

To The Point About Hazardous Spill Response FACT SHEET

LENGTH: 10 MINUTES

Production Year: 2024

PROGRAM SYNOPSIS:

Our workplace is full of hazards, hazards that can hurt us or kill us. Controlling these hazards and preventing injuries is the point of our safety and health program. One such hazard is the one presented by the uncontrolled release of a hazardous material, or “HazMat.” Protecting all personnel, the general public, and the environment from the harmful effects of a HazMat spill is the point of hazardous spill response procedures. This program discusses the different roles in a HazMat Spill Response Team, their PPE, and some basic ways to clean up a spill safely.

PROGRAM OBJECTIVES:

After watching the program, the participant should be able to explain the following:

- What is a HazMat;
- HAZWOPER regulations;
- The members and responsibilities of a HazMat Spill Response Team;
- The duties of each member of the team;
- The purpose of an Emergency Action Plan (EAP);
- What takes place during DECON.

PROGRAM OUTLINE:

INTRODUCTION

- Our workplace is full of hazards, hazards that can hurt us or kill us. Controlling these hazards and preventing injuries is the point of our safety and health program.
- One such hazard is the one presented by the uncontrolled release of a hazardous material, or “HazMat.”
- Protecting all personnel, the general public, and the environment from the harmful effects of a HazMat spill is the point of our organization’s hazardous spill response procedures, and that is the point of this program. So, pay close attention as we “get to the point” about hazardous spill response.

SKILLS AND RESPONSIBILITIES

- Identifying the spilled material and its hazards, selecting PPE that can withstand prolonged contact, sampling the air for flammable gases or harmful levels of a contaminant, and choosing and deploying compatible sorbents and diking materials to contain and clean up the spill safely are some of the skills needed by a HazMat Spill Response Team.
- They also work toward establishing a decontamination area so all exposed personnel, tools, and non-disposable PPE may be safely cleaned and decontaminated.

HAZWOPER

- In most instances, when a HazMat is spilled or released in an uncontrolled manner, it is not recoverable as a useful product and must be considered waste. But it’s not like normal waste that can be gathered up and simply thrown away and recycled.
- It is hazardous waste, and its transportation, cleanup and disposal is highly regulated by OSHA, the Environmental Protection Agency, and the Department of Transportation, each of which maintains their own listings of the materials they consider to be hazardous.
- Both OSHA and the EPA have issued “Hazardous Waste Operations and Emergency Response” regulations, better known as “HAZWOPER.”
- The purpose of the HAZWOPER regulations is to protect workers tasked with handling or cleaning up hazardous waste and ensure they are able to handle the hazardous substances safely and effectively.

TRAINING

- The HAZWOPER regulations define specific training requirements and levels of HAZWOPER training.

- Only those employees who have completed the appropriate level of HAZWOPER training and are authorized by their organization may participate in hazardous spill response or cleanup.
- When unqualified personnel attempt to contain or clean up a hazardous spill, they place themselves and others at risk of serious injury or death.
- In many cases, it is a material handler, plant operator, lab worker, or similar person who first notices a leak or spill.
- The HAZWOPER regulations refer to this type of person as a “First Responder” and they must have an “awareness” level of training that will allow them to understand the hazards presented by the spilled material, know the minimum safe distance to move away from the spill, and initiate the emergency response procedure developed by their organization to trigger an alarm and deploy a HazMat Spill Response Team.

INITIAL ARRIVAL AT SPILL

- When the HazMat Spill Response Team first arrives at the scene, their initial priority will be to protect people, property, and the environment by safely containing the spill and preventing its spread.
- First, they will determine the identity and nature of the spilled material and ensure that all potentially impacted personnel are moved to a safe distance away from the spill.
- The identity and nature of the spilled material will dictate the level of Personal Protective Equipment, or “PPE,” required for responding team members.
- HAZWOPER levels of PPE range from level A to level D, with level A offering the most protection and level D offering the least.
- Next, the source of the spill or leak will be stopped or slowed if possible, and measures will be taken to contain the spill and prevent its entry into any drains or waterways.

DUTIES OF SPILL RESPONSE MEMBERS

- The HAZWOPER regulations outline the roles and duties of the various Spill Response Team members.
- The “Operations Level” first responder covers drains, remotely shuts down pumps, and performs other defensive duties to contain and control the spill.
- The “Technician Level” first responder is more offensive in nature and is able to limit the spread of the spill by manipulating drums or containers to stop the flow, plugging holes, installing patches, closing valves, and performing other actions to stop the release.
- The Technician Level first responder is also able to use various direct-reading instruments and gas monitors to determine contaminant concentration levels, the presence of flammable gases or vapors, oxygen levels, and other critical hazard information.
- The “HazMat Specialist” has the same skills as the HazMat Technician but with an added emphasis on the hazards and properties of chemicals, identifying unknown chemicals, and the initial creation and implementation of emergency response plans.
- Regardless of role, all team members must be able to assess the hazards of the incident, understand the terminology to be used during the operation, and implement the emergency response plan and procedures to be used.
- During a HazMat incident, the overall person in charge is known as the “Incident Commander.” The Incident Commander is responsible for the overall containment and cleanup effort as well as the safety of every person onsite and the public.
- The person designated as Incident Commander is typically the most senior, appropriately trained individual present at the response site. An Incident Commander will have a minimum of 40 hours of HAZWOPER training.

EMERGENCY ACTION PLAN

- A key resource for the Incident Commander will be the facility’s Emergency Action Plan or “EAP.”
- OSHA requires employers to create a site-specific EAP which should include chemical-specific spill response procedures such as the minimum safe distance for evacuation from a spill, the specific PPE required to prevent harmful exposure during cleanup, any applicable exposure limits and IDLH levels, required respiratory protection based on known and unknown concentration levels, methods to neutralize, dilute, or otherwise make the spill less hazardous, and the type of sorbent and containment materials that are compatible with the spilled substance.
- It’s critical that a safe and compatible sorbent be selected to match the chemical or material to be cleaned up. Certain sorbents may react violently to certain chemicals.
- Once used to clean up hazardous waste, these items must be placed into appropriate hazardous waste containers.

DECONTAMINATION

- And finally, a decontamination area must be established so all exposed personnel, tools, and non-disposable PPE may be safely cleaned and decontaminated.
- This process is frequently referred to as “DECON” and consists of a series of cleaning stations that progress from the contaminated “hot zone” towards the “cool zone” or “support zone” which is not contaminated.
- Typically, a mild solution of detergent and water is used for decontamination; however, some substances may require a specific type of decontamination solution.
- The DECON area should be set up so that all contaminated water and other items can be contained, collected, and disposed of properly.

CONCLUSION

- A proficient and well-drilled spill response team is critical to protecting the environment and preventing injuries and fatalities related to a hazardous spill or release.
- Your specific responsibilities during a hazardous materials incident will be determined by your level of HAZWOPER training and the direction of the incident commander.
- As someone who works with or near hazardous chemicals or materials, understanding the proper response to a chemical spill or release can prevent injuries and save lives.
- After all, preventing injuries is the point of our safety and health program, which is why you must make it a point to be safe.