

Department of Legislative Services
Maryland General Assembly
2025 Session

FISCAL AND POLICY NOTE
Enrolled - Revised

Senate Bill 253

(Chair, Education, Energy, and the Environment
Committee)(By Request - Departmental - Commerce)

Education, Energy, and the Environment

Environment and Transportation

**Controlled Hazardous Substance Facility Permit - Research Facilities - Chemical
Warfare Material Requirements**

This departmental bill authorizes the Maryland Department of the Environment (MDE) to issue a research, development, and demonstration (RDD) permit and establishes requirements for such permits. Subject to the RDD permit provisions, the bill exempts the incineration of chemical warfare materials at a “research facility” from specified State controlled hazardous substances (CHS) statutory and regulatory requirements related to the incineration of chemical warfare materials if the incineration is done for research, development, or demonstration purposes. The bill further specifies that nothing under §§ 7-239.2 through 7-239.5 of the Environment Article (which include the exemptions and the RDD permit provisions established by the bill) limits MDE’s authority to apply regulations adopted under Subtitle 2 of Title 7 of the Environment Article, which governs CHS, to a chemical warfare material that is a CHS. **The bill takes effect July 1, 2025.**

Fiscal Summary

State Effect: State finances are not anticipated to be materially affected. MDE can implement the bill with existing budgeted resources.

Local Effect: The bill is not expected to directly affect local governmental operations or finances.

Small Business Effect: The Department of Commerce has determined that this bill has minimal or no impact on small business (attached). The Department of Legislative Services concurs with this assessment. (The attached assessment does not reflect amendments to the bill.)

Analysis

Bill Summary/Current Law:

Definitions and Findings Regarding Chemical Warfare Materials

Under current law and the bill, “chemical warfare material” is any one of nine listed substances; the term includes any substance that has chemical warfare material as an active or principal ingredient or ingredients and degradation products of chemical warfare material. *Under the bill*, a “research facility” is defined as a facility designated by the U.S. Department of Defense for the research, development, and demonstration of technologies related to chemical warfare materials.

Under current law and the bill, statute establishes that the State of Maryland finds that chemical warfare materials were designed for warfare, specifically the destruction of human beings, and for no legitimate civilian industrial use. Thus, the State recognizes the need to dispose of these chemical warfare materials as safely as possible, ensuring the health and safety of State residents by the regulation of their release into the environment.

Incineration of Chemical Warfare Materials and Applicability of Controlled Hazardous Substance Standards

Under current law, statute further provides that since these chemical warfare materials are highly toxic or carcinogenic, in addition to any other applicable requirements at law, the State must require *without exemption or waiver* that an applicant for the treatment by incineration of chemical warfare materials shall comply with all statutory and regulatory requirements for CHS. *Under the bill*, the phrase “without exemption or waiver” is repealed, and instead, the provision specifies that an applicant for the treatment by incineration of chemical warfare materials must comply with all *applicable* statutory and regulatory requirements for CHS. *Under current law and the bill*, a chemical warfare material that is a solid waste is a CHS.

Under current law, in addition to the standard CHS requirements, there are additional requirements specific to the incineration of chemical warfare materials. More specifically, MDE may not issue a permit to construct, materially alter, or operate a CHS facility that will be used for the treatment of the incineration of a chemical warfare material unless the permit applicant can demonstrate to MDE’s satisfaction that the following requirements have been met:

- the proposed incinerator technology has consistently met all applicable federal and State performance standards in an operational and comparable facility for a period of time and under conditions acceptable to MDE;

- emissions and monitoring data from a comparable facility demonstrate compliance with State toxic air pollutant standards;
- a destruction and removal efficiency of at least 99.9999% is achievable for each chemical warfare material to be incinerated at the facility;
- the applicant has made plans to adequately fund the development of a plan to remove, shelter, and protect persons from the largest area at risk from a worst-case release, as defined by MDE;
- an emergency preparedness plan has been developed with adequate public participation and has been presented at public meetings in counties at risk from a worst-case release;
- MDE finds that the applicant has fully evaluated all reasonable alternative methods for treatment or disposal in order to create less risk of release or harm to the general public or the environment; and
- the local governing body of each jurisdiction included in the worst-case release has a reasonable opportunity to review and provide comment on the permit application and the emergency preparedness plan.

Under the bill, subject to the bill's RDD permit provisions, the incineration of chemical warfare materials at a research facility is exempt from these incineration-specific standards if the incineration is done for research, development, or demonstration purposes.

Under current law, statute establishes several permit restrictions that must be in place in order for MDE to issue a CHS facility permit for the incineration of a chemical warfare materials. More specifically, MDE must require, as a condition of operation of a CHS facility to be used for the incineration of a chemical warfare material, that (1) the incineration of chemical warfare material be monitored on a continuous basis; (2) monitoring data be reviewed by an MDE-selected qualified independent third party; and (3) both the data and reviews be reported to MDE in a manner and frequency determined by the department. Further, MDE may only issue a CHS facility permit for a specifically identified quantity of chemical warfare material. A permit may only be renewed or extended for good cause and to complete the incineration. However, a permit may not be modified as to the amount of CHS material to be destroyed. In addition to CHS facility permit fee, an applicant must pay for the independent third party with whom MDE is authorized to contract for the review of application materials and monitoring data.

Under the bill, subject to the bill's RDD permit provisions, the incineration of chemical warfare materials at a research facility is exempt from these requirements if the incineration is done for research, development, or demonstration purposes.

Under current law, after the chemical warfare materials are destroyed, the incinerator must be disassembled and disposed of in accordance with all applicable federal and State performance standards and in a time period established in the permit. *Under the bill*, subject

to the bill's RDD permit provisions, the incineration of chemical warfare materials at a research facility is exempt from this requirement if the incineration is done for research, development, or demonstration purposes.

Controlled Hazardous Substances Facility Permits

Under current law and the bill, Subtitle 2 of Title 7 of the Environment Article establishes the standards for CHS, which include requirements for facility permitting and transportation restrictions. Among other things, MDE has the general authority to issue, modify, or revoke permits to install, modify, or operate a disposal system or any part of a disposal system and to require proper maintenance and operation of a disposal system. CHS facility permit application fees are established in regulation and range from \$2,000 to \$10,000 per application. Regulations also establish the method by which permit fees are calculated.

Treatability Studies and Research, Development, and Demonstration Permits

The Code of Maryland Regulations (COMAR) defines a “treatability study” as a study in which a hazardous waste is subjected to a treatment process to determine whether the waste is amenable to the treatment process, what pretreatment, if any, is required, the optimal process conditions needed to achieve the desired treatment, the efficiency of a treatment process for a specific waste or wastes, or the characteristics and volumes of residuals from a particular treatment process. A person conducting a qualifying treatability study, and the laboratories or testing facilities that are conducting those treatability studies, are exempt from specified portions of State CHS regulations.

COMAR also authorizes the Secretary of the Environment to issue an RDD permit for any hazardous waste treatment facility that proposes to utilize an innovative and experimental hazardous waste treatment technology or process for which permit standards have not been adopted in COMAR 26.13.05, which establishes standards for owners and operators of hazardous waste treatment, storage, and disposal facilities. The RDD permit must include terms and conditions that assure protection of human health and the environment and other specified provisions.

Under the bill, MDE is authorized to issue an RDD permit for the incineration of chemical warfare materials at a research facility. The bill establishes numerous requirements relating to such permits, which are in addition to any general requirements for RDD permits, including general requirements related to public participation in the permitting process. Specifically, a permit issued pursuant to the bill must:

- limit the duration of the permit in accordance with MDE regulations;

- provide for the receipt and treatment by the research facility of only those types and quantities of chemical warfare materials that MDE considers necessary for purposes of determining the efficacy and performance capabilities of the incineration technology or process; and
- include requirements MDE considers necessary to protect human health and the environment, as specified.

Further, *under the bill*, MDE may *not* issue an RDD permit for the incineration of chemical warfare materials at a research facility unless the applicant demonstrates to MDE's satisfaction, prior to the issuance of the permit, that:

- the applicant has made adequate provisions to support and fund the development of a plan that demonstrates the capability of evacuating, sheltering, and protecting persons from the largest area at risk from a "maximum credible event" (*i.e.*, a hypothetical, worst-case explosion, fire, or toxic agent release that is realistically possible), as determined by MDE;
- an emergency preparedness plan has been developed that enumerates the training, coordination, and equipment necessary for State and local emergency response personnel and community members to respond to a release of a chemical warfare material from the research facility; and
- the emergency preparedness plan has been developed with adequate public participation and presented at public meetings in each county potentially impacted by a maximum credible event.

MDE also may not issue such a permit unless the local governing body of each county and municipality included in the maximum credible event has a reasonable opportunity to review and comment on the permit application and the emergency preparedness plan.

Under the bill, in developing permit requirements, MDE must (1) require continuous near-real time air emissions monitoring, as specified, and (2) consider the need for soil and water pollution monitoring.

Under the bill, MDE is authorized to order an immediate termination of all incineration operations at a research facility if MDE determines that termination is necessary to protect human health or the environment.

Under the bill, MDE must require a research facility that receives an RDD permit to (1) at least once annually, report to MDE on operations under the permit, as specified, and (2) at least once every two years, conduct and submit an assessment to MDE of incineration activities conducted under the permit on local ecosystems, public health, and air quality. Further, MDE must (1) review all reports and assessments submitted pursuant to the bill;

(2) make all such reports and assessments available on its website (to the extent doing so is consistent with specified provisions of the Public Information Act); and (3) submit all such reports and assessments to specified committees of the General Assembly. On the basis of a report or assessment submitted under the bill, MDE is authorized to modify or revoke an RDD permit.

Background: According to Commerce, the existing restrictions on the incineration of chemical warfare materials dates to 1993, when the U.S. Chemical Stockpile Elimination Program was planning the destruction of chemical weapon stockpiles stored in nine locations around the United States, including 1,818 mustard-filled ton containers at Aberdeen Proving Ground (APG). The language was written to ensure the Army had sufficient technical data and performed necessary emergency response planning with the local communities to facilitate the safe incineration of APG's stockpile. The Army instead decided in 1998 to use chemical neutralization in lieu of incineration to destroy APG's stockpile. This effort was completed in 2006.

APG-Edgewood Area is home to the U.S. Army Chemical Biological Center (CBC) and its Chemical, Biological, Radiological, Nuclear, and Explosives partners. The facility is a national asset for the research, development and demonstration of technologies to defend our nation against and combat chemical and biological warfare threats. CBC is evaluating at least four new thermal destruction technologies to support warfighters' requirements to destroy chemical and biological agents in tactical environments; Commerce indicates that these evaluations are at risk for delay due to the permitting requirements. The licensing process in current law essentially prohibits such activity, as it requires prospective permittees to supply extensive amounts of data that are not available for the novel technologies proposed.

Additional Information

Recent Prior Introductions: Similar legislation has not been introduced within the last three years.

Designated Cross File: HB 62 (Chair, Environment and Transportation Committee)(By Request - Departmental - Commerce) - Environment and Transportation.

Information Source(s): Department of Commerce; Anne Arundel, Cecil, and Frederick counties; Maryland Association of Counties; cities of Frederick and Havre de Grace; Maryland Municipal League; Maryland Department of the Environment; Department of Legislative Services

Fiscal Note History:
km/lgc

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ANALYSIS OF ECONOMIC IMPACT ON SMALL BUSINESSES

TITLE OF BILL: Controlled Hazardous Substance Facility Permit - Research Facilities
 - Chemical Warfare Material Requirements

BILL NUMBER: SB 253

PREPARED BY: Troy Wittek

PART A. ECONOMIC IMPACT RATING

This agency estimates that the proposed bill:

 X WILL HAVE MINIMAL OR NO ECONOMIC IMPACT ON MARYLAND
SMALL BUSINESS

OR

 WILL HAVE MEANINGFUL ECONOMIC IMPACT ON MARYLAND SMALL
BUSINESSES

PART B. ECONOMIC IMPACT ANALYSIS

The proposed bill would modify language in the Environmental Article to enable development, testing, and evaluation of chemical weapon treatment systems at Aberdeen Proving Ground's Edgewood Area. The current licensing process prohibits such activity, as it requires prospective permittees to supply extensive amounts of data that are not available for the novel technologies detailed in legislative proposal.

Allowing this type of R&D activity has important public health and national security implications. However, the proposed bill would have minimal or no impact on Maryland's small businesses. The extremely specific technologies and sensitive subject matter involved suggest that a very limited number of firms, let alone small enterprises, would be affected by the legislation.