

HAZMAT Training Requirements Overview (For First Responders)

The following material consists of nearly direct quotes from the US Department of Transportation- PHMSA, “Hazardous Materials Incident Response Curriculum Guidelines, Response Training Considerations” 2016.¹

All personnel who respond to hazardous materials emergencies must be properly trained to perform their jobs safely and efficiently. Their employers are responsible for ensuring the health and safety of the responding personnel as well as the protection of the public and the communities served. Such training must be provided before employees are permitted to engage in emergency response activities, and refresher training must be provided annually. (PHMSA, pg 3)

The minimum level of required training is defined by the regulatory specifications from OSHA 1910.120(q) (extended to state/local responders by EPA 40 CFR 311)^{2 3}. This includes the Hazardous Waste Operations & Emergency Response (HAZWOPER) standard. More current and higher-level recommended levels of training for responders are defined in the voluntary consensus standards from National Fire Protection Association (NFPA) 472⁴, 473⁵, 1072⁶ (recently combined into NFPA 470⁷.) and referenced in the Florida State Emergency Response Commission’s Training Guidance⁸. **Note:** These *Consensus standards developed by peers may constitute a “standard of care” used in legal settings to judge response; and so, should be considered and implemented.*⁹

In addition, recommended levels of training for hospital personnel handling victims of hazardous materials/weapons of mass destruction incidents are found in OSHA’s Best Practices for Hospital-Based First Receivers of Victims of Mass Casualty Incidents Involving the Release of Hazardous Substances. (PHMSA, pg. 3)

These require that emergency response employees be trained and competent to perform their assigned tasks during an emergency. At a minimum, such training needs to include the elements of the emergency response plan, standard operating procedure (SOP’s) established

¹US DOT-PHMSA, Hazardous Materials Incident Response Curriculum Guidelines, Response Training Considerations 2016, pg 3-4 <https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2020-06/03-Response-Training-Considerations-2016-508-Compliant.pdf> Accessed May 9, 2022.

² <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-J/part-311>

³ <https://www.osha.gov/laws-regs/standardinterpretations/2017-03-31>

⁴ NFPA 472: Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents

⁵ NFPA 473: Standard for Competence of EMS Personnel Responding to Hazardous Materials/Weapons of Mass Destruction Incidents

⁶ NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications

⁷ NFPA 470, Hazardous Materials/Weapons of Mass Destruction (WMD) Standard for Responders

<https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=470&tab=nextedition>

⁸ Florida SERC Guidelines for Hazardous Materials Training,

<https://portal.floridadisaster.org/SERC/External/SERC%20Documents/SERC%20Guidelines.pdf> , 2015 Edition

⁹ DHS, Initial Response to Hazardous Materials Incidents, Basic Concepts IRHMI: BC- Student Manual, 2003, pg SM 2-22

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by the employer, and procedures for notification and response to hazardous materials emergencies. (PHMSA, pg. 3)

The employer must certify annually that each employee has successfully completed the required training to perform their assigned tasks. The maintenance of skills and knowledge through refresher training can be accomplished through a range of training and exercise options. The method used to demonstrate competency for certification of training must be recorded and maintained by the employer. Important concepts to remember are: ¹¹

- The chief or director is responsible for determining the appropriate level of training required based on actions required of members as stated in the SOPs.
- The chief or director is responsible for implementing the required training or certifying that members of the organization have the competencies required. Documentation of training is critical.
- OSHA 1910.120(q) or EPA 40 CFR 311 rules apply to all public sector agencies that are expected to respond to an emergency involving hazardous materials, including career or volunteer fire departments, emergency medical services, or law enforcement personnel, etc. (PHMSA, Pg 4)

Employers whose employees are engaged in emergency response to hazardous materials incidents have responsibilities in four primary areas:

- Development of an emergency response plan
- Development of specific procedures for handling hazardous materials incidents
- Training requirements
- Health and safety requirements (e.g., medical monitoring for personnel assigned to Hazardous Materials Response Teams (HMRT), and documentation of chemical protective clothing and personnel exposure records) (PHMSA, pg 4)

Employers must ensure that employees are trained and competent in emergency response to hazardous materials incidents, based on their expected and assigned duties and functions. Such training must be provided before employees are permitted to engage in emergency response activities, and refresher training must be provided annually. (PHMSA, pg 5)

- An employer is responsible for determining the appropriate level of training required, based on the assigned tasks and actions expected of employees as stated in the agency's SOPs.
- An employer is responsible for providing the required training. Emphasis should be on achieving the required competencies (i.e., skill and knowledge) for the appropriate level of response rather than on minimal requirements for length of training.
- An employer is responsible for selecting qualified, competent instructors.

¹⁰Response Training Considerations, 2016 Response Training Guidelines, pg 3-4

<https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2020-06/03-Response-Training-Considerations-2016-508-Compliant.pdf> Accessed May 9, 2022.

¹¹Response Training Considerations, 2016 Response Training Guidelines, pg 3-4

<https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2020-06/03-Response-Training-Considerations-2016-508-Compliant.pdf> Accessed May 9, 2022.

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- An employer must provide annual refresher training sufficient to maintain competencies, or employees must demonstrate required competencies annually.
- An employer must maintain a record of demonstrated competencies, including an explanation of how each competency was demonstrated. Training records must contain dates of training, student rosters, curriculum outlines, demonstration checklists or performance records and evaluation tools, and scores if appropriate. (PHMSA, pg 5)

Competency

OSHA has defined a minimum number of hours for training at operations, technician, specialist, and incident commander levels. However, the key is the level of competency attained, not the hours expended in training. The amount of training needed to reach competency will also be influenced by the preexisting skills and experience of the trainees. Often, agencies frequently discover that training needs exceed the minimum required hours. Trainers may also need to adjust training materials to meet the needs of the discipline or audience. (PHMSA, pg 5-6)

Refresher Training

All personnel who may respond to hazardous materials emergencies must receive refresher training on an annual basis or have experience that ensures that they are maintaining competency to perform their roles safely and efficiently. Employers must certify on an annual basis that employees continue to meet the performance objectives as defined in OSHA 1910.120(q). This may be accomplished through refresher training or demonstration of skills and competency. (PHMSA, pg 6)

Refresher training or competency retesting requirements vary for each of the response levels. In general, refresher training should include critical skills practice, technical information updates, and refinement of incident scene coordination through field exercises simulating emergencies. (PHMSA, pg 6)

At a minimum, competency should be demonstrated in all refresher training for the skills directly affecting the safety of responding personnel. Minimum hours for annual refresher training for response personnel are not specified in OSHA 1910.120(q). However, in practice, many jurisdictions use the 8-hour minimum refresher training requirement for site workers in OSHA 1910.120(e) as a guide. (PHMSA, pg 6)

See <https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2020-06/03-Response-Training-Considerations-2016-508-Compliant.pdf> for more information on employer requirements; For the full requirements needed for compliance, use the legislation itself.

See also the following OSHA letters of interpretation regarding training, applicable to:

¹²Response Training Considerations, 2016 Response Training Guidelines, pg 3-4
<https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2020-06/03-Response-Training-Considerations-2016-508-Compliant.pdf> Accessed May 9, 2022.

- EMS: <https://www.osha.gov/laws-regs/standardinterpretations/2017-03-31>
- Fire and Police: <https://www.osha.gov/laws-regs/standardinterpretations/1990-02-21>
- HAZMAT Operations is required for response (minimum): <https://www.osha.gov/laws-regs/standardinterpretations/2007-03-14>
- Refreshers: <https://www.osha.gov/laws-regs/standardinterpretations/2007-07-25>
- Hospital Training, and PPE selection: <https://www.osha.gov/laws-regs/standardinterpretations/2002-12-02-0>
- Applicability to Hospitals: <https://www.osha.gov/laws-regs/standardinterpretations/1991-12-02-0>
- Hospital First Receiver training: https://www.osha.gov/sites/default/files/firstreceivers_hospital.pdf

See <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.120AppE> for 1910.120 App E –Training Curriculum Guidelines - (Non-mandatory) for assistance in developing site-specific training curriculum to meet 29 CFR 1910.120(q)(6), (q)(7), and (q)(8) and other regulations. These are generic and not a complete program, since site specific training must also be based on a needs assessment of the facility or emergency response operation. Other approaches could be used to meet the regulatory requirements as well.

SERCs HAZMAT Training Guidelines

The Florida State Emergency Response Commission (SERCs) developed HAZMAT Training Guidelines (2015). These describe the audience and competencies required for HAZMAT Awareness, Operations (and mission-specific), HAZMAT Technician and Incident Commander level personnel. It also addresses training for Firefighters, EMS, Law Enforcement, Public Health and Hospitals, and Public Works, Utilities, Transportation Workers, Public Health and General Workers. These can be found by searching “*Florida SERC Training Guidelines*” or at <https://portal.floridadisaster.org/SERC/External/SERC%20Documents/SERC%20Guidelines.pdf>

Note: These guidelines preceded NFPA 472 (2018 edition), NFPA 1072 (2017 edition) and NFPA 470 (which consolidated NFPA 472, 473, and 1072).

Course Materials Available from SERC

SERC developed training curriculum and course materials for use in teaching Awareness and Operations level personnel (including mission-specific competencies). These incorporate NFPA 472 (2018 edition) and 1072 (2017 edition). The new NFPA 470 was reviewed by course authors, who found no substantive changes requiring course content revision.

SERCs HAZMAT Awareness and Operations, and Mission-Specific Course material are available for use by agency instructors, and can be found at:

<https://portal.floridadisaster.org/SERC/External/Forms/AllItems.aspx?RootFolder=%2FSERC%2FExternal%2FFL%20Hazardous%20Materials%20Training%20Program%20and%20Assessment&FolderCTID=0x012000ECDE14614ABBC741894EC7873F985B5C&View=%7B79216700%2D92DB%2D4C35%2DAC99%2D880517E62F86%7D>