December 19, 2025

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

Re: Docket ID No. EPA–HQ–OAR–2004–0022, Comments on Proposed NESHAP for Hazardous Waste Combustors—Residual Risk and Technology Review; Withdrawal of Proposed Revisions to Standards for Periods of Malfunction (90 Fed. Reg. 50814, Nov. 10, 2025

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 Proposed NESHAP for Hazardous Waste Combustors—Residual Risk and Technology Review; Withdrawal of Proposed Revisions to Standards for Periods of Malfunction (90 Fed. Reg. 50814, Nov. 10, 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 two 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 emissions standards for hazardous air pollutants [NESHAP] for hazardous waste combustors (40 CFR part 63, subpart EEE).

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

The **Institute of Hazardous Materials Management (IHMM)** respectfully submits the following comments on the U.S. Environmental Protection Agency's proposed revisions to the **National Emission Standards for Hazardous Air Pollutants (NESHAP) for Hazardous Waste Combustors (40 CFR part 63, subpart EEE)**.

IHMM is a non-profit credentialing organization that administers globally recognized certifications for environmental, health, safety, and hazardous materials professionals, including the **Certified Hazardous Materials Manager (CHMM)** and **Certified Hazardous Materials Practitioner (CHMP)** credentials. IHMM certificants are responsible for the **implementation, compliance assurance, risk management, and continuous improvement** of hazardous waste combustion operations and related environmental controls across the United States.

I. General Support for EPA's Statutory Objectives

IHMM supports EPA's efforts to fulfill its obligations under **Clean Air Act §§112(d), 112(f), and 112(d)(6)** to reassess residual risk and update standards to reflect advances in control technologies and risk assessment methodologies. We agree that hazardous waste combustors warrant continued scrutiny given their potential impacts on **human health, worker safety, environmental quality, and community trust**.

II. Emission Limits and Work Practice Standards for HF and HCN

IHMM supports EPA's proposal to address **hydrogen fluoride (HF)** and **hydrogen cyanide (HCN)** emissions, recognizing their acute toxicity and potential off-site exposure risks.

We recommend that EPA:
- Clearly articulate the **health-based benchmarks, exposure assumptions, and uncertainty factors** used to derive emission limits or work practice standards.
- Provide implementation guidance recognizing the **practical limits of continuous monitoring**, particularly where work practice standards are used in lieu of numeric limits.
- Ensure that compliance approaches incentivize **preventive maintenance and process optimization**, rather than purely reactive reporting.

These clarifications are essential to ensure consistent implementation by regulated entities and delegated authorities while preserving the rule's public health protections.

III. Startup, Shutdown, and Malfunction (SSM) Provisions

IHMM supports EPA's elimination of broad SSM exemptions, which historically undermined enforceability during periods of elevated risk. Enforceable SSM standards align with modern environmental management systems and professional practice. However, IHMM urges EPA to:
- Clearly define compliance expectations during SSM events.

- Explicitly recognize that certain operational decisions made to protect **worker safety, equipment integrity, and surrounding communities** should not inadvertently increase liability or discourage prudent emergency responses.
- Provide examples of acceptable SSM work practices to promote uniform interpretation.

IV. Electronic Reporting and Data Transparency

IHMM strongly supports EPA's expansion of **electronic reporting via CEDRI/CDX** and standardized templates. Enhanced data quality and accessibility benefit regulators, facilities, and the public.

We recommend EPA:
- Pilot-test templates with regulated entities and compliance professionals prior to finalization.
- Provide sufficient transition periods and training resources.
- Maintain robust protections for **confidential business information (CBI)** while improving transparency.

V. Title V Permitting and Area Source Flexibility

IHMM supports EPA's proposal to allow states discretion in exempting certain area sources from Title V permitting, provided that:
- Substantive emission limits and work practice standards remain fully enforceable.
- EPA clarifies expectations for state oversight and consistency among delegated programs.

Administrative streamlining should not result in diminished environmental or public health protection.

VI. Environmental Justice and Community Protection

IHMM encourages EPA to continue integrating **environmental justice considerations**, including cumulative risk and proximity to vulnerable populations. CHMMs and CHMPs regularly engage with affected communities and recognize that transparent, enforceable standards are critical to maintaining public trust.

VII. Conclusion

IHMM and its certificants support EPA's goal of strengthening hazardous waste combustor standards in a manner that is **protective, science-based, operationally achievable, and**

legally durable. We appreciate the opportunity to comment and stand ready to serve as a technical resource as EPA finalizes and implements this rule.

COMPLIANCE–RISK MATRIX
Mapping Rule Provisions to CHMM / CHMP Duties

Proposed Rule Provision	Primary Compliance Risk	CHMM Responsibilities (Strategic / Managerial)	CHMP Responsibilities (Operational / Technical)
New HF emission limits / work practice standards	Acute exposure risk; community health impacts; enforcement variability	Interpret regulatory intent; integrate into facility compliance programs; oversee risk assessments and EMS updates	Implement monitoring/work practices; verify operating parameters; document compliance activities
New HCN emission limits / HBEL considerations	Acute toxicity; emergency response readiness	Evaluate health-based benchmarks; coordinate industrial hygiene and emergency planning	Conduct sampling/testing coordination; maintain operating controls; assist in exposure mitigation
Elimination of SSM exemption	Liability during upset conditions; enforcement actions	Establish SSM compliance policies; ensure procedures align with safety and environmental priorities	Execute SSM work practices; document deviations; support root-cause analyses
SSM work practice standards	Ambiguity in compliance expectations	Develop SOPs; train personnel; coordinate with legal and regulatory staff	Follow SOPs; log events; implement corrective actions
Expanded electronic reporting (CEDRI/CDX)	Data errors; missed deadlines; CBI exposure	Oversee reporting systems; verify data governance; ensure compliance calendars	Prepare and submit reports; validate data accuracy; maintain records
Standardized reporting templates	Misinterpretation; administrative burden	Review templates for accuracy; provide	Populate templates; reconcile monitoring and test results

Proposed Rule Provision	Primary Compliance Risk	CHMM Responsibilities (Strategic / Managerial)	CHMP Responsibilities (Operational / Technical)
		feedback to EPA/state agencies	
Title V area source permitting flexibility	Oversight gaps; inconsistent state enforcement	Assess permitting impacts; coordinate with regulators; ensure enforceability	Support permit modifications; maintain site-level compliance
Environmental justice considerations	Community trust; reputational risk	Lead stakeholder engagement; integrate EJ into risk management	Support data collection; assist with community-facing documentation
Compliance timelines and implementation	Resource constraints; schedule risk	Plan capital improvements; manage budgets and timelines	Execute implementation steps; coordinate contractors and testing

STATE-LEVEL IMPLEMENTATION GUIDANCE
EPA NESHAP for Hazardous Waste Combustors
Residual Risk and Technology Review (40 CFR Part 63, Subpart EEE)
For Delegated State, Local, and Tribal Air Agencies

I. Purpose and Scope

This guidance is intended to assist **EPA-delegated air permitting and enforcement agencies** in implementing the proposed revisions to the **Hazardous Waste Combustor (HWC) NESHAP** resulting from EPA's **Residual Risk and Technology Review (RTR)**.

The guidance emphasizes:
- **Protection of human health and the environment**
- **Consistent interpretation and enforcement**
- **Operational realism during abnormal operating conditions**
- **High-quality data collection and transparency**
- Alignment with professional environmental management practices reflected in **IHMM CHMM and CHMP competencies**

II. Regulatory Overview for Delegated Agencies

Delegated agencies remain responsible for:

- Incorporating final federal standards into **state implementation plans or permits**
- Ensuring **continuous enforceability**, including during startup, shutdown, and malfunction (SSM)
- Overseeing **monitoring, recordkeeping, and electronic reporting**
- Addressing **community risk and environmental justice considerations**

This rule introduces **new emission limits and work practice standards**, expanded electronic reporting requirements, and revised approaches to SSM compliance that require **clear, uniform state-level implementation**.

III. Implementation of HF and HCN Standards

A. Emission Limits vs. Work Practice Standards

Delegated agencies should:

- Clearly distinguish when **numeric emission limits** apply versus **work practice standards**
- Avoid creating state-specific interpretations that unintentionally raise or weaken federal requirements
- Ensure permits explicitly identify:
    - Applicable standards
    - Compliance determination methods
    - Recordkeeping expectations

Best Practice:

Encourage facilities to integrate HF and HCN controls into broader **process control and preventive maintenance programs**, rather than treating them as isolated compliance obligations.

B. Monitoring and Compliance Determination

Agencies should:

- Recognize limitations in continuous monitoring for certain pollutants
- Accept **work practice compliance demonstrations** when measurement feasibility is constrained
- Promote consistency in inspection and enforcement determinations across facilities and regions

IV. Startup, Shutdown, and Malfunction (SSM) Compliance

A. Elimination of SSM Exemptions

With the removal of broad SSM exemptions, agencies should:

- Treat SSM periods as **regulated operating conditions**
- Ensure permits include **clear, enforceable SSM work practice requirements**

B. Enforcement Discretion and Safety Considerations

Agencies are encouraged to:

- Distinguish between:
  - **Good-faith adherence to approved SSM procedures**, and
  - **Negligent or avoidable noncompliance**
- Avoid enforcement approaches that could:
  - Discourage emergency shutdowns needed to protect workers or communities
  - Incentivize unsafe continued operation during malfunctions

Recommended Approach:

Focus on **procedural compliance, documentation quality, and corrective actions**, rather than automatic penalties for all exceedances during SSM events.

V. Electronic Reporting and Data Management (CEDRI/CDX)

A. Oversight Responsibilities

Delegated agencies should:

- Ensure facilities are registered and functional within **CEDRI/CDX**
- Verify timely submission of:
  - Performance test reports
  - Notifications of compliance
  - Excess emissions and CMS reports
- Establish internal review protocols for electronic submissions

B. Data Quality and Confidential Business Information (CBI)

Agencies should:

- Train staff to identify potential **data integrity issues**
- Protect CBI consistent with **40 CFR Part 2**
- Use standardized templates to enhance comparability while avoiding duplicative state reporting requirements

VI. Title V and Area Source Permitting Flexibility

Where EPA allows exemption of certain area sources from Title V permitting, delegated agencies should:

- Clearly document the basis for any exemption
- Ensure exempt sources remain subject to:
    - All applicable emission limits
    - Monitoring and reporting requirements
- Maintain inspection and enforcement authority equivalent to Title V sources

Key Principle:

Administrative flexibility must not result in **reduced environmental protection or weakened accountability**.

VII. Environmental Justice and Community Engagement

Delegated agencies are encouraged to:

- Consider **cumulative risk and proximity** when prioritizing inspections
- Coordinate with facilities on:
    - Risk communication
    - Transparency of compliance data
- Engage communities early when permit revisions or compliance issues arise

Professionally managed facilities—often led by CHMMs and CHMPs—can serve as **partners in proactive community engagement**.

VIII. Compliance Timelines and Transition Management

Agencies should:

- Apply compliance deadlines consistently
- Recognize legitimate constraints related to:
    - Engineering modifications
    - Permit revisions
    - Workforce training
- Use compliance assistance and phased enforcement approaches during initial implementation, where appropriate

IX. Recommended Coordination with IHMM and Credentialed Professionals

Delegated agencies are encouraged to:

- Recognize **IHMM-credentialed professionals** as qualified compliance leads
- Utilize CHMMs and CHMPs as:
    - Technical liaisons
    - Compliance assurance points of contact
- Encourage facilities to document credentialed oversight in permits, compliance plans, and inspections

X. Conclusion

Effective implementation of the HWC NESHAP RTR depends on:
- **Clear state-level guidance**
- **Consistent enforcement**
- **Balanced consideration of safety, feasibility, and environmental protection**

Delegated agencies play a critical role in translating federal standards into **real-world risk reduction**, and collaboration with trained, credentialed professionals will strengthen both compliance outcomes and public trust.

IHMM Professional Credentials

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 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 also to be recognized for their competency to properly manage and perform the functions of the profession.

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. 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
gguilford@ihmm.org
301-244-4869

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.	

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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9210 Corporate Blvd
Suite 470
Rockville, MD 20850
P: (301) 984-8969
F: (301) 984-1516
www.ihmm.org

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.	

Accredited by the American National Standards Institute and the Council of Engineering and Scientific Specialty Boards

9210 Corporate Blvd
Suite 470
Rockville, MD 20850
P: (301) 984-8969
F: (301) 984-1516
www.ihmm.org

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.	

This IHMM® CHMM® certification blueprint is the intellectual property of the Institute of Hazardous Materials Management, all rights reserved.

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.

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.

The CHMP examination is a testing instrument designed to evaluate a candidate's minimal competency in the field of hazardous materials management. This Specification Blueprint offers guidance to candidates by outlining the Domains and Tasks covered in 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 come from the Domain areas of the Specification Blueprint.

This Specification Blueprint lists each Domain and Competencies with Tasks given under each Domain. A percentage of the exam accompanies each Domain in this Specification Blueprint. This percentage represents the proportion of the actual CHMP examination devoted to that Domain. The Tasks provide a reference for activities conducted under each Domain.

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

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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.