RDDP goals; (2) details of the design, construction, and operation of the RDDP; (3) information on the types of wastes being disposed of, excluded, or added, including the types and amounts of liquid added; (4) information on the types of compliance and operational monitoring that will be performed; and (5) methods of addressing potential nuisance conditions.

If an RDDP is intended to accelerate or enhance biostabilization of solid waste, the application would also include the following: (1) an evaluation of the potential for decreased slope stability; (2) an operations management plan; (3) parameters used by the DEQ to determine when it will authorize postclosure of the RDDP; and (4) information to ensure that the operational requirements are being met.

Once a RDDP construction permit is issued, it would expire three years later, although the DEQ could grant an extension for up to three more years (up to 12 years total), if it receives an application requesting an extension within 90 days before the original expiration date and the RDDP operator provides the DEQ with an assessment of the RDDP and other information. If the DEQ does not make a decision on whether to grant an extension within 90 days after receiving an administratively complete application, the permit would be extended for three years.

Operation

The bill would require an RDDP to meet the following operational requirements:

- Ensure that added liquids are evenly distributed and side slope breakout of liquids is prevented.

- Ensure that daily cover practices or disposal of low permeability solid wastes does not adversely affect the free movement of liquids and gases within the waste mass.
- Include the following:
 - A method of monitoring moisture content and temperature within the waste mass.
 - A secondary liner and leachate collection system to monitor effectiveness of the primary liner.
 - A leachate collection system of adequate size for the anticipated increased liquid production rates.
 - A method of monitoring the depth of leachate on the liner.
 - An integrated active gas collection system of adequate size for the anticipated methane production rates and to control odors.

If the goals of the RDDP are not being met, the director of the DEQ could order the termination of all or a part of the operations of the RDDP or could order other corrective measures. Additionally, the director of the DEQ could authorize the conversion of an RDDP to a full-scale operation if the owner or operator demonstrates that the goals of the RDDP have been met and the authorization would not be considered a less stringent permitting requirement than what is required under Subtitle D of the federal Solid Waste Disposal Act. The postclosure period for a RDDP begins when the RDDP reaches a condition similar to that of other landfills prior to postclosure. The parameters of postclosure would have to be specified in the permit, and the perpetual care fund would be maintained after the final closure of the landfill.

MCL 324.11511b

House Bill 5149

Part 117 (Septage Waste Servicers) of the Natural Resources and Environmental Protection Act regulates the disposal of septage waste. The bill would add that a receiving facility that is designed to receive septage waste would include an RDDP authorized under HB 5148.

In addition, the bill would add that the septage waste servicing license and septage waste vehicle license requirements under Part 117 would not apply to a publicly owned receiving facility (an RDDP) subject to a permit issued under HB 5148. Also, a construction permit for a receiving facility would not be required for an RDDP permitted under HB 5148.

MCL 324.11701

BACKGROUND INFORMATION:

For further information on the EPA's RD&D rule see the text of the rule at 40 CFR 285.4 (http://a257.g.akamaitech.net/7/257/2422/12feb20041500/edocket.access.gpo.gov/cfr_20

04/julqtr/pdf/40cfr258.4.pdf), and the notice of final promulgation (<http://a257.g.akamaitech.net/7/257/2422/14mar20010800/edocket.access.gpo.gov/2004/pdf/04-6310.pdf>) included in the Federal Register (Vol. 69, No. 55, March 22, 2004).

ARGUMENTS:

For:

Traditional landfills are generally designed to limit the entry of water into the landfill, as a way to minimize the potential for groundwater contamination stemming from the seepage of landfill leachate. This process, often known as the “dry tomb” approach, slows the biodegradation process. However, emerging research has shown that the addition of air or liquids, such as septage waste, into the landfill has the potential to accelerate or enhance degradation and lower the post-closure period compared to the traditional dry tomb approach. Research has also shown that bioreactor landfills can increase capacity by 15 to 30 percent by increasing the density of the waste itself. This allows for a quicker return to productive use and might allow for the creation of “perpetual landfills.” Landfills have a finite capacity, and the available space for constructing new or expanded landfills is rather limited in developing communities. Other potential benefits include the reduced leachate disposal costs, lower waste toxicity and mobility, and increased gas production (which can be used as a source of energy).

In addition, for many quickly developing communities, the construction of a bioreactor landfill has the benefit of providing an alternative, environmentally sound method for disposing septage waste. The construction of on-site septic waste systems is an essential component in some residential areas, as connection to the municipal sewer system is not always feasible. Often, septage waste is disposed of under Part 117 of NREPA by means of land application. This, however, has serious environmental and public health concerns, including the contamination of surface and ground water.

For:

Aside from bioreactor landfills, the bill would encourage the development of other innovative methods of disposing of municipal solid waste. These demonstration projects may ultimately lead to alternative approaches that improve air and water quality.

POSITIONS:

The Department of Environmental Quality supports the bills. (9-29-05)

The Michigan Townships Association supports the bills. (9-29-05)

The Michigan Association of Counties supports the bills. (9-29-05)

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■ This analysis was prepared by nonpartisan House staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.