



HAZWOPER

A planning guide



Department of Consumer
and Business Services

HAZWOPER:

Hazardous Waste Operations and Emergency Response Standard

About this guide

“HAZWOPER: A planning guide” is an Oregon OSHA Standards and Technical Resources Section publication.

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HAZWOPER background

HAZWOPER refers to the **Hazardous Waste Operations and Emergency Response standard:** 1910.120, Subdivision 2/H, of the Oregon Administrative Rules. The process of regulating hazardous waste is complex — even defining it is challenging. HAZWOPER protects employees who may be exposed to hazardous substances during cleanup work; at hazardous waste facilities; or when they respond to emergencies. HAZWOPER requires employers to follow specific work policies, practices, and procedures to protect their employees. What the employees do — such as cleanup, disposal, or emergency response — determines the policies, practices, and procedures that employers must follow.

Hazardous waste and worker protection

Hazardous waste (also called “hazardous substance” in HAZWOPER) includes discarded substances in solid, liquid, or gaseous form that can harm humans, other living organisms, or the environment. The Environmental Protection Agency (EPA) has identified 500 types of hazardous waste and regulates them under the [Resource Conservation and Recovery Act \(RCRA\)](#). You can find a formal definition of hazardous waste in EPA Title 40, Code of Federal Regulations (CFR), 261.3.

Oregon OSHA adopted HAZWOPER in 1990, following three EPA standards established to protect the public, workers, and the environment from hazardous waste.

Hazardous waste regulation and worker protection		
Year	The standard	What it did
1976	RCRA: Resource Conservation and Recovery Act	Regulated the creation, transportation, treatment, and disposal of hazardous waste.
1980	CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act (also known as Superfund)	Established a mechanism to respond to accidental hazardous waste spills and environmental damage caused by uncontrolled or abandoned hazardous waste disposal sites created before RCRA.
1986	SARA: Superfund Amendments and Reauthorization Act	SARA, title 1, required federal OSHA to issue regulations protecting workers engaged in hazardous waste operations.
1990	HAZWOPER: Hazardous waste operations and emergency response standard	Established health and safety requirements for Oregon employers who are engaged in hazardous waste operations or who respond to emergencies involving releases of hazardous substances.

Hazardous waste sites may pose a risk to human health and the environment. Abandoned or uncontrolled hazardous waste sites that the EPA or the Oregon Department of Environmental Quality (DEQ) identifies for cleanup are known as Superfund sites. Such sites may be on public and private land or waterways.

Are you covered by HAZWOPER?

HAZWOPER applies to the following Oregon employers:

- Cleanup operations
- Operations involving hazardous wastes at treatment, storage, and disposal (TSD) facilities
- Operations that generate hazardous waste but are not TSD facilities
- Operations that respond to emergencies involving releases of hazardous substances

Cleanup operations

Cleanup operations involve employees who remove, contain, incinerate, neutralize, stabilize, process, or handle hazardous substances at a hazardous waste site to make it safe for people and/or the environment. There are three kinds of cleanup operations: those required by a government agency at an uncontrolled hazardous waste site, corrective actions that involve cleanup at sites covered by RCRA, and voluntary cleanup operations. Voluntary means a government agency recognizes that a site contains hazardous substances that may pose a safety or health threat to workers or the environment until it is controlled.

If you are involved in cleaning up, handling, or processing hazardous substances at a hazardous waste site, you must comply with all parts of HAZWOPER except 1910.120(p) and (q).

Treatment, storage, and disposal (TSD) facilities

Hazardous waste treatment, storage, and disposal (TSD) facilities are required to have an RCRA permit or interim status from EPA. If you are a TSD employer and your facility has an RCRA permit or interim status, you must comply with HAZWOPER 1910.120(p). Other areas of your facility not covered by permit or interim status that could have uncontrolled releases of hazardous substances must comply with HAZWOPER 1910.120(q).

Hazardous waste generators

Many businesses generate hazardous waste as a byproduct of their production operations, store it for a short time, and then send it to a TSD facility for treatment, storage, or disposal. EPA classifies and assigns employers a waste generator status based on the quantity of waste produced. The length of time waste can be stored is dependent on your status and in some cases the nearest TSD facility.

More at: <https://www.epa.gov/hwgenerators>

If you are a conditionally exempt small quantity generator or a business that accumulates hazardous waste for less than 90 days, you are exempt from HAZWOPER 1910.120(p)(1)-(p)(7); you must comply with the emergency response requirements in HAZWOPER 1910.120(p)(8) — Exceptions:

- If you or a government agency require your employees to respond to emergencies in areas in which you store hazardous waste, you must comply with 1910.120(p)(8). However, in any other areas of your facility that could have emergencies caused by uncontrolled releases of hazardous substances — such as production areas — you must comply with HAZWOPER 1910.120(q). In this case, it makes sense to apply 1910.120(q) in the storage areas and the production areas; by complying with 1910.120(q) you meet the requirements 1910.120(p)(8).
- You don't have to comply with HAZWOPER 1910.120(p)(8) or 1910.120(q) if you require your employees to evacuate the facility during an emergency, they do not assist in the response, and if you have an emergency action plan that meets the requirements of **437-002-0042 Subdivision 2/E, Means of egress.**

Operations that respond to emergencies involving releases of hazardous substances

Responses by properly trained employees from outside an immediate release area at a production facility, trained responders from a fire department, or contracted **HAZMAT** responders are examples of emergency response operations. If your employees respond to emergencies caused by uncontrolled releases of hazardous substances no matter where they occur, then you must comply with HAZWOPER 1910.120(q).

Responses to incidental releases of hazardous substances that can be absorbed, neutralized, or controlled at the time of release by those in the immediate release area or by maintenance personnel are *not* emergency response operations.

Questions about environmental regulations and hazardous waste management? The Oregon Department of Environmental Quality is authorized by the Environmental Protection Agency to regulate hazardous waste in Oregon. Contact DEQ, Land Quality Division, www.oregon.gov/deq.

HAZWOPER for cleanup operations

The essential HAZWOPER requirement for cleanup operations is a written safety and health program. This program describes the work policies, practices, and procedures that your employees who do cleanup work must follow. Your written program must also describe the chain of command at the site; task one person with overall responsibility for managing site operations, and make others responsible for carrying out specific tasks, including:

- A general supervisor, who directs site operations.
- A **site safety-and-health supervisor**, who has authority and knowledge to develop the program and who can ensure that it complies with HAZWOPER requirements.
- Those involved in cleanup operations at the site.
- Those who will respond to emergencies at the site.

One site-specific safety and health program is acceptable if it covers all tasks, operations, and employers on the site, and if the employees are trained to use the plan. However, each contractor or subcontractor at the site must comply with HAZWOPER requirements. If you already have a written workplace safety-and-health program, you don't need to develop another one just for your cleanup operations; however, it must address conditions at the site and include the following three elements:

(1) Site Evaluation

HAZWOPER 1910.120(c)

Before your employees begin cleanup work at a new site, a designated qualified person must do a preliminary evaluation to identify potential hazards and associated engineering controls, work practices, and personal protective equipment (PPE). Soon after employees begin working at the site, the qualified person must evaluate the site for areas that may be immediately dangerous to life and health (IDLH); exceed published exposure levels defined in HAZWOPER 1910.120(a)(3); or indicate exposure above radioactive dose limits.

Site evaluation criteria should include:

- The site's hazards, including the physical or chemical properties of hazardous substances and how employees could be exposed to the hazards.
- Employee health and safety risks associated with exposure to hazardous substances.
- Places where hazardous substances could leak.
- Location, size, topography, and access to the site.
- What jobs employees do and how long it will take to accomplish them.
- Qualifications of emergency responders and approximate response times.
- PPE that employees need to do their jobs.

(2) Site Control

HAZWOPER 1910.120(d)

Site control establishes procedures and safe practices that ensure your employees will be protected from hazardous substances. Site control should include:

- A map of the site that identifies contaminated areas.
- Clearly identified work zones that prevent unauthorized workers from entering contaminated areas.
- Written communication and safe work procedures for each work zone.
- Written procedures for a buddy system. A buddy system pairs workers so they can help one another during an emergency. Buddies don't have to work for the same employer, but they must be similarly equipped, appropriately trained, and must know their responsibilities under HAZWOPER.
- Written procedures for warning employees about emergencies.
- The name of the nearest emergency-medical responder.

(3) Employee Training

HAZWOPER 1910.120(e)

Employees need to know about the site hazards, how to recognize the hazards, and how to control exposure. They must have appropriate training before beginning their work. Employers can send employees to an off-site trainer, but are responsible for ensuring that employees can apply their training to the conditions at the site. Employees need to know:

- The names of those responsible for employee safety and health at the site.
- The site's hazards.
- How to use PPE to control exposure.
- How to minimize exposure risks.
- Medical surveillance requirements.
- Procedures for decontaminating clothing and minimizing exposure to hazardous substances.
- Procedures for responding to emergencies.
- Procedures for working in confined spaces.
- Procedures for containing leaks and spills of hazardous substances.

Employees in certain categories whose jobs put them at higher risk of exposure need more training than those who do lower-risk jobs:

Employee category	Initial training	Refresher training
General site workers who remove hazardous substances or engage in activities that may expose them to hazardous substances	Forty hours of off-site instruction and three days of field experience	Eight hours of annual refresher training
Workers on site occasionally who have specific tasks and are unlikely to be exposed above Oregon OSHA permissible exposure limits or published exposure levels	Twenty-four hours of off-site instruction and one day of field experience	Eight hours of annual refresher training
Workers regularly on site in areas where exposures are below exposure limits, respirators are not required, and emergencies are not likely	Twenty-four hours of off-site instruction and one day of field experience	Eight hours of annual refresher training
On-site managers and supervisors who are directly responsible for or who supervise workers engaged in hazardous waste operations	Forty hours of off-site instruction and three days of field experience	Eight hours of annual refresher training

Employees with 24 hours of off-site instruction who become general site workers — or who are required to wear respirators — must have additional training that totals 40 hours of off-site instruction and three days of field experience.

Employees who have successfully completed their training and field experience must receive a written certificate; **they cannot begin work at the site without one.**

Employees who have work experience or training that meets HAZWOPER initial training requirements must be given appropriate site-specific training and have appropriate supervised field experience at the new site.

Medical surveillance

HAZWOPER 1910.120(f)

If your employees are exposed to hazardous substances during their work, you may need to monitor their health to detect medical conditions that could harm them. Medical surveillance consists of regular medical examinations and consultations for those who may be overexposed to hazardous substances during their work.

Employee category	When a medical exam is required
<ul style="list-style-type: none">• Employees who may be exposed to hazardous substances at or above permissible exposure limits or published exposure levels for those substances 30 or more days a year• Employees who wear a respirator for 30 or more days a year or who are required by 1910.134, Subdivision 2/I to wear a respirator• Members of HAZMAT teams	<ul style="list-style-type: none">• Before assignment• Every 12 months unless the physician recommends a longer interval (not to exceed 24 months)• At termination of employment and at reassignment• Immediately after reporting symptoms indicating overexposure
Employees who show symptoms of overexposure to hazardous substances	<ul style="list-style-type: none">• As soon as possible after an employee reports symptoms• When a physician determines that an examination is necessary

Note: Oregon OSHA's requirements for using respirators are in 1910.134, Subdivision 2/I, Personal protective equipment.

Key points about the medical examination:

- The examination must be performed under the supervision of a licensed physician.
- The physician must have information about the employee's duties, exposure levels, and PPE.
- The employee must receive a copy of the physician's written findings.

Keep a record of the examination, including the employee's name and the physician's written opinion regarding the employee's medical fitness to do work or to wear a respirator.

Engineering controls, work practices, and PPE

HAZWOPER 1910.120(d) and 1910.120(g)

How will you control hazards and employee exposure at the site? You can control hazards most effectively with controls that “engineer” or physically change the work environment to reduce exposures to safe levels. Safe-work practices and PPE are less effective, but can be combined with engineering controls to protect employees.

Using PPE. If employees will use PPE (which includes respirators) during hazardous waste operations, your written program must ensure the following:

- Equipment is selected to protect employees against site-specific hazards.
- Employees maintain and store the equipment properly.
- Employees understand the equipment’s limitations.
- Equipment is decontaminated and disposed of properly.
- Employees are trained to use, wear, and inspect equipment.
- Equipment fits employees who use it.

Air monitoring

HAZWOPER 1910.120(h)

Air monitoring can tell you the concentration of air contaminants in areas where employees may be exposed to hazardous substances. Personal sampling (or monitoring) tests the exposures of individual employees by sampling the air in their breathing zones. Testing air for contaminants in specific locations, called area monitoring, is used to estimate exposures affecting groups of employees. Monitoring is required during initial site entry and during cleanup.

Establish a monitoring policy that applies to conditions at the site. Briefly describe what you are monitoring for, the monitoring equipment that you will use, and how often you will monitor. The policy must also specify the concentrations of airborne contaminants at which you will re-evaluate the effectiveness of the site’s engineering controls, safe work practices, and PPE.

When to monitor	How to monitor
<ul style="list-style-type: none">• At initial entry• When an employee suspects a hazardous condition or hazardous atmosphere	Monitor the air to identify any condition immediately dangerous to life and health (IDLH) and hazardous exposure levels
After the cleanup phase of a hazardous waste operation begins	Use personal sampling to monitor employees likely to have the highest exposures to hazardous substances

Informing employees and contractors

HAZWOPER 1910.120(i) and 1910.120(b)(1)(iv)

Your written program must ensure that employees and contractors know about the chemical, physical, and toxicologic properties of the hazardous substances to which they may be exposed before they begin work at the site.

Handling hazardous materials

HAZWOPER 1910.120(j)

Drums or containers: If these are stored either above ground or buried, they must be inspected before moving for leaks or signs of weakness.

Containers should be stored so that it is not necessary to move them frequently. Never stand on containers or use them as a work platform. When working in flammable surroundings, always use explosion-resistant equipment.

Controlling leaks and spills: Don't move containers that show signs of weakness, bulging, or swelling; or containers that contain radioactive waste until exposure risks have been assessed. Establish a procedure to contain leaks or spills and ensure that employees are trained and have appropriate containment equipment, salvage containers, and absorbents available at the site for leaks and spills.

Opening hazardous waste containers: Use caution when opening containers with pressurized contents; open them from a remote location or use appropriate shielding. Those not involved in opening hazardous waste containers must be at a safe distance or be protected by a suitable shield. Permit only specially trained employees to open laboratory waste packs. Consider unidentified laboratory waste or any laboratory waste pack with crystallized material on the outside as shock sensitive.

Shock-sensitive waste: Those who handle shock-sensitive waste must first evacuate all nonessential employees from the area, then sound an alarm to warn others. Use handling equipment that has explosion-resistant shields or barriers. Handlers must also ensure continuous communication with the site's safety and health supervisor.

Decontamination

HAZWOPER 1910.120(k) and 1910.120(p)(4)

Your written program must include procedures to ensure that employees who may be exposed to hazardous substances decontaminate themselves and decontaminate or properly dispose of contaminated equipment, including PPE.

Decontamination must be done in areas that will minimize the exposure of uncontaminated employees or equipment. If you send employee clothing to a commercial laundry, inform the laundry about the harmful effects of hazardous substances that may contaminate the clothing.

Emergency response

HAZWOPER 1910.120(l) and 1910.120(p)(4)

Your written program must ensure that employees at the site know what to do in the event of an emergency such as fire, personal injury, or a chemical release. Your emergency response plan must also coordinate with the local emergency response plan within your state or district. If you rely on a local emergency responder such as a fire department for services, you must ensure they can respond appropriately. If not, you must find a responder who can.

What your emergency response plan must include:

- A description of possible emergencies at the site
- The roles and authority of emergency personnel
- Communication procedures used during emergencies
- Procedures for reporting emergencies to local, state, and federal government agencies
- Emergency zones, safe distances, and evacuation areas at the site
- Security and control measures for emergencies
- Site evacuation procedures and routes
- Emergency-response equipment available at the site
- Procedures for medical treatment and first-aid
- Emergency decontamination procedures
- Training required for employees who will respond to emergencies at the site
- Criteria for evaluating the plan

Regularly rehearse the plan's procedures and review the plan to keep it current.

Lighting for employees

HAZWOPER 1910.120(m)

Employees must have enough light to do their work safely. The following table shows the minimum illumination intensities in foot-candles* for typical areas at hazardous waste operations.

Foot-candles	Work area
5	General work areas
3	Excavation and waste areas, access ways, active storage areas, loading platforms, refueling, and field maintenance areas
5	Indoors
5	Tunnels, shafts, and general underground work areas
10	Shop areas
30	First-aid stations, infirmaries, and offices

* Illumination is commonly measured in foot-candles. One foot-candle is the illumination produced by one candle at a distance of one foot. The most practical way to measure illumination is with a light meter.

Sanitary facilities

HAZWOPER 1910.120(n)

Your written program must include a policy that ensures that potable water and appropriate toilets, washing, and showering facilities are available at the site.

Drinking water. Employees must have an adequate supply of drinking water at the site. Water must be supplied from clearly labeled closed portable containers with taps. The containers cannot be used for any other purpose. If you provide disposable cups, employees must take them from a sanitary container and dispose of them in a separate container.

Non-potable water outlets must clearly state that the water is not to be used for drinking, washing, or cooking.

Toilet facilities. Toilet facilities must be available for employees at the site. Sites that don't have sanitary sewers must have chemical, recirculating, combustion, or flush toilets. Doors to toilets must have locks that can be controlled from the inside.

Washing facilities. Handwashing facilities must be available for employees in work areas that expose them to contaminants that could harm them.

Shower facilities. Shower facilities and change rooms must be available at the site if employees do cleanup work for at least six months and they may be exposed to hazardous substances. Showers and change rooms must meet the sanitation requirements of **1910.141(d)(3) and 1910.141(e), Subdivision 2/J, General environmental controls**, and must be located in areas with exposures below permissible exposure limits and published exposure levels. Employees must shower at the end of their work shifts or before they leave the site.

New technology

HAZWOPER 1910.120(o) and 1910.120(p)(5)

"New technology" in HAZWOPER refers to products and equipment introduced by manufacturers to protect workers who do hazardous waste cleanup operations. Your written program should direct employees to evaluate such products when they replace existing products or purchase new ones.

HAZWOPER for treatment, storage, and disposal (TSD) facilities

You must have a written safety-and-health program that will protect employees who may be exposed to hazardous substances at the facility. The purpose of the program is to ensure that you identify, evaluate, and control safety and health hazards and respond promptly to emergencies. Required program elements are:

Site analysis

HAZWOPER: 1910.120(p)(1)

If your employees begin work at a site other than your facility, a designated **qualified person** must do a preliminary site evaluation to identify the specific hazards to which they may be exposed and to determine what engineering controls, work practices, and PPE are needed to protect them. The qualified person must evaluate for areas that are: immediately dangerous to life and health (IDLH), exceed published exposure levels, and indicate exposure above radioactive dose limits. Soon after employees begin working at the site, the qualified person must do a detailed site evaluation.

Site evaluation criteria:

- The site's hazards, including the physical or chemical properties of hazardous substances and how employees could be exposed to the hazards.
- Employee health and safety risks associated with exposure to hazardous substances.
- The places where hazardous substances could leak.
- The location, size, topography, and access to the site.
- Employees' jobs at the site and how long it will take them to complete the jobs.
- Qualifications of emergency responders and approximate response times.
- PPE that employees need to do their jobs.

Employers must inform employees about the chemical, physical, and toxicologic properties of hazardous substances to which they may be exposed before they begin work at the site.

Engineering controls, work practices, and PPE

HAZWOPER: 1910.120(p)(1)

Part of your written program must describe how you will identify and control site hazards.

Controls that “engineer” or physically change the work environment to reduce exposures to safe levels are the most effective. Safe work practices or “administrative” controls and PPE are less effective, but can be combined with engineering controls to protect employees.

Using PPE. When PPE is used by employees, employers must comply with [standards](#). When respirators are used, employers must comply with 1910.134, Subdivision 2/I. The written program must address the following for all PPE:

- Equipment is selected to protect employees against site-specific hazards.
- Employees maintain and store the equipment properly.
- Employees understand the equipment’s limitations.
- Equipment is decontaminated and disposed of properly.
- Employees are trained to use, wear, and inspect equipment.
- Equipment fits employees who use it.

Hazard communication

HAZWOPER: 1910.120(p)(1) and Hazard Communication 1910.1200

Your written program must have a policy that ensures employees know about chemical hazards at the worksite and how to protect themselves from the hazards. The policy does not apply to hazardous waste as defined by the Solid Waste Disposal Act and amended by the [Resource Conservation and Recovery Act of 1976](#). Your hazard communication policy must meet the requirements of the hazard communication standard, **1910.1200, Subdivision 2/Z, Toxic and hazardous substances**, which includes the following:

Hazard determination. Identify and maintain a current list of all hazardous chemicals at the site, including hazardous substances to which employees may be exposed during their routine and nonroutine tasks, and hazardous substances in pipes.

Labeling. Label containers of hazardous chemicals with the chemical’s name and a warning about its hazards. Pipes must be labeled in accordance with [Oregon Rules for Pipe Labeling, 437-002-0378](#).

Safety data sheets. A safety data sheet for each hazardous chemical used at the site must be readily accessible to employees during their work shifts.

Employee training. Inform and train employees who work with hazardous chemicals before their assignments and whenever their assignments or work processes change.

Medical surveillance

HAZWOPER 1910.120(p)(3) and 1910.120(f)

If your employees are exposed to hazardous substances during their work you may need to monitor their health to detect medical conditions that could harm them. Medical surveillance consists of regular medical examinations and consultations for those who may be overexposed to hazardous substances during their work. The table shows employees who must have medical surveillance.

Employee category	When a medical exam is required
<ul style="list-style-type: none">• Employees who may be exposed to hazardous substances at or above permissible exposure limits or published exposure levels for those substances 30 or more days a year• Employees who wear respirators for 30 or more days a year or who are required by 1910.134, Subdivision 2/I to wear a respirator• Members of HAZMAT teams	<ul style="list-style-type: none">• Before assignment• Every 12 months unless the physician recommends a longer interval (not to exceed 24 months)• At termination of employment and reassignment• Immediately after reporting symptoms indicating overexposure
Employees who show symptoms of overexposure to hazardous substances	<ul style="list-style-type: none">• As soon as possible after an employee reports symptoms• When a physician determines that an examination is necessary

Key points about the medical examination:

- The examination must be performed under the supervision of a licensed physician.
- The physician must have information about the employee's duties, exposure levels, and PPE.
- The employee must receive a copy of the physician's written findings.
- Keep a record of the examination, including the employee's name and the physician's written opinion regarding the employee's medical fitness to do hazardous waste work and to wear a respirator.

Handling hazardous materials

HAZWOPER 1910.120(p)(6) and 1910.120(j)(1)(ii)-(viii), 1910.120(j)(xi), 1910.120(j)(3), 1910.120(j)(8)

Before moving drums or containers, check for leaks or signs of weakness.

Controlling leaks and spills. Establish a procedure to contain leaks or spills and ensure that employees are trained and have appropriate containment equipment. Make sure there are salvage containers and absorbents at the site. Do not move containers that show signs of weakness, bulging, or swelling. Do not move radioactive waste until exposure risks have been assessed.

Material-handling equipment. The equipment that you use to move containers must be selected and operated to minimize the risk of igniting vapors from damaged containers.

Shipping and transporting containers. Identify and classify containers before shipping them. Limit the number of container staging areas and make sure they are accessible. Put hazardous wastes in bulk containers only after determining it is safe to do so.

Training

HAZWOPER 1910.120(p)(7)

Employees who work at the facility must have initial and refresher training that covers the following topics:

- How to identify and control hazards
- Decontamination procedures and how to use PPE
- How to minimize exposure to hazardous substances
- How to use engineering controls and equipment
- Medical surveillance procedures
- Procedures for responding to emergencies

The hours of required training differs for new employees, current employees, and trainers, shown in the table below:

Employee category	Initial training	Refresher training
New employees	Twenty-four hours	Eight hours annually
Current employees	None required if previous work experience and training is equivalent to the 24 hours of training for new employees	Eight hours annually
Trainers	Satisfactory completion of a training course for subjects they are expected to teach and competent instructional skills	None required

Employees who have successfully completed their initial training must receive a written certificate.

Emergency response

HAZWOPER: 1910.120(p)(8)

Your written program must include a plan that ensures employees know what to do during an emergency at the facility. The requirements for your emergency response plan depend on whether employees evacuate the site or respond to an emergency, as shown in the following table:

Type of emergency response	Emergency response plan requirement
Employees are evacuated during an emergency and do not help respond to the emergency	See the requirements in 437-002-0041, Subdivision 2/E, Means of egress
Employees remain on site during an emergency or help respond to an emergency	Refer to the required HAZWOPER 1910.120(p)(8) elements and training requirements below

If employees remain on site during an emergency or help respond to an emergency, your emergency-response plan must address the following elements:

- Planning and coordinating with off-site responders
- Personnel roles, lines of authority, and communication procedures
- Emergencies and how to prevent them
- Safe distances and places of refuge
- Site control and security
- Evacuation routes and procedures
- Emergency decontamination procedures
- Emergency medical treatment and first aid
- Emergency communication procedures
- Necessary emergency equipment, including PPE
- Emergency-response plan evaluation criteria

Training for emergency responders must cover the following topics:

- Elements of the emergency response plan
- Procedures for handling emergencies
- PPE necessary for emergencies
- How to recognize hazards that may endanger responders

You need to certify that each employee has successfully completed the training, or certify their competency yearly. Keep records that show how they have been trained and their training dates.

You don't need to give emergency response training to every employee at the facility if one of the following applies:

- You have trained a smaller number of employees to control emergencies and all other employees know how to recognize emergencies, summon the trained responders, and evacuate the affected area.
- A trained off-site team will respond promptly to an emergency, and on-site employees know how to recognize emergencies and summon the responders.

Use the plan to do the following:

- Inform responders about the site's topography and layout
- Coordinate the plan with the emergency response plans of local, state, and federal agencies
- **Rehearse the plan's procedures regularly**
- Review the plan regularly and keep it current
- Evaluate the plan's effectiveness after an incident and correct deficiencies
- Install an alarm ([in accordance with 1910.165](#)) at the site that will notify employees of an emergency

Emergency response training for chemical facility employees. Chemical facility employees who manufacture, use, store, or handle hazardous materials need emergency response training only if their activities could cause an emergency. Incidental releases of hazardous substances that employees can control quickly are not emergencies. However, these employees should have training covering the emergency action plan, hazard communication, and respiratory protection.

HAZWOPER for emergency responders

Prompt, effective responses to emergencies happen when they are based on prepared, well-rehearsed plans. If you are an employer who responds to releases of hazardous substances, your written emergency response plan must include the elements described in this section. If you are already following a local or state emergency response plan, you don't need to create another one; however, your plan must cover all of the elements in this section.

Basic elements

- Planning and coordinating with off-site responders
- Personnel roles, lines of authority, and communication procedures
- Possible emergencies and how to prevent them
- Safe distances and places of refuge
- Site control and security
- Evacuation routes and procedures
- Emergency decontamination procedures
- Emergency medical treatment and first aid
- Emergency communication procedures
- Necessary emergency equipment, including PPE
- Plan-evaluation criteria

Critical elements

- Incident command system
- Training
- Medical surveillance
- Chemical-protective clothing
- Post-emergency response operations

Incident command system

HAZWOPER 1910.120(q)(3)

An incident command system is a set of procedures for controlling and managing operations during an emergency. One person — the emergency scene commander — has overall responsibility for managing emergency activities at a site and directs the activities through a chain of command to those responsible for carrying out specific emergency-response tasks. Responsibilities of the emergency scene commander:

- Identifying hazardous substances or conditions at the site.
- Designating a safety official, who knows emergency procedures at the site, to help identify and evaluate hazards. This official has the authority to alter, suspend, or cancel emergency-response activities in conditions **imminently dangerous** or **immediately dangerous to life or health (IDLH)**.
- Enforcing procedures and ensuring that responders wear appropriate PPE.
- Determining when responders can remove positive-pressure, self-contained breathing apparatus.
- Keeping others away from the site (with the exception of those involved in the emergency operations).
- Implementing appropriate decontamination procedures after emergency operations.



Training

HAZWOPER 1910.120(q)(4)-(6)

Minimum training for emergency responders:

Employee category	Initial training	Refresher training
Skilled support personnel	Skilled equipment operators needed to perform emergency-support work	Initial briefing covering hazards, PPE, and duties at the scene
Specialist employees	Provide technical assistance or advice on specific hazardous substances	Annual refresher training, or ability to demonstrate competency in their specialty
Level 1: first responder, awareness level	Likely to witness or discover a hazardous substance release and initiate the emergency-response notification process	Training to identify emergencies and initiate the response process Additional Level 1 competencies, [Refer to 1910.120(q)(6)(i)] Annual refresher training
Level 2: first responder, operations level	Responds to releases of hazardous substances; contains the release from a safe distance but is not involved in stopping the release; protects nearby people, property, or the environment from the effects of the release	Eight hours of training that includes Level 1 awareness training or the equivalent relevant experience Additional Level 2 competencies, [Refer to 1910.120(q)(6)(ii)] Annual refresher training
Level 3: HAZMAT technician	Responds to releases of hazardous substances; attempts to stop the release	Twenty-four hours of Level 2 training Additional Level 3 competencies, [Refer to 1910.120(q)(6)(iii)] Annual refresher training
Level 4: HAZMAT specialist	Supports the HAZMAT technician; acts as a government liaison during an emergency	Twenty-four hours of Level 3 training Additional Level 4 competencies [Refer to 1910.120(q)(6)(iv)] Annual refresher training
On-scene incident commander	Implements the incident command system and the emergency-response plan	Twenty-four hours of Level 2 training Additional on-scene incident commander competencies [Refer to 1910.120(q)(6)(v)] Annual refresher training
Trainers	Instructs any of the above employees	Satisfactory completion of courses in the subjects they will teach

Medical surveillance

HAZWOPER 1910.120(q)(9) and 19120(f)

Medical surveillance consists of regular medical examinations for employees who may be exposed to hazardous substances during their work. The purpose of the examinations is to detect medical conditions that could harm employees because of their hazardous waste operations work.

Employees requiring medical exams	When an exam is required
<ul style="list-style-type: none">• HAZMAT specialists• Employees who wear respirators for 30 or more days a year, or who are required by 1910.134, Subdivision 2/1 to wear a respirator• Members of HAZMAT teams	<ul style="list-style-type: none">• Before assignment• Annually; more frequently if recommended by a physician• At termination of employment or reassignment• Immediately after reporting symptoms indicating overexposure
Employees who show symptoms of overexposure to hazardous substances	<ul style="list-style-type: none">• As soon as possible after an employee reports symptoms• When a physician determines that an examination is necessary

Key points about the medical examination:

- It must be performed under the supervision of a licensed physician.
- The physician must know about the worker's duties, potential exposure levels, and PPE.
- The employee must receive a copy of the physician's written findings.
- The employer must keep a record of the examination, including the employee's name and the physician's written opinion regarding the employee's medical fitness to do hazardous waste work or to wear a respirator.

Chemical-protective clothing

HAZWOPER 1910.120(g)(3)-(g)(5); 1910.120(q)(10); 1910.120 Appendix A; 1910.120 Appendix B

Chemical-protective clothing ranges from items such as gloves and face shields to totally encapsulating chemical-protective suits and provides four levels of protection (refer to [HAZWOPER 1910.120 Appendix A and B](#) for details). This part of the emergency-response plan ensures that employees will be protected from chemical, physical, or biological hazards during emergency-response operations. If your employees use chemical-protective clothing, your emergency-response plan must ensure the following:

- Clothing is selected to protect employees against site-specific hazards
- Employees maintain and store the equipment properly
- Employees understand the equipment's limitations
- The equipment is decontaminated or disposed of properly
- Employees are trained to use, wear, and inspect the equipment
- The equipment fits employees who use it

Employees who may be exposed to substances that could cause immediate death, serious illness, or injury must wear totally encapsulating chemical-protective suits. The suits must provide the following level-A protection:

- *Positive-pressure, full-facepiece, self-contained breathing apparatus (SCBA) or positive-pressure supplied-air respirator with escape SCBA approved by the National Institute for Occupational Safety and Health (NIOSH)*
- Chemically resistant gloves
- Chemically resistant boots with steel toe and shank
- Disposable protective suit

Post-emergency-response operations

HAZWOPER 1910.120(b)-1910.120(o)

If your employees are involved in cleanup operations after responding to an emergency, your written program must ensure that they are protected. Post-emergency response refers to any remaining cleanup after the emergency-response team finishes its work. Your written plan must address the HAZWOPER requirements in 1910.120(b)-1910.120(o) that apply to the cleanup work your employees do.

Brownfields and HAZWOPER

Brownfields do not have levels of contamination that warrant listing on federal or state priority cleanup lists. However, the Oregon Department of Environmental Quality (DEQ) may list a brownfield for cleanup or other remedial action based on a site assessment by department staff. Brownfields are not likely to be an immediate health hazard to those living or working nearby, although effects from long-term exposure are possible. Brownfields may be a health hazard for employees who work on site.

Hazardous substances found on brownfields may include petroleum hydrocarbons, gasoline or diesel fuel, metals, construction debris containing asbestos or lead paint, polychlorinated biphenyls (PCBs), wood-treating chemicals, and industrial chemicals. They may be present in air, soil, sediment, surface or groundwater, and in structures or containers at the site.

How does HAZWOPER apply to brownfields?

To be covered under HAZWOPER, a brownfield must meet the definition of an uncontrolled hazardous waste site: **Any area identified as such by a governmental body where an accumulation of hazardous substances creates a threat to the health and safety of individuals or the environment.** In Oregon, brownfields generally fall under HAZWOPER 1910.120(a)(1)(iii): “Voluntary clean-up operations at sites recognized by federal, state, local, or other governmental bodies as uncontrolled hazardous waste sites.”

HAZWOPER 1910.120(b)-(o) applies to any work activity where hazardous substances are present. Work done for site characterization and cleanup operations are examples. Construction activities in areas where hazardous substances remain on site and are managed in place fall under the scope of the HAZWOPER rules.

The Oregon DEQ regulates brownfield cleanup under a variety of programs, including Voluntary Cleanup and Site Response; the program depends on whether cleanup is performed voluntarily or under DEQ enforcement authority. DEQ-regulated brownfields must have safety and health plans that meet HAZWOPER 1910.120(b)(4) requirements. DEQ does not approve the plans.

The site plan is the basis for training and informing workers about hazardous substances on site, recognizing signs and symptoms of chemical exposure, steps to take if a hazardous substance is discovered during routine activities, medical emergency or evacuation procedures, and decontamination procedures. On-site personnel must know who is responsible for the site safety-and-health plan.

HAZWOPER does not apply to construction activities at sites where contamination has been removed to concentrations that do not endanger human health. Workers performing routine construction activities must fully comply with the Oregon OSHA construction rules (Division 3).

Clandestine drug labs and HAZWOPER

Illegal drug labs pose health and environmental threats from toxic chemicals associated with the production of methamphetamine, fentanyl, ecstasy, and other synthetic drugs. The chemicals can contaminate structures, groundwater, and soil, and harm those near the labs.

Small, mobile labs that produce one or two ounces at a time are frequently located in residences, motels, hotels, or automobiles. “Super” labs are capable of producing 10 pounds or more of meth per month and 5 to 6 pounds of waste for each pound of product.

How does HAZWOPER apply to clandestine drug labs?

HAZWOPER applies to police and cleanup personnel who deal with clandestine drug labs. Oregon State Police must follow the agency’s clandestine drug laboratory policy, which also serves as a model for other police agencies and response teams. State police must also be certified under their agency’s standards for clandestine drug operations and meet HAZWOPER training requirements for emergency response and post-emergency-response operations as part of the certification. HAZWOPER rules apply to police tactical operations and hazardous substance removal from drug lab sites. Unless information to the contrary is available, clandestine drug labs are assumed to be chemically contaminated and HAZWOPER 1910.120(q) applies.

Operations against a clandestine drug lab must be coordinated through an incident command system. Team supervisor and site safety officer roles must be established for planning, entry, hazard identification, and evidence recovery. Participating agencies must also plan and coordinate their actions to ensure employee safety. The incident commander is responsible for determining whether a lab is contaminated. Chemical contamination may be determined by sampling with direct-reading instruments; by observing spilled chemicals, or open or leaking containers; by complaints of chemical odors; and by symptoms such as watery eyes, irritated skin, or difficulty breathing. Employees or members of HAZMAT teams who complain of signs and symptoms of exposure are entitled to medical consultation under HAZWOPER 1910.120(f).

Properties that have been declared unfit for use by a law enforcement agency are considered uninhabitable until they are cleaned up by a state-certified decontamination contractor and a certificate of fitness has been issued by the Oregon Department of Human Services Office of Public Health Systems. Post-emergency cleanup operations of contaminated sites are covered under HAZWOPER 1910.120(b)-(o). Contractors and their employees must meet HAZWOPER requirements for 40-hour training and eight-hour annual refresher training. Supervisory personnel must have additional training. A two-day certification class and biennial refresher are also required. More information about drug lab cleanup is available on the Oregon Department of Human Services’ website, www.oregon.gov/dhs.

Key words and rules

1910.1200, Subdivision 2/Z, Toxic and hazardous chemicals. Oregon OSHA hazard communication requirements.

1910.134, Subdivision 2/I, Personal protective equipment. Oregon OSHA requirements for respiratory protection.

1910.141(d)(3) Subdivision 2/J, General environmental controls. Oregon OSHA sanitation requirements for shower facilities.

1910.141(e) Subdivision 2/J, General environmental controls. Oregon OSHA sanitation requirements for change rooms.

437-002-0042 Subdivision 2/E, Means of egress. Oregon OSHA requirements for emergency action plans.

Brownfield. Real property where expansion or redevelopment is complicated by actual or perceived environmental contamination. A brownfield cannot be the subject of planned or ongoing removal actions, posted or proposed for listing on the National Priority List, the subject of an administrative court order under solid and hazardous waste laws, the subject of corrective actions or closure requirements, or a federal facility.

Buddy system. A system of organizing employees into work groups so that each employee of the work group is observed by at least one other employee in the work group. The purpose of the buddy system is to ensure immediate assistance to employees in an emergency.

CERCLA. Refer to [Comprehensive Environmental Response, Compensation, and Liability Act](#).

Chain of command. Chain of command links one person with overall responsibility for managing an emergency to others responsible for carrying out specific emergency-response tasks.

Cleanup operation. Hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleaned up to make a site safer for people or the environment.

Comprehensive Environmental Response, Compensation, and Liability Act (also Superfund).

Federal legislation that provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA).

Conditionally exempt small quantity generator. Generator of 220 pounds or less of hazardous waste per month; has less burdensome record keeping and reporting requirements than small quantity generators or large quantity generators.

Decontamination. Removal of hazardous substances from employees and equipment.

Emergency action plan. Oregon OSHA requirement Subdivision 2/E, 437-002-0042, for responding to emergencies such as fires, toxic substance releases, severe weather, and flooding.

Emergency response. Response by employees from outside an immediate release area or by other designated responders to an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances in which the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area or by maintenance personnel, are not considered emergency responses within the scope of HAZWOPER.

Emergency response operation. Response to a hazardous waste spill or leak.

Environmental Protection Agency (EPA). Federal agency whose mission is to protect human health and the environment.

EPA Title 40, Code of Federal Regulations (CFR), 261.3. Definition of hazardous waste.

EPA Title 40, Code of Federal Regulations (CFR), 261.5. Special requirements for hazardous waste generated by conditionally exempt small quantity generators.

EPA Title 40, Code of Federal Regulations (CFR), 262.34. Standards applicable to generators of hazardous waste, accumulation time.

Facility. A building or a site where a hazardous substance has been deposited; facility refers to hazardous waste generators, TSD facilities, and designated recycling facilities.

Generator. An owner, manager, or controller of a facility that creates hazardous waste.

Hazardous materials response team (HAZMAT). An organized group of employees, designated by their employer, that controls hazardous substance leaks or spills. A HAZMAT team is not a fire brigade, nor is a fire brigade necessarily a HAZMAT team. A HAZMAT team may be a separate component of a fire brigade or fire department, however.

Hazardous substance. A substance defined under HAZWOPER 1910.120(a)(3)(A)-(D); a substance defined under section 9601(14) of CERCLA; an agent that can cause death, disease, or other adverse health effects in humans; a substance listed by the U.S. Department of Transportation as a hazardous material under 49 CFR 172.101.

Hazardous waste. Waste or combination of wastes as defined in Title 40, CFR 261.3; substances defined as hazardous wastes in Title 49 CFR 171.8; a waste defined as hazardous in the state of Oregon under OAR 340-101-0033.

Hazardous waste generator. Refer to [Generator](#).

Hazardous waste operation. Any operation conducted within the scope of HAZWOPER 1910.120.

Hazardous Waste Operations and Emergency Response standard (HAZWOPER). Subdivision 2/H, 1910.120 of the Oregon Administrative Rules.

Hazardous waste site. An area contaminated by hazardous waste that poses a risk to human health or the environment.

HAZMAT. Refer to [Hazardous materials response team](#).

HAZWOPER. Refer to [Hazardous Waste Operations and Emergency Response standard](#).

Health hazard. A chemical, mixture of chemicals, or a pathogen for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees.

Immediately dangerous to life or health (IDLH). An atmospheric concentration of any toxic, corrosive, or asphyxiant substance that poses an immediate threat to life, would cause irreversible or delayed adverse health effects, or would interfere with an individual's ability to escape from a dangerous atmosphere.

Interim status. Authorization granted by the EPA that allows a TSD facility to continue operating pending review and decision of the facility's permit application.

Large-quantity generator. Generator of more than 2,200 pounds of hazardous waste in one month, more than 2.2 pounds of acutely hazardous waste in one month, or more than 220 pounds of debris containing acutely hazardous waste in one month.

Oregon Department of Environmental Quality (DEQ). Agency responsible for protecting and enhancing Oregon's water and air quality and for managing disposal of solid and hazardous wastes.

Oxygen deficiency. The concentration of oxygen by volume below which atmosphere supplying respiratory protection must be provided. The percentage of oxygen by volume is less than 19.5 percent oxygen.

Permissible exposure limit (PEL). The exposure, inhalation, or dermal exposure limits specified in 1910 Subdivision 2/G (Occupational Health and Environmental Controls) and 1910 Subdivision 2/Z (Toxic and Hazardous Substances).

Post-emergency response. That portion of an emergency response performed after the immediate threat of a hazardous substance release has been stabilized or eliminated and cleanup of the site has begun.

Published exposure level. The exposure limits published in “NIOSH Recommendations for Occupational Health Standards” or exposure limits specified by the American Conference of Governmental Industrial Hygienists.

Qualified person. A person with specific training, knowledge, and experience in the area for which the person has the responsibility and the authority to control.

Radioactive dose limits. Under CERCLA, remedial actions should generally attain dose levels of no more than 15 millirems per year effective dose equivalent for sites at which a dose assessment is conducted. Dose is the amount of energy deposited in body tissue due to radiation.

RCRA permit. Permit required for a hazardous waste treatment, storage, or disposal facility.

RCRA. Refer to [Resource Conservation and Recovery Act](#).

Resource Conservation and Recovery Act (RCRA). Federal law that regulates hazardous waste as amended by Oregon law.

SARA. Refer to [Superfund Amendments and Reauthorization Act](#).

SARA, title I. Required OSHA to issue regulations protecting workers engaged in hazardous waste operations.

Site safety and health supervisor. The person at a hazardous waste site who has the authority and knowledge necessary to implement a site safety-and-health plan and verify compliance with safety and health requirements.

Small-quantity generator. Generator of no more than 2,200 pounds of hazardous waste in any calendar month.

Superfund Amendments and Reauthorization Act (SARA). Amendments to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

TSD facility. Refer to [Treatment, storage, and disposal facility](#).

Treatment, storage, and disposal facility (TSD). A facility that treats, stores, or disposes of hazardous waste and is subject to RCRA permit requirements.

Uncontrolled hazardous waste site. An uncontrolled hazardous waste site, as designated by a governmental agency, at which an accumulation of hazardous substances creates a threat to the health and safety of people or the environment.

Written safety-and-health program. Comprehensive workplace-safety-and-health requirements for cleanup operations and TSD facilities required in HAZWOPER 1910.120(b)(1)(i) and 1910.120(p)(1).

Oregon OSHA Services

Oregon OSHA offers a wide variety of safety and health services to employers and employees:

Appeals

➤ 503-378-3272

- Provides the opportunity for employers to hold informal meetings with Oregon OSHA on concerns about workplace safety and health.
- Discusses Oregon OSHA's requirements and clarifies workplace safety or health violations.
- Discusses abatement dates and negotiates settlement agreements to resolve disputed citations.

Conferences

➤ 503-378-3272; 888-292-5247, Option 1; oregon.conferences@dcbs.oregon.gov

- Co-hosts conferences throughout Oregon that enable employees and employers to learn and share ideas with local and nationally recognized safety and health professionals.

Consultative services

➤ 503-378-3272; 800-922-2689; consult.web@dcbs.oregon.gov

- Offers no-cost, on-site safety and health assistance to help Oregon employers recognize and correct workplace safety and health problems.
- Provides consultations in the areas of safety, industrial hygiene, ergonomics, occupational safety and health programs, assistance to new businesses, the Safety and Health Achievement Recognition Program (SHARP), and the Voluntary Protection Program (VPP).

Enforcement

➤ 503-378-3272; 800-922-2689; enforce.web@dcbs.oregon.gov

- Offers pre-job conferences for mobile employers in industries such as logging and construction.
- Inspects places of employment for occupational safety and health hazards and investigates workplace complaints and accidents.
- Provides abatement assistance to employers who have received citations and provides compliance and technical assistance by phone.

Public education

- 503-947-7443; 888-292-5247, Option 2; ed.web@dcbsoregon.gov
- Provides workshops and materials covering management of basic safety and health programs, safety committees, accident investigation, technical topics, and job safety analysis.

Standards and technical resources

- 503-378-3272; 800-922-2689; tech.web@dcbsoregon.gov
- Develops, interprets, and gives technical advice on Oregon OSHA's safety and health rules.
- Publishes safe-practices guides, pamphlets, and other materials for employers and employees.
- Manages the Oregon OSHA Resource Center, which offers safety videos, books, periodicals, and research assistance for employers and employees.

Need more information? Call your nearest Oregon OSHA office.

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