

MNOSHA guidelines for releases of hazardous substances that may require an emergency response

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For more information, contact:

Minnesota Department of Labor and Industry
Occupational Safety and Health Division
443 Lafayette Road N.
St. Paul, MN 55155-4307
Phone: (651) 284-5050
Toll-free: 1-877-470-OSHA (1-877-470-6742)
E-mail: osha.compliance@state.mn.us
Web site: www.dli.mn.gov

MNOSHA guidelines for releases of hazardous substances that require an emergency response

The function of this document is to present a thorough discussion of the distinction between incidental releases of hazardous substances and releases that require an emergency response, and, hence, compliance with the provisions of 1910.120(q), Emergency Response to Hazardous Substance Releases. This has been a point of considerable inquiry to and interpretation by OSHA.

An understanding of the distinction between an incidental release of a hazardous substance and a release that requires an emergency response is fundamental to proper compliance with 1910.120(q). This part of the Hazardous Waste Operations and Emergency Response (HAZWOPER) standard was written to cover a wide array of facilities and situations where "emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard" may result in employee exposure to safety or health hazards (1910.120(a)(1)(v)).

Potential releases of hazardous substances in the workplace can be categorized into three distinct groups in terms of the planning provisions of 1910.120(q). These groups are:

1. releases that are clearly incidental regardless of the circumstances;
2. releases that may be incidental or may require an emergency response depending on the circumstances; and
3. releases that clearly require an emergency response regardless of the circumstances.

Releases that are clearly incidental

The scope of the HAZWOPER standard does not cover the inevitable release of a hazardous substance that is limited in quantity and poses no emergency or significant threat to the safety and health of employees in the immediate vicinity. This type of release is referred to as an "incidental release" in 1910.120(a)(3), where "emergency response" is defined.

An incidental release is a release of a hazardous substance that does not pose a significant safety or health hazard to employees in the immediate vicinity or to the employee cleaning it up, nor does it have the potential to become an emergency within a short time frame. Incidental releases are limited in quantity, exposure potential or toxicity and present minor safety or health hazards to employees in the immediate work area or those assigned to clean them up.

If the hazardous substances that are in the work area are always stored in very small quantities, such as a laboratory that handles amounts from pints to test tubes, and the hazardous substances do not pose a significant safety and health threat at that volume, then the risks of having a release that escalates into an emergency are minimal. In this setting, incidental releases will generally be

the norm and employees will be trained to protect themselves in handling incidental releases according to the requirements of Employee Right-to-Know.

For example, a tanker truck is receiving a load of hazardous materials at a tanker truck loading station. At the time of an accidental spill, the product can be contained by employees in the immediate vicinity and cleaned up utilizing absorbent without posing a threat to the safety and health of employees. This situation describes an "incidental spill" under HAZWOPER. An incidental spill poses an insignificant threat to health or safety and may be safely cleaned up by employees who are familiar with the hazards of the chemicals with which they are working.

Releases that may be incidental or require an emergency response depending on the circumstances

The properties of hazardous substances, such as toxicity, volatility, flammability, explosiveness and corrosiveness, as well as the particular circumstances of the release itself, including quantity, confined-space considerations and ventilation, will have an impact on what employees can handle safely and what procedures should be followed. Additionally, there are other factors that may mitigate the hazards associated with a release and its remediation, such as the knowledge of the employee in the immediate work area, the response and personal protective equipment (PPE) at hand and the pre-established standard operating procedures for responding to releases of hazardous substances. There are some engineering control measures that will mitigate the release that employees can activate to assist them in controlling and stopping the release.

These three considerations combine to define the distinction between incidental releases and releases that require an emergency response. The distinction is facility-specific and is a function of the emergency response plan.

For example: A spill of the solvent toluene in a facility that manufactures toluene may not require an emergency response because of the advanced knowledge of the personnel in the immediate vicinity and equipment available to absorb and clean up the spill. However, the same spill inside a furniture refinishing shop with personnel that have had only the basic Employee Right-to-Know training about toluene may require an emergency response by more highly trained personnel. The furniture refinishing shop's emergency response plan in this case would call for evacuation for all but the most minor spills, while evacuation and emergency response would be necessary for only much larger spills at the chemical manufacturing facility.

Releases that require an emergency response regardless of the circumstances

There are releases of hazardous substances that pose a significant enough threat to health and safety that, by their very nature, require an emergency response regardless of the circumstances surrounding the release or the mitigating factors. An employer must determine the potential for

an emergency in a reasonably predictable worst-case scenario, or "anticipated emergency," and plan response procedures accordingly.

For example, a motor carrier is engaged in the transportation of hazardous materials. At the time of an accidental release, the product cannot be contained by employees in the immediate vicinity and cleaned up utilizing absorbent. Because of the larger problem, the motor carrier's employees evacuate the area and call for outside help, as instructed by the employer.

In this instance, if an employer instructs all employees to evacuate the danger area in the event of a spill of a hazardous substance, then the employer may not be required to train those employees under 1910.120. However, the ability to decide whether a spill is an incidental spill or one requiring an emergency response requires training. Employers electing to evacuate their employees must create an emergency action plan that meets the requirements of 1910.38. Also, any employees who are expected to become actively involved in an emergency response due to a release of a hazardous substance are covered by 1910.120 and must be trained accordingly. (Note: OSHA has limited jurisdiction for over-the-road vehicle operation. In the instance of spills occurring while the material is on the vehicle or otherwise "in transportation," OSHA's HAZWOPER standard does not cover the operator per se. However, it does cover emergency response personnel who respond to the incident. If the operator of the vehicle in transportation becomes actively involved in an emergency response, then he or she becomes an emergency responder and is covered by 1910.120(q).)

An emergency response may include any of the following situations:

1. the response comes from outside the immediate release area;
2. the release requires evacuation of employees in the area;
3. the release poses or has the potential to pose conditions that are immediately dangerous to life and health (IDLH);
4. the release poses a serious threat of fire or explosion (it exceeds or has the potential to exceed the lower explosive limit or lower flammable limit);
5. the release requires immediate attention because of imminent danger;
6. the release may cause high levels of exposure to toxic substances;
7. there is uncertainty the employee in the work area can handle the severity of the hazard with the PPE and other equipment that has been provided and the exposure limit could easily be exceeded; or
8. the situation is unclear or data is lacking about important factors.

Responders from outside the immediate release area

Emergency response is defined in 1910.120(a)(3).

Emergency response means a response effort by employees from outside the immediate release area **or** by other designated responders (i.e., mutual-aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result, in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances where 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 to be emergency responses within the scope of this standard. Responses to releases of hazardous substances where there is no potential safety or health hazard (i.e., fire, explosion or chemical exposure) are not considered to be emergency responses.

The standard covers responses "by other designated responders," preceded by "or," which means responders are a separate group, different from employees within the immediate release area, directed to respond to the emergency by the employer. Employees working in the immediate release area (not just outsiders) are covered if the employer designates them as emergency responders. The standard, 1910.120(q), uses the term "responders" generally to refer to employees who respond to emergencies.

The Superfund Amendments and Reauthorization Act (SARA), the statute that mandated HAZWOPER, directs broad coverage of all employees responding to emergencies with no limitation on their location. SARA 126(d)(4) states, "standards shall set forth responding requirements for training of workers who are responsible for responding to hazardous emergency situations who may be exposed to toxic substances." For an emergency to be covered by the standard, conditions causing a dangerous situation that involve hazardous substances are sufficient, there need not be both an emergency and a response by outside responders before the employer prepares for an emergency.

For example, a release of chlorine gas above the IDLH, obscuring visibility and moving through a facility is an emergency situation even if the initial responders are from the immediate release area. Employees who would respond to this situation, whether they work in the immediate area or come from outside, would need to act in accordance with 1910.120(q).

Employees must not be made to respond to releases in the immediate release area that would otherwise require outside assistance from a trained hazardous materials team merely because the definition of an emergency response states that an emergency response is "a response effort by employees from outside the immediate release area."

Conversely, incidental releases of hazardous substances that are routinely cleaned up by those from outside the immediate release area need not be considered emergency responses solely because the employee responsible for cleaning it up comes from outside the immediate release area.

For example, paint thinner is spilled in an art studio and the janitor is called from outside the immediate release area to mop it up. The janitor does not have to respond in accordance with 1910.120, although the janitor would be expected to understand the hazards associated with paint thinner through Employee Right-to-Know training.

Other OSHA standards

Other standards that impact emergency response to fires, chemical releases or other incidents should be part of an emergency response compliance evaluation. Flammable chemical spills and other small fires are covered by 1910.157, Portable Fire Extinguishers, as well as 1910.156, Fire Brigades. The Process Safety Management for Highly Hazardous Chemicals standard, 1910.119, and the Employee Right-to-Know standard, Minnesota Rules Chapter 5206, as well as some of the specific expanded health standards in Subpart Z would also apply.