

OSHA Guidelines for HAZWOPER Training

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Abstract: Meeting training requirements for employee protection during hazardous waste operations and emergency responses has become a lot easier with the new guidelines issued by OSHA. These guidelines will help employers with detailed information concerning:

- When to train employees,
- What the training should consist of,
- How to determine the professional competency of an instructor,
- How to evaluate trainee's proficiency,
- What should be included in course certification.

These questions and many more are covered by OSHA's non-mandatory Appendix E guidelines in 29 CFR 1910.120 for general industry and 29 CFR 1926.65 for construction.

The Advisory Committee on Construction safety and Health recommended that OSHA use a guideline titled "Minimum Criteria for Worker Health and Safety Training for Hazardous Waste Operations and Emergency Response."

OSHA reviewed the guidelines and decided it would meet the training requirements for the HAZWOPER standard and that the detailed guidance would be helpful to trainers and employers and lead to the better training of employees.

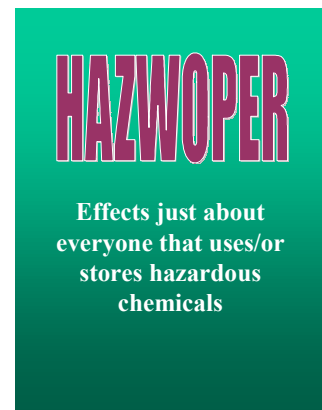
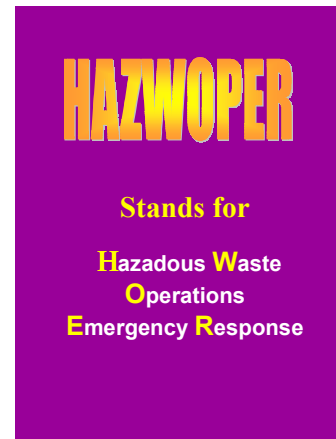
Introduction

HAZWOPER. It's probably one of the most common recognizable acronyms in the environmental, health and safety world.

HAZWOPER stands for Hazardous Waste Operations Emergency Response..

HAZWOPER is recognized mainly because it effects just about everyone that uses/or stores hazardous chemical. If you have a hazardous chemical, you have the opportunity to have a spill. If you have a spill, you need somebody to clean it up. As far as OSHA is concerned, not just anybody can clean up a spill. That person needs to be trained, and that's where HAZWOPER comes in

Since it's original passing in 1987, the HAZWOPER standard has caused a lot of confusion and stress. Many people have been unsure of how the standard affects them, and consequently went overboard. Steel-toe shoes and safety glasses were replaced with fully encapsulated vapor-tight moon suits, equipped with supplied air and escape bottles.



And the training! Training films were sprouting everywhere, and they were offering programs at hotels and conference centers all over the country. With the passing of HAZWOPER, many companies were spending a fortune on lavish programs. The question is: "Is all this really necessary?" For most small and mid-size companies, the answer is simply "No." Yet the uncertainty of HAZWOPER's application induced such a "knee-jerking" reaction.

OSHA expects only a trained person to clean up a spill....and that's where HAZWOPER comes in.

Training Objectives

The general training objectives for employees involved in hazardous waste site/emergency response activities are:

- To make workers aware of the potential hazards they may encounter.
- To provide the knowledge and skills necessary to perform the work with minimal risk to worker safety and health.
- To make workers aware of the purpose and limitation of safety equipment.
- To ensure that workers can safely escape from emergencies.

The level of training should be consistent with the worker's job function and responsibilities. Specific recommendations for the areas to be covered in training sessions are given in Table 1.

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The training program should involve both classroom instructions in a wide range of health and safety topics and "hands-on" practice. Hands-on instruction should consist of drills in the field that simulate site activities and conditions. Any training around hazardous substances should also incorporate onsite experience under direct supervision of trained and experienced personnel. Employees should also complete refresher training, at least annually, to reemphasize the initial training and to update workers on any new policies or procedures

Training program should include a wide range of health/safety topics and "hands on" practice.

HAZWOPER Standard

The HAZWOPER standard can be found in 29 CFR 1910.120. When we start talking about training requirements, this standard is basically divided into three distinct sections. The first section deals with all employees working on hazardous waste site clean-ups can be found in 29 CFR 1910.120(e). The second deals with hazardous waste clean-ups at Treatment, Storage, and Disposal (TSD) sites (29 CFR 1910.120(p), and the last deals with those who are expected to respond to emergencies, like chemical spills (29 CFR 1910.120(q).

The training programs for employees subject to the requirements of paragraph (e) of this standard (see Table 2.) should address:

- The safety and health hazards that employees should expect to find on hazardous waste clean-up sites;
- What control measures or techniques are effective for those hazards;
- What monitoring procedures are effective in characterizing exposure levels;
- What makes an effective employer's safety and health program;
- What a site safety and health plan should include;
- Hands on training with personnel protective equipment and clothing that they may be expected to use;
- The contents of the OSHA standard relevant to the employee's duties and function;
- Employee's responsibilities under OSHA and other regulations.

Supervisors will need additional training in their responsibilities under the safety and health program, and are subject to such areas as the spill containment program, the personal protection program, the medical surveillance program, the emergency response plan and other areas (see Table 3).

The training programs for employees subject to the requirements of paragraph (p) of this standard (see Table 4.) should address:

- The employer's safety and health program elements impacting employees;
- The hazard communication program;
- The hazards and controls for such hazards that employees need to know for their job duties and functions;
- All require annual refresher training.

The training programs for employees covered by the requirements of paragraph (q) of this standard (see Table 5.) should address those competencies required for various levels of response such as:

- The hazards associated with hazardous substances;
- Hazard identification and awareness;
- Notification of appropriate persons;
- The need for and use of personal protective equipment including respirators;
- The decontamination procedures to be used;
- Preplanning activities for hazardous substance incidents including the emergency response plan;
- Company standard operating procedures for hazardous substance emergency responses;
- The use of the incident command system.

Hands-on training should be stressed whenever possible. Critiques done after an incident, which includes an evaluation of what worked and what did not and how could the incident be better handled the next time, may be counted as training time.

HAZWOPER Participants

For hazardous materials specialists (usually members of hazardous materials teams), the training should address the care, use and/or testing of chemical protective clothing including totally encapsulating suits, the medical surveillance program, and the standard operating procedures for the hazardous materials teams including the plugging and patching equipment.

Officers and leaders, who may be expected to be in charge at an incident, should be fully knowledgeable of their company's incident command system. They should know where and how to obtain additional

assistance and be familiar with the local district's emergency response plan and the state emergency response plan.

Specialist employees (technical experts, medical experts or environmental experts working with hazardous materials) may be sent to the scene by the shipper, manufacturer or governmental agency to advise and assist the person in charge of the incident. These employees should have training on an annual basis. Their training should cover the care and use of personal protective equipment, which would include respirators; knowledge of the incident command system and how they are to relate to it.

Those skilled support-personnel (employees who work for public works departments or operators, who operate bulldozers, sand trucks, backhoes, etc.,) may be called to the incident scene to provide emergency support assistance. These personnel should at least have a safety briefing before entering the area of potential or actual exposure. These skilled support personnel, who have not been a part of the emergency response plan and do not meet the training requirements, should be made aware of the hazards they could face and should be provided all necessary protective clothing and equipment required for their tasks.

Appendix E - Training Curriculum Guidelines

In August 1994, OSHA issued non-mandatory *Appendix E - Training Curriculum Guidelines*, which provides detailed information that can be used in the development of a HAZWOPER training program. Training curriculum suggestions cover:

- When to train employees;
- What the training should consist of;
- How to determine the professional competency of an instructor;
- How to evaluate trainees' proficiency;
- What should be included in the course certification?

These guidelines are not site specific, therefore, additional standards may need to be consulted to achieve total compliance.

Occupational Safety and Health Administration (OSHA) created the HAZWOPER standard to guide employers as to what level of training is most appropriate. By using this standard, along with some common sense, training can be simple, yet effective.

HAZWOPER TRAINING

Table 1 – Recommended Training by Job Category

Training Topic	Emphasis of Training	General Site Worker	On-Site Management & Supervisors	Health and Safety Staff	Visitors
Biology, Chemistry, and Physics of Hazardous Materials	Chemical and physical properties; chemical reactions; chemical compatibilities.	R	R	R	
Toxicology	Dosage, routes of exposure, toxic effects, immediately dangerous to life or health (IDLH) values, permissible exposure limits (PELS), recommended exposure limits (RELs), threshold limit values (TLVs).	R	R	R	
Industrial Hygiene	Selection and monitoring of personal protective equipment. Calculation of doses and		R	R	

	exposure levels; evaluation of hazards; selection of worker health and safety protective measures		R		R	
Rights and Responsibilities of Workers Under OSHA	Applicable provisions of Title 29 of the Code of Federal Regulations (The OSH Act).	R		R		R
Monitoring Equipment	Functions, capabilities, selection, use, limitations, and maintenance.	R		R		R
Hazard Evaluation	Techniques of sampling and assessment.			R		R
	Evaluation of field and lab results.			R		R
	Risk Assessment.			O		R
Site Safety Plan	Safe practices, safety briefings and meetings, Standard Operating Procedures, site safety map.	R		R		R
Standard Operating Procedures (SOPs)	Hands-on practice	R		R		R
	Development of Compliance			R		R
Engineering Controls	Use of barriers, isolation, and distance to minimize hazards.	R		R		R
Personal Protective Clothing and equipment	Assignment, sizing, fit testing, maintenance, use, limitations, and hands-on training.	R		R		R
	Selection of PPE.			O		R
	Ergonomics					R
R= Recommended						
O= Optional						

HAZWOPER TRAINING

Table 1 – Recommended Training by Job Category, continued

Training Topic	Emphasis of Training	General Site Worker	On-Site Management and Supervisors	Health and Safety Staff	Visitors
Medical Program	Medical monitoring, first aid, stress recognition.	R	R	R	
	Advanced first aid, cardiopulmonary resuscitation (CPR); emergency drills.	O	R	R	
	Design, planning, and implementation.			R	
Decontaminatio n	Hands-on training using simulated field conditions.	R	R	R	

	Design and maintenance.	R	R	R
Legal and Regulatory Aspects	Applicable safety and health regulations (OSHA, EPA, etc.).	O	R	R
Emergencies	Emergency help and self-rescue; emergency drills.	R	R	R
	Response to emergencies, follow-up investigation and documentation.		R	R

R= Recommended

O= Optional

HAZWOPER
Table 2 – Training Requirements
Hazardous Waste Clean-Up Sites
Health and Safety Staff

General site employees	40	Hours initial off-site training	1910.120(e)(3)(i)
	3	Days field experience	
	8	Hours annual refresher	
Routine site employees (minimal exposure)	24	Hours initial off-site training	1910.120(e)(3)(iii)
	1	Day field experience	
	8	Hours annual refresher	
Non-routine site employees	24	Hours initial off-site training	1910.120(e)(3)(ii)
	1	Day field experience	
	8	Hours annual refresher	

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Table 3 – Training Requirements
Hazardous Waste Clean-Up Sites
Supervisor/Managers of:

General site employees	40	Hours initial training	1910.120(e)(4)
	3	Days field experience	
	8	Hours hazardous waste management specialized training	
	8	Hours annual refresher	
Routine site employees (minimal exposure)	24	Hours initial off-site training	1910.120(e)(4)
	1	Day field experience	
	8	Hours hazardous waste management specialized training	
Non-routine site employees (minimal exposure)	24	Hours initial off-site training	1910.120(e)(4)
	1	Day field experience	

Trainers	8	Hours hazardous waste management specialized training	
	8	Hours annual refresher	
		Complete training course on subjects, or have credentials and experience to demonstrate competency	1910.120(e)(5)

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Table 4 – Training Requirements
Hazardous Waste Clean-Up Sites
Treatment, Storage and Disposal Sites Staff

General Site employees	24	Hours initial or equivalent training	1910.120(p)(7)
	8	Hours annual refresher	
Emergency Response Personnel		Trained to level of competency	1910.120((p)(8)(iii)
		Annual Refresher	
Trainers		Complete training course on subjects, or have credentials and experience to demonstrate competency	1910.120(p)(7)(iii)

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Table 5 – Training Requirements
Hazardous Waste Clean-Up Sites - Other Emergency Response Staff

Level 1	First Responder (Awareness) Level ¹		Sufficient training or proven experience in specific competencies	1910.120(q)(6)(i)
			Annual refresher to maintain competency	
Level 2	First Responder (Operations Level) ²	8	Hours initial training or proven experience in specific competencies	1910.120(q)(6)(ii)
Level 3	HAZMAT Technician ³	24	Hours of Level 2 and proven experience in specific competencies	1910.120(q)(6)(iii)
Level 4	HAZMAT Specialist ⁴	24	Hours of Level 3 and proven experience in specific competencies.	1910.120(q)(6)(iv)
			Annual refresher to maintain competency	
Level 5	On-The-Scene Incident Commander ⁵	24	Hours of Level 2 and additional competencies	1910.120(q)(6)(v)
Trainer			Complete training course on subjects, or have credentials and experience to demonstrate competency	1910.120(q)(7)

¹ Witnesses or discovers a release of hazardous materials and who are trained to notify the proper authorities.

² Responds to releases of hazardous substances in a defensive manner, without trying to stop the releases.

³ Responds aggressively to stop the release of hazardous substances.

⁴ Responds with and in support to HAZMAT technician, but who have specific knowledge of various hazardous substances.

⁵ Assumes control of the incident scene beyond the first-responder awareness level.