

# HOUSE BILL NO. 5923

September 11, 2024, Introduced by Rep. Miller and referred to the Committee on Natural Resources, Environment, Tourism and Outdoor Recreation.

A bill to amend 1994 PA 451, entitled "Natural resources and environmental protection act," by amending sections 11109, 11132, and 11514b (MCL 324.11109, 324.11132, and 324.11514b), section 11109 as added by 2018 PA 689, section 11132 as added by 2018 PA 688, and section 11514b as amended by 2022 PA 245.

**THE PEOPLE OF THE STATE OF MICHIGAN ENACT:**

**1**           Sec. 11109. (1) The owner or operator of a landfill shall pay  
**2** to the department a fee assessed on TENORM disposed of in the  
**3** landfill **before the effective date of the amendatory act that added**

1 **sections 11132(4)(a) to (d)**. The fee is \$5.00 per ton, based on the  
2 quantity of TENORM specified on the monthly operating report. The  
3 fee for fractional tons of TENORM shall be proportional. The fee  
4 shall be paid within 30 days after the end of each calendar year  
5 quarter.

6 (2) The department shall take enforcement action to collect  
7 fees that are not paid as required by this section.

8 (3) The landfill owner or operator shall forward to the  
9 department the fee revenue due under this section with a completed  
10 form that is provided or approved by the department. The owner or  
11 operator shall certify that all information provided in the form is  
12 accurate. The form shall specify the volume of TENORM disposed of  
13 at the landfill during the preceding calendar quarter and the  
14 amount of fee revenue being forwarded to the department.

15 (4) The department shall maintain information regarding the  
16 fees collected under this section.

17 (5) The TENORM account is created within the environmental  
18 pollution prevention fund created in section 11130. The department  
19 shall forward fees collected under this section to the state  
20 treasurer for deposit in the TENORM account. The state treasurer  
21 may receive money or other assets from any other source for deposit  
22 into the account. The state treasurer shall direct the investment  
23 of the account. The state treasurer shall credit to the account  
24 interest and earnings from account investments. Money remaining in  
25 the account at the close of the fiscal year shall not lapse to the  
26 general fund.

27 (6) Money from the TENORM account shall be expended, upon  
28 appropriation, only for 1 or more of the following purposes:

29 (a) To pay refunds to generators under this section.

1 (b) To fund the department's ~~regulation and oversight of the~~  
2 ~~disposal of TENORM~~ **previously disposed of** in this state **and the**  
3 **prohibition on the disposal of TENORM in section 11132.**

4 (c) To provide grants to local units of government and  
5 landfill operators to obtain equipment to monitor TENORM radiation.

6 Sec. 11132. (1) Except as otherwise provided in this section,  
7 a person shall not deliver to a landfill in this state for disposal  
8 and the owner or operator of a landfill shall not permit disposal  
9 in the landfill of TENORM. ~~with any of the following:~~

10 ~~(a) A concentration of radium-226 more than 50 picocuries per~~  
11 ~~gram.~~

12 ~~(b) A concentration of radium-228 more than 50 picocuries per~~  
13 ~~gram.~~

14 ~~(c) A concentration of lead-210 more than 260 picocuries per~~  
15 ~~gram.~~

16 ~~(2) Except as otherwise specified in the landfill operating~~  
17 ~~license, the owner or operator of a landfill shall not permit a~~  
18 ~~delivery of TENORM for disposal at the landfill unless the~~  
19 ~~generator has provided the following information in writing to the~~  
20 ~~owner or operator of the landfill:~~

21 ~~(a) The concentrations of radium-226, radium-228, lead-210,~~  
22 ~~and any other radionuclide identified using gamma spectroscopy, or~~  
23 ~~an equivalent analytical method, in the TENORM based on techniques~~  
24 ~~for representative sampling and waste characterization approved by~~  
25 ~~the department.~~

26 ~~(b) An estimate of the total mass of the TENORM.~~

27 ~~(c) An estimate of the total radium-226 activity, the total~~  
28 ~~radium-228 activity, and the total lead-210 activity of the TENORM.~~

29 ~~(d) The proposed date of delivery.~~

1 ~~(3) The department may test TENORM proposed to be delivered to~~  
2 ~~a landfill.~~

3 ~~(2) (4) If requested by the owner or operator of a landfill in~~  
4 ~~an application for the renewal of or a major modification to an~~  
5 ~~operating license, If the department may authorize with conditions~~  
6 ~~and limits authorized in the an operating license the disposal of~~  
7 ~~TENORM with concentrations of radium-226 more than 50 picocuries~~  
8 ~~per gram, radium-228 more than 50 picocuries per gram, or lead-210~~  
9 ~~more than 260 picocuries per gram, or any combination thereof, but~~  
10 ~~not more than 500 picocuries per gram for each radionuclide, An~~  
11 ~~the operating license under this part with such an authorization~~  
12 ~~constitutes a license from the state's radiation control authority~~  
13 ~~under part 135 of the public health code, 1978 PA 368, MCL~~  
14 ~~333.13501 to 333.13537, to possess the TENORM, but not to acquire~~  
15 ~~additional TENORM after the effective date of the amendatory act~~  
16 ~~that added subsections (4) (a) to (d). This subsection applies only~~  
17 ~~if the conditions and procedures for issuance of the operating~~  
18 ~~license under this part are were sufficient to satisfy the~~  
19 ~~licensing requirements of part 135 of the public health code, 1978~~  
20 ~~PA 368, MCL 333.13501 to 333.13537.~~

21 ~~(5) A request under subsection (4) shall include all of the~~  
22 ~~following:~~

23 ~~(a) A radiation safety program that addresses all of the~~  
24 ~~following:~~

25 ~~(i) Personnel radiation protection.~~

26 ~~(ii) Worker training.~~

27 ~~(iii) Radiation surveys.~~

28 ~~(iv) Radiation instrument calibration.~~

29 ~~(v) Receipt and disposal of radioactive material.~~

1       ~~(vi) Emergency procedures.~~

2       ~~(vii) Record keeping.~~

3       ~~(b) A report evaluating the risks of exposure to residual~~  
4 ~~radioactivity through all relevant pathways using a generally~~  
5 ~~accepted industry model such as the Argonne National Laboratory~~  
6 ~~RESRAD family of codes or, if approved by the department, another~~  
7 ~~model. The report shall evaluate potential radiation doses to site~~  
8 ~~workers and members of the public during site operation and after~~  
9 ~~site closure. The report shall use reasonable scenarios to evaluate~~  
10 ~~the dose to members of the public.~~

11       ~~(c) A description of any steps necessary to ensure the annual~~  
12 ~~dose to members of the public during landfill operation and after~~  
13 ~~site closure will be less than 25 millirem.~~

14       ~~(d) A description of an environmental monitoring program under~~  
15 ~~subsection (6).~~

16       **(3) (6)** ~~If TENORM is~~ **was** disposed at a landfill **before the**  
17 **effective date of the amendatory act that added subsections (4) (a)**  
18 **to (d)**, the operator of the landfill shall conduct a monitoring  
19 program that complies with all of the following:

20       (a) Radiological monitoring of site workers and at the  
21 landfill property boundary are conducted as specified in the  
22 license.

23       (b) Radium-226, radium-228, and lead-210 are included among  
24 the parameters analyzed in leachate and groundwater at the  
25 frequency specified in the license.

26       (c) Penetrating radiation, radioactivity in air, and radon in  
27 air are measured as specified in the operating license if the  
28 landfill ~~is~~ **was** used to dispose of TENORM with a concentration of  
29 radium-226 more than 50 picocuries per gram, radium-228 more than

1 50 picocuries per gram, or lead-210 more than 260 picocuries per  
2 gram.

3 (d) Results of all monitoring required under this subsection  
4 are included in the environmental monitoring reports required under  
5 rules promulgated under this part and the facility operating  
6 license.

7 **(4)** ~~(7)~~—The owner or operator of a landfill shall submit to  
8 the department by March 15, ~~each year~~ **2025**, a report that  
9 summarizes the **following** information ~~obtained under subsection (2)~~  
10 for all TENORM disposed at the landfill during ~~the previous~~  
11 ~~calendar year~~ **2024**:

12 **(a) The concentrations of radium-226, radium-228, lead-210,**  
13 **and any other radionuclide identified using gamma spectroscopy, or**  
14 **an equivalent analytical method, in the TENORM based on techniques**  
15 **for representative sampling and waste characterization approved by**  
16 **the department.**

17 **(b) An estimate of the total mass of the TENORM.**

18 **(c) An estimate of the total radium-226 activity, the total**  
19 **radium-228 activity, and the total lead-210 activity of the TENORM.**

20 **(d) The dates of delivery.**

21 **(5)** ~~(8)~~—The owner or operator of a landfill shall ~~do both of~~  
22 ~~the following~~:

23 ~~(a) Ensure that all TENORM is deposited at least 10 feet below~~  
24 ~~the bottom of the future landfill cap.~~

25 ~~(b) Maintain~~ **maintain** records of the location and elevation of  
26 TENORM disposed of at the landfill **before the effective date of the**  
27 **amendatory act that added subsections (4) (a) to (d).**

28 Sec. 11514b. (1) A person shall not deliver to a type II  
29 landfill in this state for disposal and the owner or operator of a

1 type II landfill shall not permit disposal in the landfill of  
2 technologically enhanced naturally occurring radioactive material.  
3 ~~with any of the following:~~

4 ~~(a) A concentration of radium-226 more than 50 picocuries per~~  
5 ~~gram.~~

6 ~~(b) A concentration of radium-228 more than 50 picocuries per~~  
7 ~~gram.~~

8 ~~(c) A concentration of lead-210 more than 260 picocuries per~~  
9 ~~gram.~~

10 ~~(2) The owner or operator of a type II landfill shall not~~  
11 ~~permit a delivery of TENORM for disposal at the landfill unless the~~  
12 ~~generator has provided the following information in writing to the~~  
13 ~~owner or operator of the landfill:~~

14 ~~(a) The concentrations of radium-226, radium-228, lead-210,~~  
15 ~~and any other radionuclide identified using gamma spectroscopy, or~~  
16 ~~an equivalent analytical method, in the TENORM based on techniques~~  
17 ~~for representative sampling and waste characterization approved by~~  
18 ~~the department.~~

19 ~~(b) An estimate of the total mass of the TENORM.~~

20 ~~(c) An estimate of the total radium-226 activity, the total~~  
21 ~~radium-228 activity, and the total lead-210 activity of the TENORM.~~

22 ~~(d) The proposed date of delivery.~~

23 ~~(3) The department may test TENORM proposed to be delivered to~~  
24 ~~a landfill.~~

25 ~~(2) (4)~~ Within 45 days after the end of each state fiscal  
26 year, **years ending September 30, 2024 and September 30, 2025**, the  
27 owner or operator of a type II landfill shall submit to the  
28 department ~~an annual~~ a report that summarizes the ~~information~~  
29 ~~obtained under subsection (2)~~ **following** for all TENORM disposed at

1 the landfill during the previous state fiscal year:

2 (a) The concentrations of radium-226, radium-228, lead-210,  
3 and any other radionuclide identified using gamma spectroscopy, or  
4 an equivalent analytical method, in the TENORM based on techniques  
5 for representative sampling and waste characterization approved by  
6 the department.

7 (b) An estimate of the total mass of the TENORM.

8 (c) An estimate of the total radium-226 activity, the total  
9 radium-228 activity, and the total lead-210 activity of the TENORM.

10 (d) The proposed date of delivery.

11 (3) ~~(5)~~—The owner or operator of a type II landfill that  
12 disposes of TENORM with a concentration of radium-226 more than 25  
13 picocuries per gram, a concentration of radium-228 more than 25  
14 picocuries per gram, or a concentration of lead-210 more than 25  
15 picocuries per gram shall do all of the following:

16 (a) Ensure that all TENORM is deposited at least 10 feet below  
17 the bottom of the future landfill cap.

18 (b) Maintain records of the location and elevation of TENORM  
19 disposed of at the landfill.

20 (c) Conduct a monitoring program that complies with all of the  
21 following:

22 (i) Radiological monitoring of site workers and at the landfill  
23 property boundary are conducted as specified in the license.

24 (ii) Radium-226, radium-228, and lead-210 are included among  
25 the parameters analyzed in leachate and groundwater at the  
26 frequency specified in the license.

27 (iii) Results of all monitoring required under this subsection  
28 are included in the environmental monitoring reports required under  
29 rules promulgated under this part and the facility operating



1 license.

2       **(4)** ~~(6)~~—As used in this section, "technologically enhanced  
3 naturally occurring radioactive material" or "TENORM" means  
4 naturally occurring radioactive material whose radionuclide  
5 concentrations have been increased as a result of human practices.  
6 TENORM does not include any of the following:

7       (a) Source material, as defined in section 11 of the atomic  
8 energy act of 1954, 42 USC 2014, and its progeny in equilibrium.

9       (b) Material with concentrations of radium-226, radium-228,  
10 and lead-210 each less than 5 picocuries per gram.