November 16, 2025

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

**Re: Docket [EPA–HQ–OAR– 2025–0078; FRL–5774–01– OAR]**
**National Emission Standards for Hazardous Air Pollutants From Secondary Lead Smelting Technology Review**

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 "National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting—Technology Review", published October 1, 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®].

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**

IHMM supports the Agency's statutory mission under Clean Air Act § 112 and submits this comment letter to ensure that the final rule is technically practicable, enforceable, equitable, and consistent with sound compliance management principles. Although the source category is narrowly defined, the structure of the proposed revisions has broader implications for hazardous materials and hazardous waste operations and therefore merits careful consideration.

## II. Summary of the Proposal

EPA proposes to retain existing NESHAP emission limits for secondary lead smelting because it did not identify cost-effective developments in practices or control technologies during the technology review under Clean Air Act § 112(d)(6). In addition, EPA proposes amendments relating to:

1. updated monitoring requirements and the use of surrogate parameters;
2. revisions applicable to startup, shutdown, and malfunction (SSM) periods;
3. elimination of the malfunction affirmative defense;
4. mandatory electronic reporting of performance tests and compliance data through CDX/CEDRI; and
5. reconsideration, through solicited comment, of the prior "ample margin of safety" determination.

**III. Comments on Specific Provisions**

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

SSM periods are a critical facet of emissions management, frequently associated with non-steady-state conditions and higher risk of unintentional emissions. IHMM agrees that EPA should clarify obligations during these periods but recommends that the Agency strengthen the final rule by:

1. Defining "startup," "shutdown," and "malfunction" with specificity.
2. Clarifying feasible compliance expectations during SSM events.
3. Establishing a structured SSM documentation framework.

Without greater clarity, facilities may struggle to interpret their compliance duties and will face increased enforcement uncertainty.

B. Removal of the Malfunction "Affirmative Defense"

EPA proposes eliminating the malfunction affirmative defense incorporated into the existing standard. IHMM recognizes the D.C. Circuit's decisions that constrained certain versions of this doctrine but respectfully submits that EPA should retain a properly structured affirmative defense—or an equivalent mechanism—because it plays a critical role in fair and effective enforcement.

1. Definition of Affirmative Defense

An affirmative defense is a legal doctrine permitting a regulated entity to avoid or mitigate

civil liability when it demonstrates that the violation, although factually established, resulted from circumstances outside the operator's reasonable control. It does not contest the occurrence of an exceedance; instead, it provides an evidentiary pathway showing that:

- the malfunction was unavoidable and not due to negligence;
- the operator minimized emissions to the greatest extent possible; and
- corrective action, root-cause analysis, and reporting were completed.

This doctrine mirrors long-standing administrative principles such as "unavoidable casualty" and is essential in complex industrial processes where some malfunctions are unavoidable despite prudent operation.

2. Why EPA Should Retain the Affirmative Defense

**a. The doctrine remains legally permissible if structured as part of EPA's enforcement discretion**

While the D.C. Circuit invalidated one particular design of the affirmative defense, it did not prohibit EPA from adopting mechanisms that guide the Agency's own enforcement decisions. EPA can lawfully retain an affirmative defense framework that:

- does not constrain judicial remedies,
- functions as an internal enforcement-discretion tool, and
- requires robust documentation by operators.

This approach respects the court's holdings without sacrificing the practical benefits of the doctrine.

**b. Complex smelting systems cannot eliminate all malfunctions**

Secondary lead smelting involves metallurgical and mechanical systems subject to extreme heat, corrosive conditions, and equipment stresses. Even the most rigorous maintenance programs cannot eliminate all malfunctions. Without an affirmative defense:

- regulated entities face strict liability for inherently uncontrollable events;
- operators may shift from transparent reporting to defensive practices; and
- EPA receives less reliable incident data for future rulemaking.

IHMM certificants who design compliance systems need a regulatory framework that recognizes the technical limits of control technologies.

**c. The affirmative defense promotes transparency, reporting, and corrective action**
By requiring operators to document root-cause analysis, corrective actions, and mitigation steps, the affirmative defense **serves EPA's enforcement interests** by:

- encouraging prompt reporting;
- generating detailed incident records;
- identifying systemic weaknesses in operations; and
- strengthening EPA's understanding of malfunction frequencies and causes.

Without such a mechanism, facilities may be incentivized to minimize or delay reporting.

**d. It ensures proportional and consistent enforcement**
A well-drafted affirmative defense empowers EPA to focus enforcement resources on actual misconduct rather than unavoidable, quickly remedied malfunctions. Eliminating the defense:

- increases the likelihood of arbitrary outcomes,
- strains enforcement resources, and
- imposes disproportionate penalties on good-faith operators.

Professionals such as CHMMs and CHMPs rely on predictable enforcement to design effective compliance programs.

**e. It provides regulatory certainty essential to compliance planning**
Compliance professionals oversee training programs, preventive-maintenance systems, monitoring instrumentation, and incident-response protocols. The affirmative defense provides:

- clear standards for documentation;
- defined expectations for operator conduct during malfunctions;
- increased certainty for capital planning and staffing; and
- assurance that investments in preventive systems are recognized in enforcement decisions.

Removing the affirmative defense increases strict liability exposure without improving environmental protection.

3. IHMM Recommendation

IHMM urges EPA to retain the malfunction affirmative defense or adopt a revised enforcement-discretion mechanism containing:

1. clear criteria for unavoidable malfunctions.
2. mandatory documentation and rapid reporting elements;
3. explicit requirements for corrective-action verification; and
4. structured guidance for EPA regional consistency in enforcement decisions.

This balanced approach would maintain environmental protection while ensuring fair and predictable enforcement.

C. Monitoring and Surrogate Parameters

EPA proposes revisions to enclosure monitoring, including reliance on fan-amperage readings as a surrogate for confirming negative pressure. IHMM recommends:

1. **Technical justification:** EPA should publish validation studies demonstrating the correlation between fan-amperage levels and actual capture efficiency. Without this technical record, surrogate enforcement may be uncertain or challenged.
2. **Alternative monitoring methods:** Facilities should be permitted to seek approval for equivalent monitoring approaches where appropriate.
3. **Calibration and QA/QC:** EPA should specify calibration, maintenance, and quality-assurance requirements to ensure consistency.
4. **Performance-test extension criteria:** IHMM supports extensions but urges EPA to adopt clear criteria for determining "good cause" and specifying EPA response timelines.

D. Mandatory Electronic Reporting

IHMM supports modernizing compliance reporting through CDX/CEDRI but requests that EPA:

- provide draft versions of reporting templates for stakeholder review;
- offer training resources for facilities with limited IT capacity;
- ensure consistency with electronic reporting requirements under RCRA, TSCA, and OSHA to avoid duplicative burdens; and
- provide a reasonable phase-in schedule to ensure accurate implementation.

E. Ample Margin of Safety Determination

IHMM encourages EPA to revisit its prior margin-of-safety determination in light of evolving toxicological data, multi-pathway exposure models, and community-monitoring results—including in environmental justice communities. A more robust scientific and risk-based explanation would strengthen the legal defensibility of the final rule.

IV. Broader Regulatory Implications

Although this rule applies to secondary lead smelting, its structure—particularly regarding SSM obligations, the affirmative defense, surrogate monitoring, and electronic reporting—signals broader trends in NESHAP regulatory design. IHMM urges EPA to adopt consistent frameworks across sectors to reduce confusion for multi-facility operators and to recognize the role of competent, credentialed professionals in achieving compliance. IHMM further encourages EPA to identify opportunities to incorporate recognized professional credentials (CHMM®, CHMP®) as indicators of compliance competency within enforcement and policy frameworks.

## 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. 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 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 NESHAP categories.

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.

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 | |

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| 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 |

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| 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.*