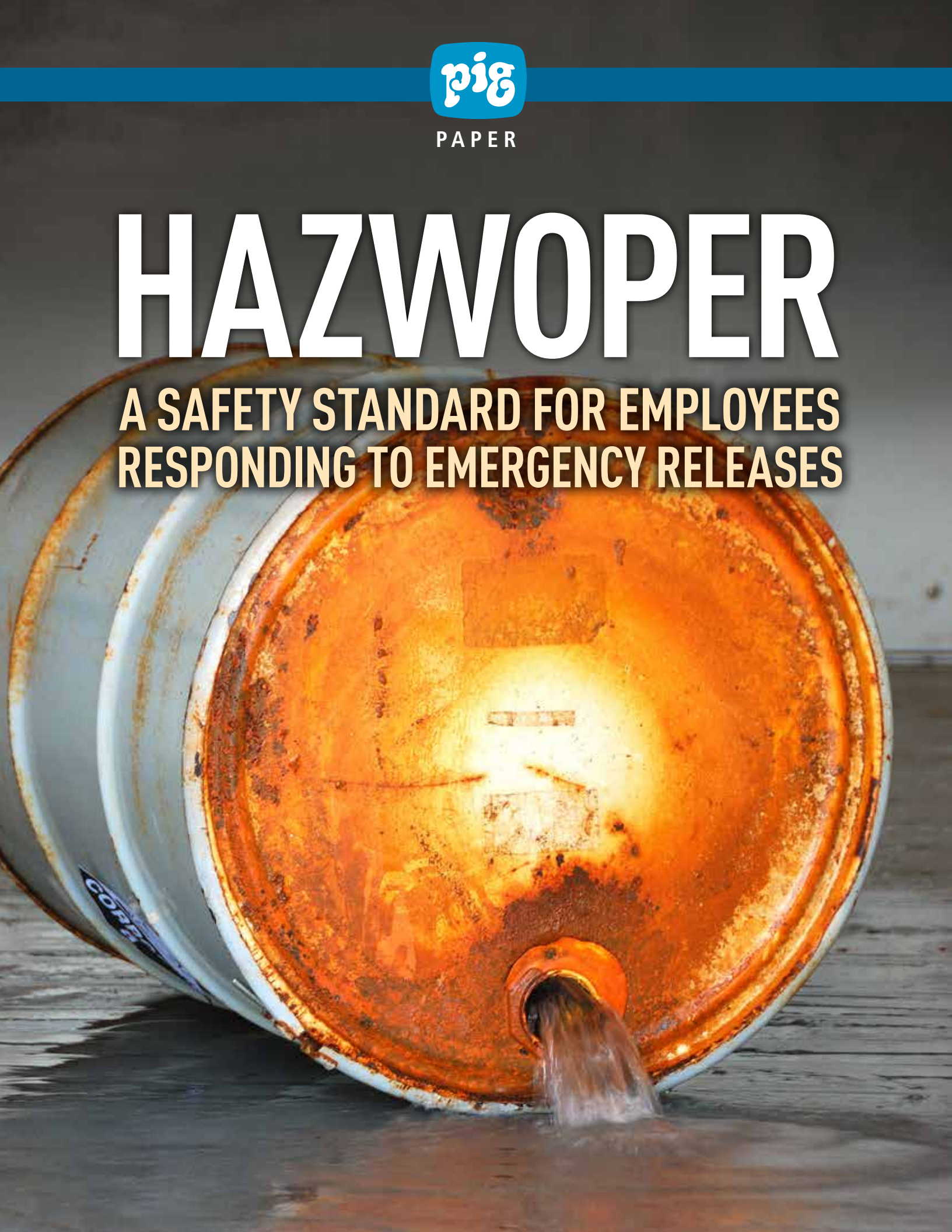
pig

PAPER

HAZWOPER

A SAFETY STANDARD FOR EMPLOYEES RESPONDING TO EMERGENCY RELEASES



HAZWOPER

A Safety Standard for Employees Responding to Emergency Releases

Toxic gas clouds, broken pipes spraying liquids in all directions, leaky containers, limited mobility, hot suits, thick gloves and heavy air packs are just a few of the hazards that emergency spill responders can face when they're called upon to clean up a chemical spill.

When spill emergencies happen, the standard safety rules that facilities have in place to prevent injuries and illness may no longer apply. After safely evacuating nonresponders, emergency responders need a different set of criteria to keep themselves safe.

The Occupational Safety and Health Administration (OSHA) created the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation to help keep employees safe while they are responding to chemical spills, working at hazardous waste sites or performing operations at Transportation, Storage and Disposal Facilities (TSDFs). Because spill responders often face situations that fall far outside the parameters of most facilities' standard operating procedures, this regulation is specifically designed to teach responders how to protect themselves from danger and how to perform emergency response and cleanup operations safely.

In this PIG Paper, you'll find out who needs HAZWOPER training and learn how to best respond to emergency spills.

HAZWOPER regulations cover five groups of employees:

1. Cleanup operations that are required by a governing body
2. Corrective actions at Resource Conservation and Recovery Act (RCRA) sites
3. Voluntary cleanup at sites recognized by a government agency
4. Operations at TSDFs
5. Emergency response to a hazardous chemical release or threat of a release

The HAZWOPER rule outlines the specific training requirements for each of these groups of employees, as well as their supervisors and others who may provide supporting services during a response. Employees who respond to spills at fixed facilities differ slightly from the other four groups because they traditionally perform other duties on a regular basis, but have also been specifically trained to respond when a spill situation occurs that is beyond the training level or capabilities of their fellow employees.

Employers are required to teach employees what to do when there is a spill. Part of this training includes describing when a spill is incidental and can be safely cleaned up, and when they should evacuate and leave response to someone with more training.

Incidental and Emergency Spills

Establishing criteria for what constitutes a spill emergency is important for facilities because OSHA requires anyone responding to emergency releases have certain levels of HAZWOPER training. Incidental spill response is not governed under the HAZWOPER standard, and training to clean up incidental spills can be incorporated into other safety trainings.

Reviewing chemical inventories, Safety Data Sheets and processing safety documents will provide a good baseline for making determinations. Although every spill is different, OSHA provides guidance on how to determine what types of spills anyone can be taught to handle and which ones should be left for trained emergency responders:

"An incidental release is a release of a hazardous substance which 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 to those assigned to clean them up. An incidental spill may be safely cleaned up by employees who are familiar with the hazards of the chemicals with which they are working."

OSHA is clear about volume not being the sole factor in determining whether or not an emergency spill has occurred. The following factors should all play into determining whether a spill is incidental or an emergency:

- The properties (toxicity, flammability, corrosivity, etc.) of each hazardous chemical in the facility
- The volume that may be spilled
- Location (confined space, areas with poor ventilation, etc.)
- Employee's level of knowledge
- Availability of tools and personal protective equipment (PPE)

Every facility needs to be prepared to respond to both incidental and emergency releases. OSHA does, however, allow facilities to contract emergency response services to outside contractors instead of training in-house staff to perform emergency response functions. Facilities that choose to have emergency response capabilities in-house need to ensure that those employees meet the criteria outlined in the HAZWOPER standard.

Emergency Response Plans

Spills can be caused by any number of scenarios. Employers are responsible for considering events that could potentially cause a chemical release and developing a written plan that addresses these situations.

Plans should be specific to the facility and must include the following elements:

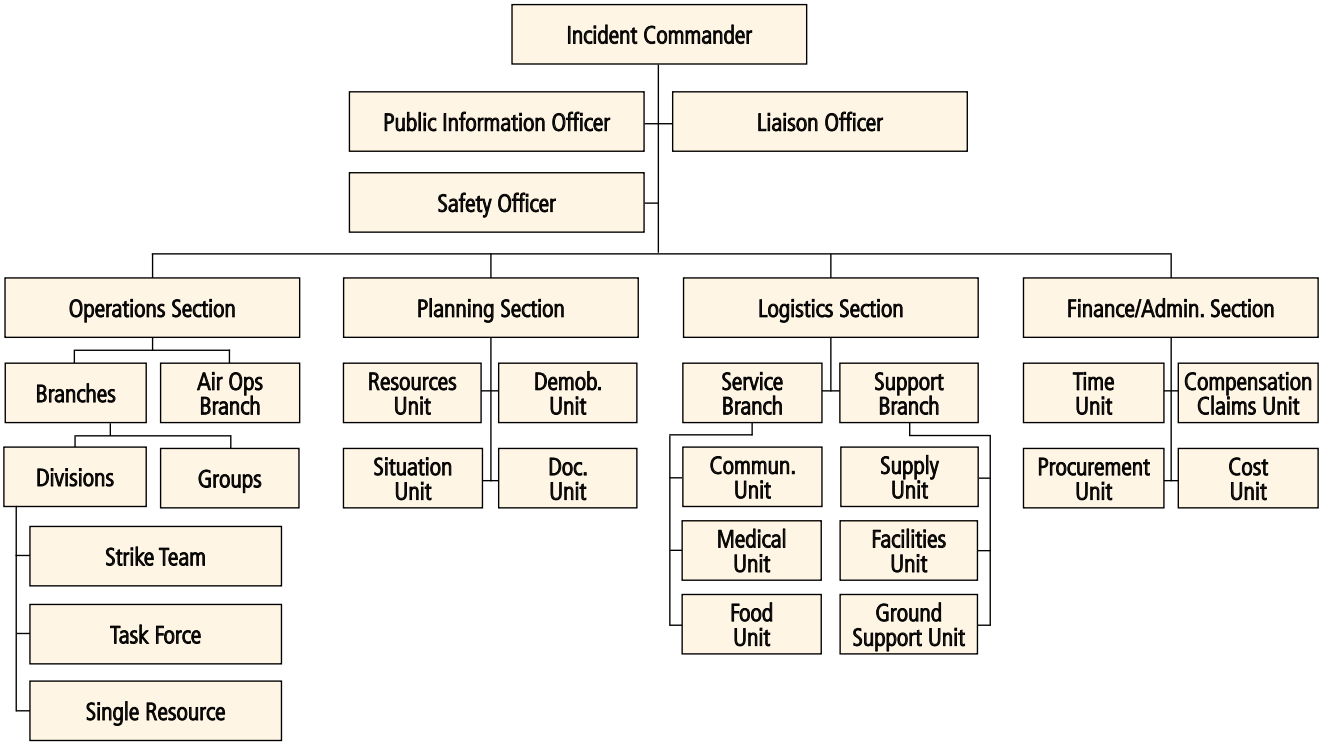
- Roles of personnel, training and lines of authority
- Recognition and prevention of emergencies
- Evacuation routes, safety zones and site security
- Emergency alerting, medical treatment and first aid
- Response procedures, including the tools and PPE available to responders as well as decontamination procedures
- Coordination and planning with outside response agencies
- Response critiques and follow-up

Facilities can use local and state emergency response plans as a template for creating their own plans and response procedures. Applicable parts of response plans that have been created to satisfy other regulatory requirements can also be incorporated to help simplify training and plan maintenance.

Incident Command Systems

Life safety is the top priority of all emergency responders. During a large response, it is common for multiple groups to be performing different tasks at the same time. To maintain safety, keep track of everyone involved in a response effort and provide a framework that allows different types of response agencies to work together. The Federal Emergency Management Agency (FEMA), for example, developed the National Incident Management System (NIMS) and the Incident Command System (ICS), both of which were influenced by response efforts that firefighters use during wildfire responses to standardize the way that incidents are managed, as well as the language used by responders.

The benefits of NIMS and ICS are that they are scalable, and both the organizational chart and response principles can be applied to all types of hazards. As part of HAZWOPER training, emergency responders become familiar with NIMS and ICS as well as the types of response roles that may be needed to respond to an incident. Those responding to a spill would fall under the operations section.



Source: FEMA

Levels of Training

Each employee at your facility must be taught what to do when there is a spill emergency. Even if their only action is to exit the building and go to a predetermined safe location, training and regular drills are necessary to ensure that they know what they are expected to do when an emergency happens.

Employees who will be more involved in stopping, controlling, containing or cleaning up an emergency spill need to have the appropriate level of HAZWOPER training for the skills they will perform. Following initial training, responders must also take annual refresher training to ensure that they have maintained their skill sets. Some HAZWOPER-trained employees also need to have a medical evaluation before performing response duties.

First Responder Awareness Level

Employees who are likely to discover an emergency spill and who will be expected to initiate response by notifying the proper authorities (such as a supervisor) must be trained to the first responder awareness level. First responder awareness level employees:

- Have an understanding of what constitutes hazardous substances, how to recognize them and who to contact when there is an emergency release
- Have been taught the risks associated with hazardous substances and how to use the DOT Emergency Response Guidebook
- Know the risks associated with hazardous substances and the potential outcomes of a spill emergency involving those substances

First Responder Operations Level

Employees who will take defensive action to contain a spill from a safe distance, but who will not stop the source of the release, must have operations-level training. The initial training is at least eight hours, and employees at the operations level must be able to demonstrate competency with:

- All awareness level skills
- Knowledge of hazard- and risk-assessment techniques
- Selection and use of any PPE provided
- Understanding of basic hazmat terms
- Performing containment operations and implementing decontamination procedures
- SOPs and incident termination procedures

Hazardous Materials Technician

Hazardous materials technicians stop the source of a release by plugging, patching, damming, closing valves or otherwise preventing the spill from becoming larger. Their initial training is at least 24 hours and requires competency in the following:

- All awareness and operations levels skills
- Understanding of hazard- and risk-assessment techniques as well as basic chemical and toxicological terminology and behavior
- How to implement the employer's emergency response plan
- How to use field instruments to classify or identify materials
- How to function under their assigned rule in ICS
- How to select and use PPE
- Performing advanced spill control, containment and confinement operations
- Understanding and implementation of decontamination procedures

Hazardous Materials Specialist

These individuals will support hazardous materials technicians by providing specialized information on chemicals, processes or other unique hazards. Their duties are similar to hazardous materials technicians, but are more detailed and specialized. Hazardous materials specialists also act as site liaisons with local, state and federal agencies. Specialists have at least 24 hours of training and competency in:

- The state and local emergency response plans
- Developing site safety and control plans
- Understanding chemical, radiological and toxicological terminology and behavior
- Classifying, identifying and verifying known and unknown materials using advanced surveying instruments or equipment
- Selecting specialized PPE
- In-depth hazard- and risk-assessment techniques
- Performing specialized control, containment and confinement operations
- Determining and implementing decontamination procedures

On-Scene Incident Commander

The on-scene incident commander assumes control of an incident scene and oversees incident planning, operations, logistics and other functions. Initial training is at least 24 hours and at least equal to that of operations level responders. Incident commanders must:

- Know and be able to implement the employer's incident command system
- Know how to implement the employer's emergency response plan
- Know and understand the hazards and risks associated with employees working in chemical protective clothing
- Know how to implement federal, state and local emergency response plans

Skilled Support Personnel

Employees who operate equipment such as backhoes or forklifts are often needed to support emergency operations. OSHA requires them to be properly trained, but there is no set time requirement attached to their training. These employees need to know:

- When to wear appropriate PPE
- What chemical hazards are onsite
- What duties they will be asked to perform
- Any safety and health precautions that are necessary for their roles

After training, regular drills help ensure that responders can maintain their skills and knowledge — especially in facilities where spills aren't common. Coordinating drills with local responders, such as firefighters, police and hazmat teams, can help expand employees' skills and help everyone involved get to know each other's abilities. These efforts promote safety during spill response and will help efficiently restore operations.

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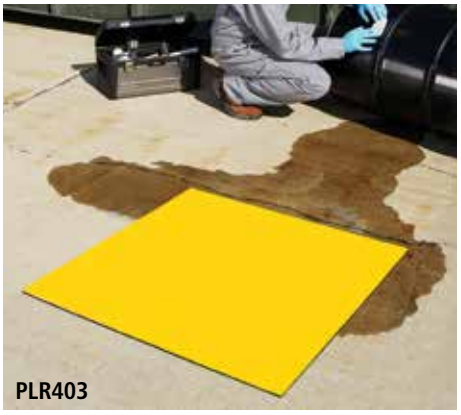

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