December 15, 2025

Lee Zeldin, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

Re: Docket EPA–HQ–OPPT–2020–0549; FRL–7902.3–01–OCSPP
Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Data Reporting and Recordkeeping Under the Toxic Substances Control Act (TSCA); Revision to Regulation

Dear Administrator Zeldin:

On behalf of the hazardous materials management community and the Institute of Hazardous Materials Management, we submit these comments in response to EPA's proposed rule entitled *"Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Data Reporting and Recordkeeping Under the Toxic Substances Control Act (TSCA); Revision to Regulation,"* published November 13, 2025.

IHMM is an ANSI-accredited, ISO 17024-compliant credentialing body whose certificants, including Certified Hazardous Materials Managers (CHMM®) and Certified Hazardous Materials Practitioners (CHMP®), are responsible for environmental compliance, hazardous materials management, emissions monitoring, incident response, and operational safety across a wide range of regulated industries.

Founded in 1984, the Institute of Hazardous Materials Management® (IHMM®) is a not-for-profit organization headquartered in Rockville, Maryland, operating in all 50 states and 85 countries. IHMM has been protecting the environment and the public's health, safety, and security through the creation of credentials recognizing professionals who have demonstrated a high level of knowledge, expertise, and excellence in the management of hazardous materials, dangerous goods transportation, environmental protection, health, and workplace safety.

It is primarily through three of IHMM's professional credentials that we provide comments in this submission: the Certified Hazardous Materials Manager® [CHMM®] and the Certified Hazardous Materials Practitioner® [CHMP®].

IHMM certificants are responsible for the **identification, characterization, handling, storage, transport, disposal, and remediation** of hazardous materials across industrial, governmental, and community settings. As such, our certificants are directly affected by changes that influence PFAS lifecycle reporting, environmental data availability, and worker/public safety.

The CHMM and CHMP credentials are accredited by the ANSI National Accreditation Board [ANAB], under the international ISO/IEC 17024-2012 standard, containing principles and requirements for a body certifying persons against specific requirements, and includes the development and maintenance of a certification scheme for persons.

ANSI/ANAB accreditation of IHMM's credentials is the strongest and highest level of accreditation for professional credentials, serving as an indicator of the rigorous ANSI annual surveillance process. ANSI accreditation is recognized both nationally and internationally and has become the hallmark of a quality certification program.

The IHMM CHMM and CHMP certification programs are also accredited by the Council of Engineering & Scientific Specialty Boards (CESB). CESB is an independent, voluntary membership body for organizations that recognize, through specialty certification, the expertise of individuals practicing in engineering and related fields. Accreditation is earned by demonstrating adherence to CESB Accreditation Guidelines, including a robust review program of compliance with those standards.

The Proposed Rule

I. GENERAL POSITION

IHMM supports EPA's efforts to refine PFAS reporting obligations; however, IHMM has **concerns that several proposed exemptions may undermine EPA's ability to assess PFAS exposures, releases, and disposal pathways**, while also creating inconsistencies with established hazardous materials management principles.
Our comments focus on **technical, scientific, operational, health, and environmental management impacts** observed by CHMM and CHMP certificants in real-world practice.

II. TECHNICAL AND SCIENTIFIC CONCERNS

A. The 0.1% De Minimis Exemption May Omit Meaningful Exposure Pathways

PFAS are chemically persistent at extremely low concentrations. A uniform 0.1% de minimis threshold—derived from labeling conventions, not environmental behavior—may eliminate reporting of PFAS that nonetheless contribute to:

- bioaccumulation,
- drinking water contamination,
- soil persistence, and
- wastewater treatment pass-through.

CHMMs and CHMPs routinely observe PFAS environmental impacts at **parts per trillion** concentrations. A de minimis threshold several orders of magnitude above documented toxicological relevance risks, hindering environmental risk characterization.
IHMM recommends EPA reconsider whether a **uniform mass-percentage threshold** is scientifically appropriate for PFAS.

B. Exemption of PFAS in Imported Articles Will Limit Identification of Downstream Uses

EPA's proposal to exempt PFAS in imported articles assumes manufacturers lack information. While often true, IHMM certificants increasingly encounter PFAS-containing articles in:

- textiles
- firefighting gear
- electronics
- gaskets and seals
- automotive and aerospace components

These articles become **waste streams**, triggering hazardous waste management, worker exposure potential, and downstream releases through combustion, landfilling, or recycling.

Excluding article importers removes critical data regarding **PFAS entry points** into U.S. commerce, complicating accurate lifecycle reconstruction.
IHMM urges EPA to consider **limited or tiered reporting** for article categories where PFAS presence is well-documented.

C. Exemptions for Byproducts, Impurities, and Non-Isolated Intermediates May Obscure Environmental Releases

CHMMs and CHMPs frequently manage PFAS releases arising from:
• off-gassing,
• thermal degradation,
• polymerization byproducts, and
• trace residuals in mixtures.

While such PFAS may not have been intentionally manufactured, **environmental releases and worker exposures occur regardless of commercial purpose**. The exemption risks deprioritizing data necessary for:
• wastewater permitting,
• sludge management,
• site characterization, and
• environmental cleanup under RCRA and CERCLA.
IHMM recommends requiring at least **basic reporting of PFAS byproducts known to be environmentally mobile** or associated with known degradation pathways (e.g., fluorotelomer precursors).

D. Exempting PFAS Used for R&D May Ignore Historically Significant PFAS Development

CHMMs and CHMPs note that many PFAS now of concern began as decade-old R&D materials. Exempting all R&D PFAS—regardless of quantity—may obscure:
• abandoned pilot projects,
• historical laboratory waste,
• contaminated legacy disposal areas, and
• early-generation PFAS chemistries still found in groundwater.
IHMM suggests EPA require **limited identification** of R&D PFAS (e.g., chemical name, CASRN, date range of use) without requiring full datasets.

III. HEALTH AND SAFETY CONCERNS

A. Worker Exposure Assessment Is Dependent on Accurate PFAS Inventories

CHMM and CHMP certificants investigate PFAS exposures among workers in:

• plating shops
• semiconductor manufacturing
• textile treatment facilities
• landfill operations
• fire training sites

Incomplete PFAS reporting—especially regarding articles, intermediates, and byproducts—directly undermines worker exposure modeling, hazard communication (29 CFR 1910.1200), and respiratory protection protocols.
EPA's exemptions risk **inconsistent hazard communication**, contradicting OSHA's requirement for accurate chemical hazard identification.

B. Emergency Response and Environmental Monitoring Require Granular PFAS Data

During spill response, CHMM/CHMP professionals must quickly determine:
• PFAS identity
• mobility
• toxicity
• appropriate containment and cleanup methods

Lack of PFAS lifecycle data increases response time and risk of misclassification, especially for emerging PFAS not reflected in SDSs.
IHMM recommends retention of broader reporting to maintain environmental response readiness.

IV. ENVIRONMENTAL MANAGEMENT & WASTE DISPOSITION CONCERNS

A. Waste Profiling Requires Precise PFAS Identification

Many municipal solid waste, industrial sludges, and thermal residuals contain PFAS at levels influenced by manufacturing practices EPA now proposes to exempt. Waste profiling under RCRA, state regulations, and TSCA requires accurate PFAS data—particularly for:
• leachability
• incineration byproducts
• water treatment concentrate
• biosolids land application

Incomplete reporting will impair waste classification and environmental protection.

B. Exemptions May Undercut Future PFAS Rulemakings

EPA notes that PFAS data will inform future TSCA risk evaluations, RCRA listings, CERCLA hazardous substance designations, and CWA effluent guidelines. Limiting reporting now may delay or complicate these actions.
IHMM recommends EPA maintain reporting obligations that support **future scientific risk assessment** even where immediate regulatory need is not identified.

V. RECOMMENDATIONS

IHMM respectfully urges EPA to:

1. **Reassess the scientific appropriateness of the 0.1% de minimis threshold.**
2. **Adopt a targeted article-reporting approach**, focusing on known PFAS-containing categories.
3. **Require limited reporting for PFAS byproducts, impurities, intermediates, and R&D PFAS** where environmental release potential exists.
4. **Retain reporting necessary for worker protection**, emergency response, and site remediation.
5. **Develop guidance clarifying "known or reasonably ascertainable"** obligations for retrospective PFAS inquiries.

VI. CONCLUSION

IHMM supports burden reduction where feasible but emphasizes that PFAS present **distinct, persistent, and far-reaching environmental and health risks** that warrant robust data collection. CHMM and CHMP certificants rely on accurate PFAS lifecycle information to protect workers, communities, and the environment. We urge EPA to refine the rule to ensure critical data are not lost.
IHMM appreciates EPA's consideration of these comments and stands ready to assist with technical or scientific expertise from our certificants nationwide.

<u>IHMM Professional Credentials</u>

The **Certified Hazardous Materials Manager® (CHMM®)** is a professional who has demonstrated, through education, experience, and examination, the ability to identify and

assess the risks of hazardous materials, mitigate, or eliminate those risks, and manage their impact on human health and the environment. A CHMM provides proper controls for material handling, transportation, and security throughout the life cycle of hazardous materials, from design and production through storage, recycling, and ultimate disposal. They apply scientific knowledge, engineering technologies, and best management practices in compliance with U.S. regulatory requirements. We illustrate the hazardous materials compliance under 49 CFR and risk management knowledge, skills, and abilities of the CHMM by including the CHMM blueprint in **Attachment One**.

The CHMM is accredited by the Council on Engineering and Scientific Specialty Boards [CESB] and by the American National Standards Institute [ANSI]. The measure of the quality and strength of a certification program is to evaluate its accreditation status. Accreditation is a form of certification for the certifying organization, requiring conformance with strict standards of validity, reliability, and impartiality. A key feature of IHMM credentialing programs is that accreditation is essential because of the nature of work performed by IHMM certificants. The handling and management of hazardous materials and the transport of dangerous goods are governed by model regulations published by the US Environmental Protection Agency, US Department of Transportation, the U.S. Department of Labor, the Occupational Safety and Health Administration, as well as by the safety industry best practices regulations. Accredited credentials allow professionals not only to gain knowledge to use and implement these regulations but to be recognized for their competency to properly manage and perform the functions of the profession.

The **Certified Hazardous Materials Practitioner® (CHMP®)** is a professional who has demonstrated, through education, experience, and examination, the ability to identify and assess the risks of hazardous materials, mitigate, or eliminate those risks, and manage their impact on human health and the environment. A CHMP provides proper controls for material handling, transportation, and security throughout the life cycle of hazardous materials, from design and production through storage, recycling, and ultimate disposal. They apply scientific knowledge, engineering technologies, and best management practices in compliance with U.S. regulatory requirements. We illustrate the hazardous materials compliance under 49 CFR and the risk management knowledge, skills, and abilities of the CHMP by including the CHMP blueprint in **Attachment Two**.

The CHMP is accredited by the Council on Engineering and Scientific Specialty Boards [CESB] and by the American National Standards Institute [ANSI]. The measure of the quality and strength of a certification program is to evaluate its accreditation status. Accreditation is a form of certification for the certifying organization, requiring

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Recertification of Credentials. After recognizing the strength of the content of the credential, and then its accreditation comes the requirements imposed by the certification body [IHMM] for the periodic recertification of the credential. IHMM requires that the CHMM and CHMP holders recertify their competency to continue to hold the credential every 5 years based on the contents of the certification blueprint. This ensures EPA and every public and private sector entity that relies on the professionals who hold these credentials, who are constantly upgrading their skills, knowledge, and abilities in their communities of practice. We strongly recommend that the EPA rely on professional credentials that require recertification based on the certification blueprint at least every 5 years.

Training. IHMM's commitment to the excellence of its professional credentials, and throughout EPA's work with employers, is the emphasis on the necessity of receiving training, and IHMM applauds the dedication to training and education as we stand behind and support our credential holders. IHMM has a Foundation, the IHMM Foundation https://hazmatsociety.org/, whose reason to exist is principally a focus on the education and training of IHMM's certificants.

Here https://hazmatsociety.org/education-training/, our certificants can easily find and take an extraordinary range of courses to upgrade and expand their knowledge, skills, and abilities.

If there are specific areas where EPA-required training can be made available to IHMM certificants, then we are pleased to make these resources available to all.

IHMM appreciates the opportunity to comment on this proposed rule. The secondary lead smelting industry is complex and technically demanding, and the compliance framework must remain both protective and practicable. By refining its SSM provisions, preserving a structured affirmative-defense mechanism, strengthening monitoring rationales, and

ensuring manageable electronic-reporting requirements, EPA can achieve the public-health protections intended by the Clean Air Act while supporting transparent, effective compliance.

IHMM Guidance Document: PFAS Reporting & Compliance Responsibilities

This guidance document provides CHMM and CHMP certificants with a structured approach to complying with EPA's Proposed PFAS Reporting and Recordkeeping Rule (40 CFR Part 705). It explains obligations, exemptions, reporting standards, and practical steps for compliance.

1. Overview of PFAS Reporting Rule

EPA requires reporting of all PFAS manufactured or imported since January 1, 2011, unless exempt under the proposed rule. Reporting includes chemical identity, uses, quantities, byproducts, health/environmental effects, and release data.

2. Key Exemptions Certificants Must Understand

- 0.1% de minimis exemption for PFAS in mixtures/articles
- PFAS imported in articles
- PFAS as byproducts, impurities, or non-isolated intermediates without commercial purpose
- PFAS manufactured solely for R&D
- Municipal solid waste imports
- Certain federal agency activities

3. Compliance Steps for CHMM/CHMP Professionals

- Conduct PFAS lifecycle inventory (2011–2022)
- Audit supply chain and SDS records for PFAS indicators
- Validate applicability of exemptions
- Assemble exposure, disposal, release, and byproduct information
- Document "known or reasonably ascertainable" data per TSCA standards

4. Documentation Requirements

Certificants must ensure records are complete, accurate, and retained for auditing. This includes SDS, manifests, purchase records, transport documentation, analytical reports, and environmental release data.

5. OECD Harmonized Templates (OHT)

Certificants must ensure that any unpublished PFAS health or environmental study is reported using OHT formats unless exposure data are already captured in mandatory fields.

6. Avoiding Compliance Pitfalls

- Do not assume PFAS absence without verification
- Beware of gaps in SDS prior to 2015
- Ensure byproduct vs. impurity classification is correct
- Validate commercial purpose of PFAS byproducts

7. Implications for IHMM Practice

The proposed rule aligns directly with CHMM and CHMP domains involving identification, reporting, waste management, emergency response, remediation, and environmental assessment.

PFAS Reporting Rule – Comprehensive Risk Matrix for CHMM & CHMP

This risk matrix evaluates regulatory, operational, legal, and professional risks faced by CHMM and CHMP certificants under EPA's Proposed PFAS Data Reporting Rule (TSCA § 8(a)(7), November 13, 2025). It reflects exposure due to reporting obligations, historical data reconstruction, and compliance responsibilities across hazardous materials lifecycle management.

Risk Category	Description	Impact on CHMM/CHMP	Risk Rating (L/M/H)
Regulatory Compliance	Failure to identify PFAS subject to TSCA §8(a)(7) reporting, including misapplication of exemptions.	CHMM/CHMP responsible for chemical identification, classification, and TSCA reporting accuracy.	High
Recordkeeping Gaps	Missing or incomplete records from 2011–2022 regarding PFAS	Professionals may be required to reconstruct historical data using SDS,	High

	manufacturing, import, use, or disposal.	procurement, waste manifests.	
Liability Exposure	Civil penalties for inaccurate or missing TSCA submissions; potential organizational enforcement.	CHMM/CHMP serve as technical authorities and may be implicated in compliance assessments.	Medium-High
Operational Risk	Inability to determine PFAS in mixtures/articles at ≥0.1% due to poor documentation.	CHMM/CHMP must interpret analytical data, SDS, and supply-chain communications.	Medium
Environmental Release Reporting	Failure to document PFAS releases via waste, emissions, or disposal pathways.	Directly intersects with domains relating to spill response, remediation, waste disposition.	Medium-High

IHMM and its certificants stand ready to support EPA in developing implementation guidance and training to promote safe, compliant, and environmentally responsible operations across this and other EPA activities.

Respectfully submitted,

Sincerely,

Eugene A. Guilford, Jr., CAE
Executive Director
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About the Institute of Hazardous Materials Management - https://ihmm.org/

Founded in 1984, the Institute of Hazardous Materials Management (IHMM), is a not-for-profit organization. IHMM has been protecting the environment and the public's health, safety, and security through the creation of credentials recognizing professionals who have demonstrated a high level of knowledge, expertise, and excellence in the management of hazardous materials, dangerous goods transportation, environmental protection, health, and workplace safety.

Over 18,000 homeland security, environmental protection, engineering, health sciences, transportation, and public safety professionals have earned IHMM's accredited ***Certified Hazardous Materials Manager®*** *(CHMM®) credential. IHMM also administers the* ***Certified Hazardous Materials Practitioner®*** *(CHMP®), the* ***Certified Dangerous Goods Professional®*** *(CDGP®), the* ***Associate Hazardous Materials Manager®*** *[AHMM®], and the* ***Certified Dangerous Goods Trainer®*** *(CDGT®) credentials. IHMM also works with colleges and universities throughout the United States and, to that end, offers the* ***Student Certified Hazardous Materials Manager®*** *(ST/CHMM®) and* ***Student Associate Safety and Health Manager®*** *[ST/ASHM®] credentials. In 2019, IHMM acquired ISHM and now manages the* ***Certified Safety and Health Manager®*** *[CSHM®],* ***Certified Safety Management Practitioner®*** *[CSMP®],* ***Associate Safety and Health Manager®*** *[ASHM®],* ***Certified School Safety Specialist®*** *[CSSS®], and* ***Certified School Safety Manager®*** *[CSSM®] credentials.*

Attachment One

Certified Hazardous Materials Manager

INSTITUTE OF HAZARDOUS MATERIALS MANAGEMENT

CERTIFIED HAZARDOUS MATERIALS MANAGER (CHMM®) EXAM SPECIFICATIONS (BLUEPRINT)

Effective 2021

A Certified Hazardous Materials Manager (CHMM) is a professional who has demonstrated, through education, experience and examination, the ability to identify and assess the risks of hazardous materials, mitigate, or eliminate those risks, and manage their impact on human health and the environment.

A CHMM provides proper controls for material handling, transportation, and security throughout the life cycle of hazardous materials, from design and production through storage, recycling, and ultimate disposal. They apply scientific knowledge, engineering technologies, and best management practices in compliance with U.S. regulatory requirements.

The CHMM examination is a testing instrument designed to evaluate candidate's minimal competency in the field of hazardous materials management. This Specification Blueprint is intended to offer guidance to candidates by outlining the domains and tasks that will be covered on the examination. The blueprint reflects the consensus of the profession validated via a survey of what hazardous materials managers do in practice. The Blueprint below describes the subject matter covered by the examination. All test items will be drawn from among the domain areas of the Specification Blueprint.

This Specification Blueprint lists below each domain and competencies with tasks given under each domain. A percentage label accompanies each domain in this Specification Blueprint. This percentage represents the proportion of the actual CHMM examination devoted to that domain. Tasks provide reference for activities conducted under each domain.

DOMAINS AND COMPETENCIES/TASKS	% of Exams
1 Planning for Materials with Hazards	**9.35**
1.1 Identify hazardous materials by name.	
1.2 Given four SDS, identify the hazardous material.	
1.3 Given a laboratory report (boiling point, classification, PH), identify the constituent that makes this mixture hazardous.	
1.4 Given a scenario about pollution prevention, identify the preferred strategy that should be used.	
1.5 Identify examples of effective recycling.	
1.6 Given a scenario involving pollution, identify the pollution impacts and the related regulations.	
1.7 Given a scenario about a Pollution Prevention Opportunity Assessment (PPOA), identify the elements and sequence of events.	
1.8 Given a scenario about hazardous materials and process, identify the impact to air.	
1.9 Given a scenario hazardous materials and process, identify the impact to water resources.	
1.10 Given a scenario hazardous materials and process, identify the impact to soil.	
1.11 Identify the characteristics of minor and major permits.	
1.12 Identify the characteristics of the permit application and permit review.	
1.13 Identify the characteristics of inspection, training, and waste requirements of permitting.	

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1.14 Determine the threshold quantity of a regulated substance in a process required to comply with EPA's risk management program regulation.	
1.15 Identify the components of Standard Operating Procedures (SOP).	
2 Shipping and Transporting Hazardous Waste and Hazardous Materials	**10.34**
2.1 Given a scenario about hazmat transportation, identify requirements.	
2.2 Given a scenario about packaging, identify the appropriate container.	
2.3 Given a scenario about transporting hazardous waste or hazardous materials and the method of transportation, identify the required labeling.	
2.4 Given a scenario about shipping domestically or internationally, determine how hazardous materials should marked.	
2.5 Given a scenario, identify what information needs to be included in the shipping documents, and the proper shipping description format, and order of information.	
2.6 Given a shipment scenario, identify the required placarding.	
2.7 Identify conditions under which shipments, or portions of shipments, can be accepted or rejected.	
3 Store Materials with Hazard	**9.22**
3.1 Identify storage location site requirements for property containing hazardous materials/waste.	
3.2 Given a scenario about controlling inventory, identify the regulations that apply to that inventory.	
3.3 Given a scenario about storage of hazardous waste/material, identify the facility signage requirements.	
3.4 Given a scenario about storing a hazardous waste/material, identify proper container labeling requirements.	
3.5 Given a scenario about controlling access to hazardous materials/waste, identify how to control access.	
3.6 Given a scenario, identify how storage meets requirements.	
4 Facility Operations Involving Materials with Hazards	**9.12**
4.1 Given a type of hazardous material/waste, identify the engineering control that should be used to treat the material/waste.	
4.2 Given a type of hazardous material/waste, identify the engineering control that should be used to store of the material/waste.	
4.3 Given a type of hazardous material/waste, identify the engineering control that should be used to dispose of the waste.	
4.4 Given a scenario about a process, identify regulatory training record requirements.	
4.5 Given an SDS, identify the hazardous communication requirements that are needed for that material.	
4.6 Given a hazardous material, identify the PPE that should be used when sampling, handling, i.e., sweeping, shoveling, etc., the material.	
4.7 Given a scenario, identify the testing procedures needed to determine the hazard associated with the material.	
4.8 Given a hazardous material, determine health, safety, and security requirements.	
5 Disposition of Materials with Hazards	**8.46**
5.1 Identify typical components of a waste profile.	
5.2 Given a scenario about a waste material, identify the disposition options.	
5.3 Identify what a generator uses to quality/disqualify a disposal facility.	
5.4 Given a scenario about a material (soil, chemical product, construction waste, etc.), identify the disposition requirements for the material.	

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5.5 Given a scenario about the final disposition of a hazardous waste under RCRA, identify how final disposition is confirmed and documented.	
5.6 Given a scenario where there is a release from a container, identify how the release should be managed.	
5.7 Given a waste disposition scenario, identify how emissions (air) should be managed.	
5.8 Given a waste disposition scenario, identify how discharges (water) should be managed.	
6 Record Keeping and Reporting	**7.49**
6.1 Given a scenario about a spill of a hazardous material, identify the reporting requirements (timeframe, threshold reporting quantities, who receives the reports.)	
6.2 Given a scenario, identify the record keeping requirements for the relevant regulatory program (RCRA, EPCRA, TSCA, UST, CWA, CAA, CERCLA, HMTA, and SARA).	
7 Training Personnel	**8.07**
7.1 Given a scenario, identify the training requirements for the relevant regulatory program (RCRA, EPCRA, TSCA, UST, CWA, CAA, CERCLA, HMTA, SARA, and OSHA.)	
7.2 Given an activity involving materials with hazard, identify the competencies that would be needed for that activity (could include identifying hazards, determine if respiratory protection is needed, determine PPE needed, decontamination sequences, site worker needs a physical).	
7.3 Given a scenario about a job, identify the types of training that are required.	
7.4 Given a scenario about training, identify the assessment that should be used.	
7.5 Given a scenario about a Hazmat event when conducting drills and exercises, identify which types of agencies should be involved.	
7.6 Given a regulatory requirement, determine the adequacy of the training content and duration.	
8 Response and Recovery	**7.95**
8.1 Given a scenario about a spill or release, identify the chemical and physical hazards of the material, the quantity of material, and the location of the spill /release.	
8.2 Given a scenario about a spill or release, identify the amount of material that has been spilled or released.	
8.3 Identify the conditions that require the incident to be reported to the National Response Center.	
8.4 Given a scenario about a spill or release, identify how to mitigate the impact to receptors.	
8.5 Identify the steps to develop a recovery or incident action plan.	
8.6 Given an accident situation, identify data needed to investigate the cause of the incident.	
9 Remediation	**6.5**
9.1 Given a scenario about a spill or release, determine how to identify the constituents of concern, the vertical and horizontal extent of the constituents of concern, and the characteristics of the receiving media.	
9.2 Given a release scenario, determine the appropriate remedial objectives.	
9.3 Given a scenario about physical characteristics of a contaminant and a situation involving the contaminant, identify the treatment option that should be used to remediate the contaminant.	
9.4 Given a scenario about a remedial technology that was selected, identify the tools that should be used to ensure remedial action objectives are achieved.	
9.5 Identify capital and recurring costs (O&M costs) associated with a selected remedial action.	
9.6 Given a scenario and remediation technology, identify redevelopment considerations and pitfalls.	
9.7 Given soil analytical results, determine if the clean-up standard has been achieved.	

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10 Management Systems	**6.58**
10.1 Given a scenario, identify which regulations would apply to a multi-media program.	
10.2 Given a scenario, identify the requirements for the maintenance and retention of records.	
10.3 Given a scenario, identify how the investigator can determine if a regulation is current.	
10.4 Given a scenario, identify knowledge needed to participate in regulation development.	
10.5 Given a scenario, identify the required interested parties and the process for the interested parties to communicate.	
10.6 Given a scenario, what are the required public outreach mechanisms?	
10.7 Identify elements of a management system audit and difference(s) from a compliance audit.	
10.8 Identify variables in a financial analysis.	
10.9 Given a scenario, describe operations that require a program.	
11 Environmental Studies	**6.35**
11.1 Given a scenario about a property transfer (sales or purchase of property), describe the required environmental due diligence.	
11.2 Given a scenario where lead-based paint, asbestos, and other regulated materials are thought to be present, describe how a building survey should be conducted.	
11.3 Given a regulatory framework, describe the required process and output.	
11.4 Given a scenario of analytical data, identify contaminants of concern.	
11.5 Given a scenario of a source of contamination, describe likely exposure routes.	
12 Health and Safety	**10.57**
12.1 Given a concentration of a contaminant of concern, identify exposure routes and susceptible populations that may be affected.	
12.2 Given screening thresholds, identify potential hazardous material exposure routes.	
12.3 Given a scenario, identify tasks to complete a job, the hazards of those tasks, and the control of those hazards.	
12.4 Determine process safety management.	
12.5 Identify recommended basic elements of an OSHA-compliant site safety plan.	
12.6 Identify recommended elements of an emergency response plan.	
12.7 Given the presence of hazardous materials, identify the appropriate containment.	
12.8 Identify labeling requirements for products.	

For more information about the Certified Hazardous Materials Manager certification program, including eligibility requirements and application procedures, see the IHMM Candidate Handbook available at www.ihmm.org. If you have questions about the CHMM Blueprint, please contact M. Patricia Buley at pbuley@ihmm.org.

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Attachment Two

Certified Hazardous Materials Practitioner

INSTITUTE OF HAZARDOUS MATERIALS MANAGEMENT

CERTIFIED HAZARDOUS MATERIALS PRACTITIONER (CHMP®) EXAM SPECIFICATIONS (BLUEPRINT)

Effective Q4/2022

A Certified Hazardous Materials Practitioner (CHMP) is a professional experienced in handling hazardous materials in a wide variety of specialties, such as safety, environmental protection and compliance, and transportation. The CHMP professional focuses on technical knowledge and expertise in handling hazardous materials.

A CHMP provides proper controls for material handling, transportation, and security throughout the life cycle of hazardous materials, from design and production through storage, recycling, and ultimate disposal. They apply scientific knowledge, engineering technologies, and best management practices in compliance with U.S. regulatory requirements.

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DOMAINS AND COMPETENCIES/TASKS		% of Exams
1	**Identification, Handling, and Transport of Hazardous Materials**	**35.58%**
1.1	Declarative -- Identify management, transport, treatment, and disposal regulations for hazardous materials	
1.2	Declarative -- Identify mandated training (Example: HAZWOPER training.)	
1.3	Declarative -- Identify the difference(s) between DOT hazardous material, EPA/RCRA hazardous waste, and OSHA hazardous substance	
1.4	Declarative -- Identify generator, transporter, and TSDF standards	
1.5	Declarative -- State criteria for identifying the characteristics of hazardous waste and for listing hazardous waste	
1.6	Declarative -- Identify standards for VSQG, SQG, LQG, and generators of Universal Waste	
1.7	Declarative -- Identify shipping papers, labels, markings, placarding, packaging, and record keeping requirements	

1.8	Declarative -- Identify standards for managing specific hazardous waste, standards for owners and operators of TSDF, land disposal restrictions (LDR), and standards for universal waste management
1.9	Declarative -- Identify waste minimization activities
1.1	Declarative -- Identify waste record and reporting requirements
2	**Management of Emergencies & Incidents (E&I) 18.46%**
2.1	Procedural - Given a scenario, determine resources needed to provide an HSP and emergency planning and training; include an employee right to know (RTK) and access to safety data sheets (SDS)
2.2	Procedural -- Given a scenario about an incident, determine the size and role and responsibilities of the incident command system (ICS)
2.3	Procedural -- Given a scenario, determine if record keeping and reporting are necessary according to state and federal regulations and requirements
3	**Sampling and Analysis of Hazardous Materials/Waste 15%**
3.1	Declarative - Identify requirements of a Waste Analysis and Sampling Plan (WASP)
3.2	Declarative - Identify how and when to use different types of direct-reading instruments, such as Draeger Tubes, OVA = Organic Volatile Analyzer, CGM = Combustible Gas Meter, FLID = Flame Ionization Detector, PID = Photoionization Detector
3.3	Application - Given a scenario for a specific waste matrix, describe the sampling methods, sampling equipment, and sample preservation methods.
3.4	Declarative - Identify how specific analytical results correlate to waste characterization and specific treatment standards
3.5	Declarative - Identify standardized test methods used in waste characterization and/or determining DOT hazard class
3.6	Declarative - Identify proper sampling procedures and pertinent sampling media for the establishment of appropriate administrative and engineering controls
4	**Site Investigation and Remediation 14.04%**
4.1	Declarative - Identify potential physical or chemical hazards that may arise when a task is being performed and determine the engineering controls, administrative controls, and PPE requirements
4.2	Declarative - Identify procedures to conduct a site investigation/assessment
4.3	Declarative - Identify appropriate abatement methods based on investigation and risk assessment data
4.4	Declarative - Identify site hazard characteristics and select appropriate administrative and engineering controls including PPE
4.5	Declarative - Identify steps for long-term monitoring of hazardous waste
5	**Program and Project Management 16.92%**
5.1	Declarative - Identify hazardous waste programs scope including managing cradle-to-grave responsibility

5.2	Declarative - Identify requirements of the Hazard Communication Standard (HCS)
5.3	Declarative - Identify training requirements for hazardous materials for OSHA, RCRA, and DOT
5.4	Declarative - Identify OSHA training requirements for general requirements and respiratory protection

For more information about the Certified Hazardous Materials Practitioner certification program, including eligibility requirements and application procedures, see the IHMM Candidate Handbook at www.ihmm.org. If you have questions about the CHMP Blueprint, please contact M. Patricia Buley at pbuley@ihmm.org.