



Senate Fiscal Agency
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BILL ANALYSIS



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Senate Bills 1195 and 1196 (as introduced 11-8-18)
Sponsor: Senator Rebekah Warren (S.B. 1195)
Senator Tom Casperson (S.B. 1196)
Committee: Natural Resources

Date Completed: 11-26-18

CONTENT

Senate Bill 1196 would amend Part 111 (Hazardous Waste Management) of the Natural Resources and Environmental Protection Act to do the following:

- Prohibit a person from delivering to a landfill for disposal technologically enhanced naturally occurring radioactive materials (TENORM) with certain concentrations of specified radionuclides.
- Prohibit the owner or operator of a landfill from permitting a delivery of TENORM for disposal at the landfill unless the generator provided the owner or operator with certain information.
- Provide requirements for a request for the renewal of or a major modification to an operating license involving disposal of TENORM that exceeded certain thresholds.
- Require the operator of the landfill to conduct a monitoring program if TENORM were disposed at the landfill.

Senate Bill 1195 would add Section 11109 to the Natural Resources and Environmental Protection Act to do the following:

- Require the owner or operator of a landfill to pay to the Department of Environmental Quality (DEQ) a \$5 per ton fee assessed on TENORM disposed of in the landfill.
- Require the landfill owner or operator to forward to the Department the fee revenue with a completed form that was provided or approved by the DEQ.
- Create the TENORM Account in the Environmental Pollution Prevention Fund.
- Require the Department to forward fees on TENORM disposals to the State Treasurer for deposit in the TENORM Account.
- Require money in the TENORM Account to be spent only for purposes specified in the bill.

The bills are tie-barred, and each bill would take effect 90 days after enactment.

Senate Bill 1196**Prohibit Delivery, Disposal of TENORM, Generally**

Except as otherwise provided, the bill would prohibit a person from delivering to a landfill in the State for disposal and the owner or operator of a landfill could not permit disposal in the landfill of TENORM with any of the following:

- A concentration of radium-226 more than 50 picocuries per gram.
- A concentration of radium-228 more than 50 picocuries per gram.
- A concentration of lead-210 more than 260 picocuries per gram.

"Technologically enhanced naturally occurring radioactive material" or "TENORM" would mean naturally occurring radioactive material whose radionuclide concentrations have been increased as a result of human practices. The term would not include any of the following:

- Source material, as defined in the Atomic Energy Act, and its progeny in equilibrium.
- Material with concentrations of radium-226, radium-228, and lead-210 each less than five picocuries per gram.

Required Information

Except as otherwise specified in the landfill operating license, the owner or operator of a landfill could not permit a delivery of TENORM for disposal at the landfill unless the generator had provided the following information in writing to the owner or operator of the landfill:

- The concentrations of radium-226, radium-228, lead-210, and any other radionuclide identified using gamma spectroscopy, or an equivalent analytical method, in the TENORM based on techniques for representative sampling and waste characterization approved by the Department.
- An estimate of the total mass of the TENORM.
- An estimate of the total radium-226 activity, the total radium-228 activity, and the total lead-210 activity of the TENORM.
- The proposed date of delivery.

The owner or operator of a landfill would have to submit to the DEQ by March 15 each year a report that summarized the information obtained from the generator for all TENORM disposed at the landfill during the previous calendar year.

The Department could test TENORM proposed to be delivered to a landfill.

Disposal of TENORM Exceeding Certain Limits

If requested by the landfill owner or operator in an application for the renewal of or a major modification to an operating license, the Department could authorize, with conditions and limits in the operating license, the disposal of TENORM with concentrations of radium-226 more than 50 picocuries per gram, radium-228 more than 50 picocuries per gram, or lead-210 more than 260 picocuries per gram, or any combination of these radionuclides. A disposal could not have more than 500 picocuries per gram for each radionuclide. An operating license with such an authorization would constitute a license from the State's radiation control authority under Part 135 (Radiation Control) of the Public Health Code, if the conditions and procedures for issuance of the operating license under the bill were sufficient to satisfy the licensing requirements of the Code.

A request for the renewal of or a major modification to an operating license for elevated-activity TENORM would have to include all of the following:

- A description of any steps necessary to ensure the annual dose to members of the public during landfill operation and after site closure would be less than 25 millirem.
- A description of an environmental monitoring program.

The request would have to include a report evaluating the risks of exposure to residual radioactivity through all relevant pathways using a generally accepted industry model such

as the Argonne National Laboratory RESRAD family of codes or, if approved by the Department, another model. The report would have to evaluate potential radiation doses to site workers and members of the public during site operation and after site closure. The report would have to use reasonable scenarios to evaluate the dose to members of the public.

A request for the renewal of or a major modification to an operating license also would have to include a radiation safety program that addressed all of the following: a) personnel radiation protection, b) worker training, c) radiation surveys, d) radiation instrument calibration, e) receipt and disposal of radioactive material, f) emergency procedures, and g) record keeping.

Monitoring Program

If TENORM were disposed at a landfill, the operator of the landfill would have to conduct a monitoring program that complied with all of the following:

- Radiological monitoring of site workers and at the landfill property boundary would have to be conducted as specified in the license.
- Radium-226, radium-228, and lead-210 were included among the parameters analyzed in leachate and groundwater at the frequency specified in the license.
- Penetrating radiation, radioactivity in air, and radon in air would have to be measured as specified in the operating license if the landfill were used to dispose of TENORM with a concentration of radium-226 more than 50 picocuries per gram, radium-228 more than 50 picocuries per gram, or lead-210 more than 260 picocuries per gram.
- Results of all monitoring required under the bill would have to be included in the environmental monitoring reports required under rules promulgated under the bill and the facility operating license.

Report to DEQ

The owner or operator of a landfill would have to submit to the DEQ by March 15 each year a report that summarized the information provided by the generator to the owner or operator for all TENORM disposed at the landfill during the previous calendar year. The owner or operator of a landfill also would have to do both of the following: a) ensure that all TENORM was deposited at least 10 feet below the bottom of the future landfill cap; and b) maintain records of the location and elevation of TENORM disposed of at the landfill.

Senate Bill 1195

TENORM Disposal Fee

The bill would require the owner or operator of a landfill to pay to the DEQ a fee assessed TENORM disposed of in the landfill. The fee would be \$5 per ton, based on the quantity of TENORM specified on the monthly operating report, and would have to be paid within 30 days after the end of each calendar year quarter. The fee for fractional tons of TENORM would have to be proportional.

The Department would have to take enforcement action to collect fees that were not paid as required by the bill.

Under the bill, the landfill owner or operator would have to forward to the DEQ the fee revenue due with a completed form that was provided or approved by the Department. The owner or operator would have to certify that all information provided in the form was accurate. The form would have to specify the volume of TENORM disposed of at the landfill during the

preceding calendar quarter and the amount of fee revenue being forwarded to the Department.

The Department would have to maintain information regarding the fees collected for TENORM disposal.

TENORM Account

The bill would create the TENORM Account within the Environmental Pollution Prevention Fund. The Department would have to forward fees collected for TENORM disposal to the State Treasurer for deposit into the Account. The State Treasurer could receive money or other assets from any other source for deposit into the Account. The State Treasurer also would have to direct the investment of the Account, and would have to credit to it interest and earnings from Account investments. Money remaining in the Account at the close of the fiscal year would not lapse to the General Fund.

Money from the TENORM Account would have to be spent, upon appropriation, only for one or more of the following purposes:

- To pay refunds to generators.
- To fund the Department's regulation and oversight of the disposal of TENORM in the State.
- To provide grants to local units of government and landfill operators to obtain equipment to monitor TENORM radiation.

Proposed MCL 324.11109 (S.B. 1195)
MCL 324.11104 et al. (S.B. 1196)

Legislative Analyst: Nathan Leaman

FISCAL IMPACT

Senate Bills 1195 & 1196

The bills would have an indeterminate fiscal impact on the Department of Environmental Quality (DEQ). The bills would create new restrictions on the disposal of technologically enhanced naturally occurring radioactive material (TENORM) and would offset at least some portion of the cost of those restrictions with a disposal fee of \$5 per ton on TENORM disposed of in Michigan landfills. It is unknown how much of this waste would be disposed of, so any shortfall in revenue relative to regulatory costs would be borne by existing DEQ resources, most likely the Solid Waste Management Fund. The Solid Waste Management Fund is primarily funded by a 12 cents per cubic yard surcharge on normal landfill waste, and is the primary fund source for the regulation of landfills in Michigan. In total, the Fund receives about \$5.5 million per year. The bills would have no fiscal impact on the State and could have a negative fiscal impact on local government. To the extent that changes in the bills led to increased misdemeanor arrests and prosecutions, they could increase resource demands on law enforcement, court systems, and jails. Any increased penal fine revenue would be dedicated to public libraries.

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This analysis was prepared by nonpartisan Senate staff for use by the Senate in its deliberations and does not constitute an official statement of legislative intent.