Chapter 6: Spills Preparedness

Beyond the DNR requirements for responding to spills in Chapter 5, federal agencies have requirements to help you prevent and prepare for the possibility of spills and other accidents.

Section A: Emergency preparedness & workplace safety

Maintaining a healthy and safe facility increases productivity and reduces time lost to accidents. Proactively addressing health and safety issues can also result in lower insurance costs.

OSHA sets certain standards for workplace safety and health. Under OSHA standards, printers are required to:

- maintain Material Safety Data Sheets (MSDSs) for hazardous chemicals stored or used at their facilities (approximately 500,000 chemicals, including fire hazards and health hazards, are covered by this provision)
- conduct emergency preparedness planning
- develop a Hazard Communication Program
- provide employee training for responding to chemical spills or releases

Does my facility need an Emergency Action Plan?

Accidents and emergency situations can occur; be prepared for such events. OSHA requires printers to:

- develop and maintain an emergency action and fire prevention plan
- make the plan available to all employees
- train employees to follow the plan in case of emergency

OSHA requirements and procedures vary depending on the business's size and hazardous waste generator status:

- facilities with 10 or fewer employees do not need a written plan, though one is recommended
- Small and Large Quantity Generators (SQGs and LQGs; refer to Chapter 2: Hazardous Waste for details) must develop safety, training and emergency procedures for handling accidental spills of hazardous waste in addition to the Emergency Action Plan because the environmental regulations require a response, which in turn triggers OSHA's requirements.

What should an Emergency Action Plan contain?

Whether your facility develops a written or verbal plan, it should contain the following:

- procedures for reporting an emergency
- evacuation routes and locations of exits
- procedures for accounting for employees
- alarm system (e.g., a public address system)

- identification of fire hazards, including sources of heat or areas where flammable/ignitable products are stored or used
- individual responsibilities during an emergency, including those of the designated **Emergency Coordinator** (see below)
- locations of fire protection **equipment**, including fire extinguishers, water or fire hoses, and areas served by overhead sprinkler systems, etc. (see below)
- **Emergency Notification List** (see below)

For assistance with developing Emergency Action Plans:

- OSHA provides resources on its web site (see the Web Resources in the Black Ink Room section of this workbook)
- the University of Wisconsin Extension provides information about developing a plan and shows sample plans for review, at **http://www.werp.uwex.edu/EAP.htm**

Emergency Coordinator.

Designate and train one employee as the facility's Emergency Coordinator (it is helpful to designate alternates also). Typically, the Emergency Coordinator is responsible for leading and coordinating the Emergency Action Plan. The coordinator is the person in charge during emergency situations, and his/her responsibilities include:

- determining whether an emergency exists
- activating and overseeing emergency procedures
- directing shutdown of utilities or facility operations if necessary
- notifying and coordinating with outside emergency services

Emergency Equipment.

Keep the following equipment available for use during an emergency:

- alarm system or public address system
- external communication system, e.g., a telephone
- portable fire extinguishers and water in adequate volume and pressure for use by fire fighters
- spill cleanup materials, such as absorbents
- eyewash station
- personal protective equipment (PPE), such as gloves, safety glasses, etc.
- additional equipment you consider necessary

Emergency Notification List.

Compile an Emergency Notification List, and post it near all facility phones, near the hazardous waste storage area, and in any other locations where it would be helpful. The list should include:

- name and telephone number of the Emergency Coordinator
- location of fire and spill control equipment
- telephone number of the local Fire Department
- telephone number of the Wisconsin spill hotline (800-943-0003)
- if desired, contact information for the local hospital or emergency medical responders

- if desired, contact information for local police and county emergency management personnel

After you develop the Emergency Action Plan, make it available to all employees so that they can become familiar with it, and train them so they know what to do in case of an emergency.

	**Question SP.1:** Have you developed an Emergency Action Plan and trained employees on it?	❑ Yes ❑ No. Develop a plan and train all employees.

Section B: Hazard Communication Program (HAZCOM)

The Hazard Communication Standard or HAZCOM is an OSHA regulation requiring printers to inform their employees about hazards of the job and how to minimize chemical exposure or safety risks. Requirements include a written program, chemical inventory, MSDSs, container labels, and employee training. The following is just a brief summary of the requirements for HAZCOM.

Does my facility need a HAZCOM Program?

Yes. All employees need to know about hazardous substances in the printing facility and the proper handling and use of these materials.

What should a HAZCOM Program contain?

The Hazard Communication Program (HAZCOM) has four main components:

1) **MSDSs and Chemical Inventory.** Create a written inventory of all hazardous substances used at the printing facility.

- assemble a MSDS for each substance
- make the MSDSs available to employees for review
- keep the MSDSs accessible for reference in case of a spill or other emergency

2) **Training.** Train all employees who may be exposed to hazardous chemicals to understand MSDSs and properly handle and use hazardous substances.

3) **Labeling.** Identify and label hazardous substances at the facility.

- label each hazardous substance used or stored at your facility
- label containers of hazardous substances with the identity of the substance and appropriate hazard warnings, using words, pictures, symbols, or a combination thereof, which provide at least general information regarding the physical and health hazards of the chemicals
- label pipes that convey hazardous substances with a description of contents and associated hazards

4) **Written Program.** Develop, implement and maintain a written program. The program should describe, at a minimum, how your facility will meet the criteria mentioned above, including:

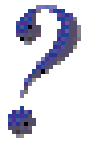
- MSDS inventory
- employee training procedures

The **MSDS inventory** is also a valuable tool for pollution prevention. The inventory will show any toxic or hazardous substances that can be replaced by non-hazardous or less toxic substitutes.

For **labeling**, many printers employ a Hazardous Materials Identification System (HMIS) that uses a combination of colors, numbers, and letters to describe the nature and hazards associated with a substance. It also lists personal protective equipment that should be worn to minimize exposure to the substance. There are a number of HMIS software packages available for purchase if you need assistance.

- information for all employees
- labeling of hazardous substances

OSHA has resources on its web site, at **http://www.osha.gov/SLTC/hazardcommunications/solutions.html**, to assist employers with developing Hazard Communication Programs.

	**Question SP.2:** Have you developed HAZCOM program, including all four elements described above?	❑ Yes ❑ No. Develop a HAZCOM program.

Section C: Hazardous Waste Operations and Emergency Response (HAZWOPER)

OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER) standard requires employers to follow practices that protect their employees from exposure to health and physical risks associated with hazardous substances during work, cleanup activities, or when responding to emergencies.

For HAZWOPER purposes, hazardous substances are chemicals or agents that have adverse effects on the health or safety of employees exposed to them. The HAZWOPER standard defines which chemicals qualify as hazardous substances in the workplace.

What do I need to know about the HAZWOPER standard?

HAZWOPER regulations apply to employers who are:

- hazardous waste cleanup operations
- hazardous waste treatment, storage and disposal (TSD) facilities
- hazardous waste generators
- facilities with employees who respond to emergencies involving hazardous substance releases

Printers usually come under HAZWOPER standards as hazardous waste generators. Some facilities may also qualify if employees respond to emergencies.

Most of the HAZWOPER requirements that apply to printers involve:

- emergency response planning and
- employee training for emergencies

Do the HAZWOPER regulations apply to my facility?

HAZWOPER standards deal specifically with planning and training for emergency response. For HAZWOPER purposes, incidental releases of hazardous substances are not considered emergencies if:

- they can be handled safely by employees in the immediate area, and
- they do not require a coordinated response from personnel outside the area

Other spills, that would be considered emergencies, do trigger HAZWOPER regulations.

What is my facility required to do for HAZWOPER?

Requirements under the HAZWOPER standard depend on the type of spill and the response necessary to contain and clean it up. For spills that cannot be cleaned up by personnel in the immediate area, some formal program training is required.

A facility's hazardous waste generator status plays a role in determining HAZWOPER requirements. Refer to Chapter 2: Hazardous Waste for information about calculating your hazardous waste generator status.

- If you are a Very Small Quantity Generator (VSQG), or a business that accumulates hazardous waste for less than 90 days, you must:
  - ➢ develop an emergency response plan if employees respond to emergencies, or
  - ➢ require employees to evacuate during an emergency, without assisting in the response.

- If you are a Small or Large Quantity Generator (SQG and LQG) you must:
  - ➢ develop an **emergency response plan**, and
  - ➢ conduct more extensive planning and employee training related to health and safety, hazard communication, and emergency response.

Very Small Quantity Generator (**VSQG**), is a business generating less than or equal to 220 lbs/month of hazardous waste.

Many small printers may be complying with some HAZWOPER requirements already because of preparations taken to satisfy other regulations. For instance:

- If you require employees to evacuate the facility during emergencies, and they do not assist in the emergency response, then you are **exempt** from the requirement to prepare an emergency response plan.
- If you are subject to EPCRA's requirements, then the emergency plan developed for that purpose meets the HAZWOPER requirements as well.
- A good HAZCOM training program that addresses cleanup of ordinary spills by employees in the immediate area is sufficient for dealing with non-emergency ("incidental") spill situations.

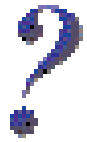
What does an emergency response plan contain?

If your facility is a SQG or LQG, you are required to develop an emergency response plan. Such a plan could be used to satisfy HAZWOPER requirements, so long as it contains the following items:

- pre-emergency planning and coordination with outside parties
- personnel roles, lines of authority, training, and communication
- emergency recognition and prevention
- safe distances and places of refuge
- site security and control
- evacuation routes and procedures
- decontamination
- emergency medical treatment and first aid
- emergency alerting and response procedures
- critique of response and follow-up
- emergency and personal protective equipment

The emergency response plan should be written and available to employees for inspection and copying.

Can the emergency response plan contain information that my facility developed to meet other program requirements?
For HAZWOPER standards, items in the emergency response plan that have already been addressed under EPCRA regulations (see Chapter 7: Emergency Planning) and/or local and state emergency planning requirements can be substituted or combined to avoid duplication.

	**Question SP.3:** If your employees may be required to respond to spills, have you developed an emergency response plan that meets HAZWOPER requirements?	❑ Yes ❑ No. Develop an emergency response plan.

How much training does HAZWOPER require for my employees?
The employee training requirements vary. If your facility is a VSQG and your emergency planning calls for immediate evacuation of all employees, no additional employee training is required.

Many small printers probably will have employee training requirements in the following categories:

First responder awareness level—individuals likely to witness or discover a hazardous substance spill.
Employees at this level will initiate an emergency response by notifying the proper authorities, **but** take no further action.

These employees need sufficient training or experience to:
- recognize hazardous substances
- understand the risks and potential outcomes of an emergency
- recognize the need for additional resources
- make appropriate notifications

At the first responder awareness level, the HAZWOPER standard does not specify a minimum training requirement. Instead, it requires “sufficient training or… sufficient experience to objectively demonstrate competency.” Printers should keep records of training and methods used to demonstrate competency.

First responder operations level—individuals performing initial response to hazardous substance spills.
In this case the individuals perform the initial response for the purpose of protecting nearby people, property, or the environment, as well as:
- contain the spill from a safe distance
- keep the spill from spreading
- prevent exposures

These employees generally need 8 hours of training (or "sufficient experience to objectively demonstrate competency") in the areas listed above along with:

- basic hazard and risk assessment techniques
- use of personal protective equipment
- basic control and containment procedures
- basic decontamination procedures
- annual refresher training

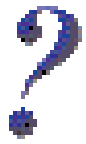
Printers should keep records of training and methods used to demonstrate competency.

Hazardous materials technician, Hazardous materials specialist, and On-scene incident commander.

These individuals perform more demanding roles than first responders, and:

- may approach the point of release to stop the spill
- assume control of the incident scene
- act as site liaisons with government authorities

Employees in these response categories usually require at least 24 hours of training and demonstrated competency in a number of additional areas. Annual refresher training is required also.



Question SP.4:
Have your employees that respond to spills received the necessary training to be competent under your HAZWOPER program?

❑ Yes

❑ No. Ensure necessary training and competencies are met.

Section D: Preventing and responding to oil spills – Federal Spill Prevention, Control and Countermeasure (SPCC) Plan

Spill Prevention, Control and Countermeasure (SPCC) Plans are part of EPA's strategy to prevent oil spills from reaching the nation's waters and shorelines. The Plans emphasize preventing spills, rather than reacting to them after they happen. A SPCC Plan may be required if your facility meets the following conditions:

- storage capacity of oil > 1,320 gallons (includes combined storage capacity of all containers 55 gallons or larger); or
- storage capacity of underground (buried) oil tanks > 42,000 gallons that are not otherwise regulated; and
- due to the location of the facility, a spill could potentially impact a navigable waterway.

Note that, when calculating oil storage capacity for purposes of the SPCC requirements, only containers with a storage capacity of at least 55 gallons of oil need to be included and empty containers need to have their entire capacity included.

SPCC Plan: Requirements include a written program detailing operating procedures to prevent oil spills; control measures to prevent spills from reaching navigable waters; and countermeasures to contain, clean up, and mitigate the effects of oil spills that reach navigable waters.

Navigable waterway: as defined in the federal Clean Water Act, the waters of the U.S. In Wisconsin, includes storm sewers and conveyances to waterways such as drainage ditches.

What kind of oil and oil storage is covered?

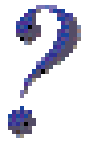
Oil is very broadly defined and includes oil in any form, including vegetable oils and any products derived from oil such as certain cleaning solvents. "Containers" of oil include drums, tanks, and manufacturing equipment such as printing presses. Containers capable of holding 55 gallons or more must be included when calculating whether a facility meets the threshold storage capacity.

Some printers may not exceed the threshold levels, but facilities using equipment or substances like the following could require SPCC Plans:

- ink containers including tanks, totes, and drums
- petroleum-derived solvents
- oils in electrical transformers
- lubricating oil
- hydraulic oils
- fuel oil
- conventional and vegetable oil-based (e.g., soy) lithographic inks
- other inks containing petroleum derived solvents

The SPCC requirements apply to oil in containers and underground tanks with a storage capacity of at least 55 gallons. If your facility does not have any containers of this minimum size, then it is exempt from SPCC Plan requirements.

For more information about SPCC plans, see EPA's online resources at **http://www.epa.gov/oilspill/** and **http://www.epa.gov/region5oil/plan/spcc.html**

	**Question SP.5:** Do you meet the criteria that would trigger SPCC plan requirements?	❑ Yes. Continue with this section. ❑ No. Continue on to the Best Management Practices section.

What is the purpose of a SPCC plan?

The SPCC Plan addresses three main areas:

- operating procedures that prevent oil spills
- control measures installed to prevent a spill from reaching navigable waters
- countermeasures to contain, clean up, and mitigate the effects of an oil spill that does reach navigable waters

EPA publishes SPCC Compliance Assistance Guides to assist facilities in developing their SPCC Plans, available at **http://www.epa.gov/oilspill/spccguid.htm**.

What must a SPCC plan include?

The SPCC Plan must be in writing and:

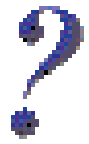
- prepared in accordance with good engineering practices
- approved by a person with the authority to commit the resources necessary to implement the Plan
- unique to a particular facility, because development of a Plan requires detailed knowledge of the facility and the potential effects of any oil spill

All SPCC plans must contain certain elements:

- description of the physical layout and a facility diagram
- contact names and phone numbers for:
  - ➢ the facility response coordinator
  - ➢ National Response Center
  - ➢ clean-up contractors
  - ➢ all appropriate federal, state, and local agencies
- predictions of the direction, rate of flow, and quantity of oil that could be discharged—especially important if experience indicates there is a potential for periodic equipment failure
- description of containment and/or diversionary structures or equipment to prevent discharged oil from reaching navigable waters
  - ➢ on-shore facilities must use one or more of the following: dikes, berms, or retaining walls; curbing; culverting, gutters, or other drainage systems; weirs, booms, or other barriers; spill diversion ponds; retention ponds; sorbent materials
- additional information where appropriate, including:
  - ➢ evidence that containment and/or diversionary structures or equipment are not practical
  - ➢ periodic integrity and leak testing of bulk containers and associated valves and piping
  - ➢ oil spill contingency plan
  - ➢ written commitment of personnel, equipment, and materials to quickly control and remove spilled oil
- complete description of the spill prevention and control measures applicable to the facility and/or its operations

Every SPCC Plan must include a demonstration of the facility management's approval and, if aboveground oil storage capacity exceeds 10,000 gallons in aggregate, must be certified by a licensed professional engineer.

EPA's web site, "Required Elements of Spill Prevention, Control and Countermeasure Plans," summarizes these elements. See **http://www.epa.gov/oilspill/spccmust.htm.**

	**Question SP.6:** Do you have a complete and updated SPCC plan?	❑ Yes. ❑ No. Prepare a complete SPCC plan.

Section E: Best Management Practices

The following best management practices are not required, but are recommended. Please indicate where you have taken action as recommended (Done), where you might want to take action (Needs Attention), or if the area doesn't apply to your shop or operations (Not Applicable).

Practices	Done	Needs Attention	Not Applicable
Keep your establishment clean. Prevent spills and leaks that may add contaminants to floor rinse waters.			
Provide secondary containment for all oil and chemical containers including inks, solvents, coatings, adhesives, plate and film chemistries, and prepress film and plate processing equipment.			
Be prepared to contain and collect any spilled fluids such as ink, oil, antifreeze, power steering, transmission, and differential fluid. Use drip pans or absorbents to collect fluids. Do not wash or pour these fluids to floor or sink drains.			

	**Question SP.7:** Have you adopted any of the recommended BMPs?	❑ Yes. ❑ No. Recommended.