



QUARTERLY SPECIAL REPORT

SPILL CONTROL SEQUENCE

TAKING A STEP-BY-STEP APPROACH TO SPILL RESPONSE



ENVIRONMENT

A man wearing glasses and a blue t-shirt is crouching in a workshop. He is holding a clipboard and looking down at a spill on the floor. The workshop background includes a pegboard with various tools and a large black barrel. A large white circle is overlaid on the image, containing the main text.

SPILL CONTROL SEQUENCE

TAKING A STEP-BY-STEP APPROACH TO SPILL RESPONSE

You might say it's not if spills of hazardous substances will happen, but when. Spills can occur even if you meet every applicable law and regulation. Could your company suffer spills due to any of these triggers?

- ▶ Equipment malfunction
- ▶ Leaking container
- ▶ Container puncture
- ▶ Transport incident on the road or at the loading dock
- ▶ Transfer line failure
- ▶ Overfilling
- ▶ Pipeline breakage
- ▶ Dike rupture or failure
- ▶ Fire or explosion
- ▶ Flood
- ▶ Earthquake
- ▶ Hurricane or tornado

WHAT CAN GO WRONG?

We've all seen headlines about hazardous substances released into the water, land, and/or air — often with catastrophic consequences. The National Response Center (NRC) is the designated federal point of contact for reporting of oil, chemical, radiological, biological, and etiological discharges into the environment, anywhere in the U.S. and its territories. According to the NRC, 23,143 incidents were reported in calendar year 2023. In that year, the agency claims that these incidents resulted in 1,155 reported fatalities, 1,139 hospitalizations, 1,476 injuries, and 20,383 evacuees, with property damage totaling over \$278.5 million. And those were just the incidents that were reported!

Clearly, spills can result in life, property, environmental, and other losses. How much those losses amount to all depends on the type of substance involved, its location, and the quantity of the spill, as well as the preparedness of your responders. In a nutshell, spills can:

- ▶ Temporarily or permanently halt your operations;
- ▶ Cost you to respond with your own or outside responders;
- ▶ Endanger worker, responder, and public health and safety, leading to injuries, illnesses, and death;
- ▶ Create a fire or explosion hazard;
- ▶ Impact drinking water and devastate natural resources;
- ▶ Lead to hefty government fines;
- ▶ Raise your insurance premiums; and/or
- ▶ Erode public confidence and destroy your company's public image.

In today's world, a spill may be reported not only on the news but on social media. What's more, spills can occur any time in any weather.



WHAT CAN YOU DO?

Even incidental spills pose a degree of risk. That's why it's so important to make every effort to prevent spills of any kind and be ready to respond to them promptly once they occur. With the following sequence of spill-control measures in place, you should be able to limit any damages, so that you can get back up and running in a very short time. The steps are not necessarily sequential. The **green-highlighted** steps below happen before a spill, and the **red-highlighted** steps happen after a spill.

- ✔ Prevent spills
- ✔ Plan for spills
- ✔ Equip your spill responders
- ✔ Train your responders
- ✔ Make notifications
- ✔ Size up the spill
- ✔ Select personal protective equipment (PPE) ensembles
- ✔ Respond properly
- ✔ Take follow-up actions

USE THE 9 SPILL-CONTROL MEASURES ABOVE TO LIMIT DAMAGES.

SPILLS CAN ERODE PUBLIC CONFIDENCE AND DESTROY A COMPANY'S PUBLIC IMAGE. IN TODAY'S WORLD, A SPILL MAY BE REPORTED NOT ONLY ON THE NEWS BUT ALSO ON **SOCIAL MEDIA.**



PREVENT SPILLS

As the old adage states, “an ounce of prevention is worth a pound of cure.” Although spill prevention is not, strictly speaking, a spill-control activity, it is worth discussing because it’s the most effective action that can be taken. It is generally agreed that preventing hazardous substance spills constitutes the best method for mitigating damage.

To prevent spills, your company might:

- ▶ Use containers suitable for the hazardous substance stored. For instance, when storing gasoline, use a container designed for flammable liquids.
- ▶ Avoid storing hazardous substances in places where flooding is possible or where they might spill into wells, drains, groundwater, or surface water.
- ▶ Keep in good working condition all processes, machinery, and equipment that use hazardous substances.
- ▶ Follow the substance manufacturer’s instructions for safe handling and storage. Refer to the safety data sheet (SDS) for further guidance.
- ▶ Encourage those who transfer substances to know the container’s capacity, to transfer slowly, and not to “top it off.”
- ▶ Pre-deploy drain covers and sorbent material prior to transfers where the operation is located in close proximity to drainage structures or navigable waters.
- ▶ Provide overfill prevention for containers that store hazardous substances, e.g., you could use a high-level alarm or high-level pump cutoff device.



- ▶ Provide sized secondary containment, such as a dike or a remote impoundment, for bulk storage containers. “Sized” means the secondary containment needs to hold the full capacity of the primary container plus possible precipitation.
- ▶ Add less-than-sized secondary containment, such as drip pans or curbing, to catch the most likely spill quantity when you transfer substances to and from containers and for mobile refuelers. (However, secondary containment must be sized when using tank truck loading/unloading racks.)
- ▶ Periodically inspect and test pipes and containers. You want to visually inspect aboveground pipes and containers according to industry standards. Buried pipes should be leak tested when they’re installed or repaired. Include a written record of inspections in your written spill plan, if you have one.

CONSIDER FACILITY SECURITY MEASURES LIKE FENCING, GUARDING, LIGHTING, SURVEILLANCE, AND/OR ALARMS TO PREVENT UNAUTHORIZED ACCESS AND DETER VANDALS.

WHY ACTIVE MEASURES ALONE WON'T SUFFICE

Simply relying on “active” measures such as applying sorbent socks or barriers when a spill occurs is not the answer for all spill situations. That’s because:

- ▶ Active measures often have limited absorption or containment capacity.
- ▶ Chemical storage can leak during off-hour periods.
- ▶ Precipitation and cold temperatures may affect the performance of active measures.

For these reasons, “passive” structures like dikes, curbing, spill diversion ponds, or similar systems remain popular methods, despite the costs.

Whatever you do to prevent spills, be sure to follow good engineering practices. You may need a professional engineer to advise you, and several industry consensus standards offer further storage tank protocols. Applicable environmental regulations and fire codes may also have spill prevention requirements.



**ACTIVE MEASURES
ALONE WON'T
SUFFICE FOR ALL
SPILL SITUATIONS!**



PLAN FOR SPILLS

Even with the most careful handling, spill incidents happen. To control them effectively, planning is essential. When a spill occurs, decisive action is required. Rapidly made choices may have far-reaching, long-term consequences, and delays can create life-threatening situations. Therefore, equipment must be on hand and in good working order, and your responders, whether onsite or off-site, must be ready to immediately take action.

DELAYS TO SPILL RESPONSE CAN CREATE LIFE-THREATENING SITUATIONS.

In fact, a former assistant administrator for EPA's Office of Enforcement and Compliance Assurance said in reference to oil spills, "Being prepared to respond to an oil spill can be the difference between dealing with a small, contained event or a full-blown environmental disaster."

Because planning is so critical, several federal government agencies require some sort of spill response plan in their regulations. These include the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), the Department of Transportation (DOT), the Bureau of Safety and Environmental Enforcement (BSEE), and the U.S. Coast Guard (USCG).

Did You Know?

An EPA March 28, 2024, final rule adds 40 CFR 118, which mandates certain onshore non-transportation-related facility owners or operators to submit a facility response plan by June 1, 2027. The rule relates to worst-case discharges of hazardous substances (designated at 40 CFR 116) that are reasonably expected to cause substantial harm to the environment.



CORE PLAN ELEMENTS

Simply thinking you'll just call 911 is not a spill plan. In general, government-required plans entail several important core elements, such as, but not limited to:

- ▶ Facility name, address, and contact information;
- ▶ Personnel roles, lines of authority, training, and drills;
- ▶ Site mapping, evacuation routes, and places of refuge;
- ▶ Emergency equipment and resources;
- ▶ What to do upon discovery, and assessment procedures;
- ▶ Communication and notification procedures;
- ▶ Evacuation procedures;
- ▶ Rescue, medical-treatment, and first-aid procedures;
- ▶ Response procedures; and
- ▶ Termination and follow-up actions.

You'll want to review any applicable regulations to determine which agency plans and plan elements are required for your company. Your state and local government agencies may also have more stringent or additional requirements.



WHAT TO CONSIDER

When putting your plan(s) together, you may wish to first determine the hazardous substances you have at your location(s) and their hazards. Then refer to the following resources for more information.



Safety data sheets contain the most current and accurate information on hazardous substances. SDSs that follow the Globally Harmonized System (GHS) style will provide first-aid, fire-fighting, and accidental release measures in sections 4, 5, and 6, respectively, and recommended PPE is found in section 8. Section 9 of the SDS will offer chemical properties like odor, color, pH, and flash point.



Container labels and other markings often indicate spill response protocols. OSHA's Hazard Communication Standard at 29 CFR 1910.1200, for instance, calls for labels to list precautionary statements that include response measures. Every pesticide product too must bear an EPA-required label that offers warning or precautionary statements, among other elements.



DOT's Emergency Response Guidebook (ERG) also helps you identify the hazards of a substance, determine isolation distances, select proper PPE, and learn what fire and spill-control steps work best for that substance.



EQUIP YOUR SPILL RESPONDERS

In any spill situation, equipment is necessary to rescue and treat victims, protect response personnel, mitigate hazardous spill conditions, and/or clean up the spill. Once a spill has begun, the success of the spill-control operation depends more upon minimizing the volume of what's spilled than any other control activity. Spill kits, carts, or control stations are frequently purchased or assembled. If well-stocked and used by trained responders, these initial response units can lessen the severity of spills and help keep control over situations.

**SPILL KITS,
CARTS, OR
CONTROL
STATIONS CAN
LESSEN SPILL
SEVERITY.**



SELECTING EQUIPMENT

When selecting the type and quantity of equipment, you should think about the following factors:

- ▶ The types of spills that may arise (consider the probable and worst-case scenarios);
- ▶ The types of hazards that site employees may be exposed to and the appropriate containment, mitigative, and protective measures;
- ▶ The capabilities and estimated response times of off-site responders;
- ▶ The number of site employees who could be victims during the spill incident; and
- ▶ The probable number of personnel available for response.

For some spills, you may even need to call in a vacuum truck or excavator.

SPILL KITS MAY COME IN A DUFFEL BAG, PAIL, BIN, DRUM, CART, CABINET, TRAILER, OR OTHER CONTAINER.



SPILL KIT CONTENTS

Obviously, the contents of these units will vary according to the needs of each chemical operation. However, typical items you might find in spill kits, carts, and control stations include:

- ▶ Patch and plug kits to stop leaks;
- ▶ Loose sorbent materials like sawdust or kitty litter ready to sprinkle on a spill;
- ▶ Materials packaged in pillows and socks designed to absorb and/or adsorb liquids;
- ▶ Absorbent toweling, pads, and/or mats;
- ▶ Storm drain covers or spill mats used to block or prevent the flow of spills;
- ▶ Booms for spills that float on water or sorbent-filled booms used for land-based spills;
- ▶ Temporary dikes, berms, curbing, or other barriers;
- ▶ Brooms, mops, shovels, scoops, scrapers, squeegees, flashlights, hammers, wrenches, or other non-sparking hand tools;
- ▶ Acid and base neutralizers;
- ▶ Environmental monitoring and sampling equipment;
- ▶ Salvage bags, buckets, and/or drums to contain or collect spill material and waste;
- ▶ Signs, tags, labels, barricade tape, permanent markers, and writing equipment;
- ▶ Two-way radio, cell phone, phone numbers, signal flags, and/or other communication equipment;
- ▶ Medical and first-aid supplies;
- ▶ Fire-fighting equipment; and
- ▶ Coveralls, gloves, goggles, face shields, boots, boot covers, respirators, masks, or other PPE and protective clothing.

Make sure you have the supplies and equipment you need in the locations you need them for the most likely spill volume expected, and keep them maintained. For example, portable tanks can be equipped with an unlocked spill kit to be used in the event of a discharge during transfers. If you feel you must lock up your supplies, at least have a key available nearby.

MAKE SURE SPILL EQUIPMENT IS NEARBY AND READY TO USE.





TRAIN YOUR RESPONDERS

Anyone actively involved in spill control must be thoroughly familiar with the procedures involved and must be trained to work safely. Employees should not engage in spill response until they have been trained to a level commensurate with their job function and responsibilities and with the degree of anticipated hazards.

In fact, responders must understand not only the hazards presented, but the potential hazards that could arise. Untrained workers who do not comprehend these hazards could put themselves and their co-workers at risk by responding to a spill that they are not qualified to handle. Training helps employees recognize when a spill presents or will present a hazard. It also ensures that they learn to assess a situation, understand what they can safely handle, and know how to respond safely.

According to an OSHA booklet entitled, “Training Requirements in OSHA Standards,” the agency explains, “Training in the safe way for workers to do their jobs well is an investment that will pay back over and over again.”

When people think of spill-response training, OSHA’s Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard comes to mind. Therefore, this training topic is covered in more detail on the next page. It should be noted, however, that you may need to also consider other federal and state training laws and regulations.

HAZWOPER RESPONDER TRAINING

Under HAZWOPER 29 CFR 1910.120(q), employees are generally given initial and refresher training in one of five levels (shown in the table below) depending on their expected duties. You are only required to provide the training levels listed in the table if you have your own employees handle an “emergency response” release. According to OSHA, an 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.”

RESPONDER LEVEL:	DESCRIPTION:	SUMMARY OF TRAINING ELEMENTS:
Awareness	Those likely to witness or discover a spill of hazardous substances and who are trained to notify the proper authorities.	They recognize the presence and risks of hazardous substance spills, can identify the substance, and know who to notify.
Operations	Those who respond to spills in a defensive manner, without trying to stop the spill.	In addition to awareness-level skills, they know how to select PPE, know basic spill-control operations, and can implement decontamination procedures.
Technician	Those who respond aggressively to stop the spill of hazardous substances, approaching the point of the spill as needed.	In addition to awareness- and operations-level skills, they can select PPE, know advanced spill-control operations, can implement decontamination procedures, and function within the incident command system and under the emergency response plan.
Specialist	Those who respond with and in support of the technician level, but who have specific knowledge of various hazardous substances.	In addition to awareness- and operations-level skills, they can select PPE, know advanced spill-control operations, can implement decontamination procedures, and have in-depth understanding of hazardous substance hazards and state and local emergency response plans.
Commander	Those who assume control of the incident scene beyond the first responder awareness level.	In addition to operations-level skills, they can implement the incident command system and state/local/employer emergency response plans, understand the risks of working in chemical protective clothing, and know the importance of decontamination.

When, as a consequence of a spill, the following conditions, or similar conditions, may develop, such situations would normally be considered emergency situations requiring an emergency response effort:

- ▶ High concentrations of toxic substances,
- ▶ A situation that is life or injury threatening,
- ▶ Immediately dangerous to life or health (IDLH) environments,
- ▶ An oxygen-deficient atmosphere,
- ▶ A condition that poses a fire or explosion hazard,
- ▶ A situation that requires an evacuation of the area, or
- ▶ A situation that requires immediate attention because of the danger posed to employees in the area.

TRAINING FOR INCIDENTAL SPILLS

Something short of an emergency response release is considered an “incidental release.” Responses to incidental spills of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time of the spill by employees in the immediate spill area, or by maintenance personnel, do not require emergency responder training under 1910.120(q). Still, other OSHA training standards, such as those found under the Hazard Communication Standard, 1910.1200, and the Personal Protective Equipment Standards, within 29 CFR 1910 Subpart I, as well as other government requirements may apply.



WHAT IF YOU EVACUATE YOUR EMPLOYEES?

If you choose to evacuate employees at your facility in the case of an emergency release, and you do not permit any of your own employees to assist in handling the emergency, you are exempt from 1910.120(q) and its training requirements. However, if you have the potential for emergency response releases and take this evacuation option, you must develop an emergency action plan (not to be confused with an emergency response plan) for the safe evacuation of personnel and ensure that the training of your employees is consistent with a different regulation — 1910.38 for general industry.

IF YOU CHOOSE TO EVACUATE ALL EMPLOYEES, THEN IN THE CASE OF AN EMERGENCY RELEASE, YOU MUST HAVE AN EMERGENCY ACTION PLAN.





WHAT ABOUT HAZARDOUS WASTE OR OIL SPILLS TRAINING?

According to EPA regulation 40 CFR 262.16, a small quantity generator (SQG) of hazardous waste must train all employees to be thoroughly familiar with proper waste handling and emergency procedures relevant to their responsibilities.

A large quantity generator (LQG), on the other hand, must comply with the “personnel training” requirements, per 262.17. These provisions require that LQG personnel complete initial and annual training that teaches them proper waste management and familiarizes them with the procedures, equipment, and systems to effectively respond to emergencies. However, if a facility employee can meet all the emergency response training requirements at 262.17 through an OSHA emergency response training course pursuant to 1910.120(p)(8) or (q), that will suffice.

Oil-handling personnel training and briefing requirements are found at EPA’s Spill Prevention, Control, and Countermeasure (SPCC) regulation 40 CFR 112.7. If you’re required to prepare a Facility Response Plan, you also must implement a facility response training program and a drill/exercise program per 112.21.

WHAT ABOUT TRAINING REQUIREMENTS UNDER 40 CFR 118?

On March 28, 2024, EPA finalized a rule for certain facilities to plan for the worst-case discharges of hazardous substances (designated at 40 CFR 116). According to 40 CFR 118.13, covered facility owners/operators must develop a “facility response training program” to train facility and non-facility personnel involved in response activities. Private response personnel and casual laborers and volunteers to be used during a response must receive training that complies with OSHA 1910.120. Training of supervisory and non-supervisory operational personnel must also be functional in nature in line with job tasks. A “drills and exercise program” is another component of 118.13.



MAKE NOTIFICATIONS

Your company should have a plan for what a worker should do upon discovery of a spill:

- ▶ Get to a safe area. If when leaving, the worker can note details like the chemical involved, that helps, but he or she should not dawdle at the scene.
- ▶ Contact the proper personnel promptly, like an immediate supervisor, safety manager, member of a HAZMAT team, or the person listed on your company's emergency plan. That contact will quickly initiate any necessary evacuation or shelter-in-place procedure and reach out to designated responders.

Government agencies may require you to report the spill/release and any casualties over the phone and/or in writing. It pays to understand your notification requirements and submit reports within required time limits. Some agencies may require reports "immediately," meaning as soon as possible and generally within 15 minutes of learning that a reportable spill has occurred. Electronic submissions may be required.



While not comprehensive, the table lists some spill reporting requirements that may apply. You may have other federal, state, or local spill-reporting requirements.

REGULATION:	DESCRIPTION:
29 CFR 1904.39	Report made to OSHA within 8 hours of a work-related fatality and within 24 hours of a work-related in-patient hospitalization, amputation, or loss of an eye
40 CFR 68.195 and .210	Accidental release under Risk Management Program rule
40 CFR 110	Discharge of oil under the sheen rule
40 CFR 112.4	Discharge of oil under the SPCC rule
40 CFR 117	40-CFR-116-listed hazardous substance release of reportable quantity (RQ) in 24-hour period
40 CFR 262.16, .17, and .265	Release of hazardous waste with a threat to human health or environment
40 CFR 264.56/265.56	Release of hazardous waste with a threat to human health or environment
40 CFR 280.50, .53, .61	Release or overfill from underground storage tank
40 CFR 302	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substance release of RQ
40 CFR 355	Emergency Planning and Community Right-to-Know Act (EPCRA) extremely hazardous substance or CERCLA substance release of RQ
40 CFR 403.8 and .12	Potential or actual violative/problematic discharge to publicly owned treatment works from industrial user
40 CFR 761.125	Spill of polychlorinated biphenyls at certain concentrations
40 CFR 1604	Release from stationary source resulting in a fatality, serious injury, or substantial property damage
49 CFR 171.15 and .16	Hazardous materials incident that occurs during transport

You may also need to notify your environmental insurance company if you have one.



SIZE UP THE SPILL

Responders should not rush into the situation when a hazardous substance spill occurs. Instead, OSHA recommends two initial steps to any response. First notify personnel, and second, size up the situation. Quickly evaluate casualties, the substance and its hazards, and response capabilities and allocate personnel and equipment for the response.

RECOGNITION INDICATORS

Your responders can use several recognition indicators to identify the hazardous substance:

- ▶ Location of the spill;
- ▶ Container type and shape;
- ▶ Color(s) of the container;
- ▶ Labels, signs, tags, or markings;
- ▶ Shipping papers;
- ▶ SDSs; and
- ▶ Uncommon odors, sounds, or sights.

When sizing up the incident, it's always important to stay clear of vapors, fumes, smoke, and spills to minimize any health and safety risks. If your responders do need to approach the released substance at any time, be sure they do so from upwind, uphill, and/or upstream. Also, never let them taste or touch a substance in an attempt to identify it.

RESPONDERS SHOULD APPROACH THE SPILL FROM UPWIND, UPHILL, AND/OR UPSTREAM.

FOUR QUESTIONS

Responders should also ask themselves:



What happened? What was spilled? What type of spill occurred? What caused it? What's the extent of the spill and the damage?



Are there any casualties? How many victims are there? Where are they? What's their condition? What treatment is required? Is anyone missing?



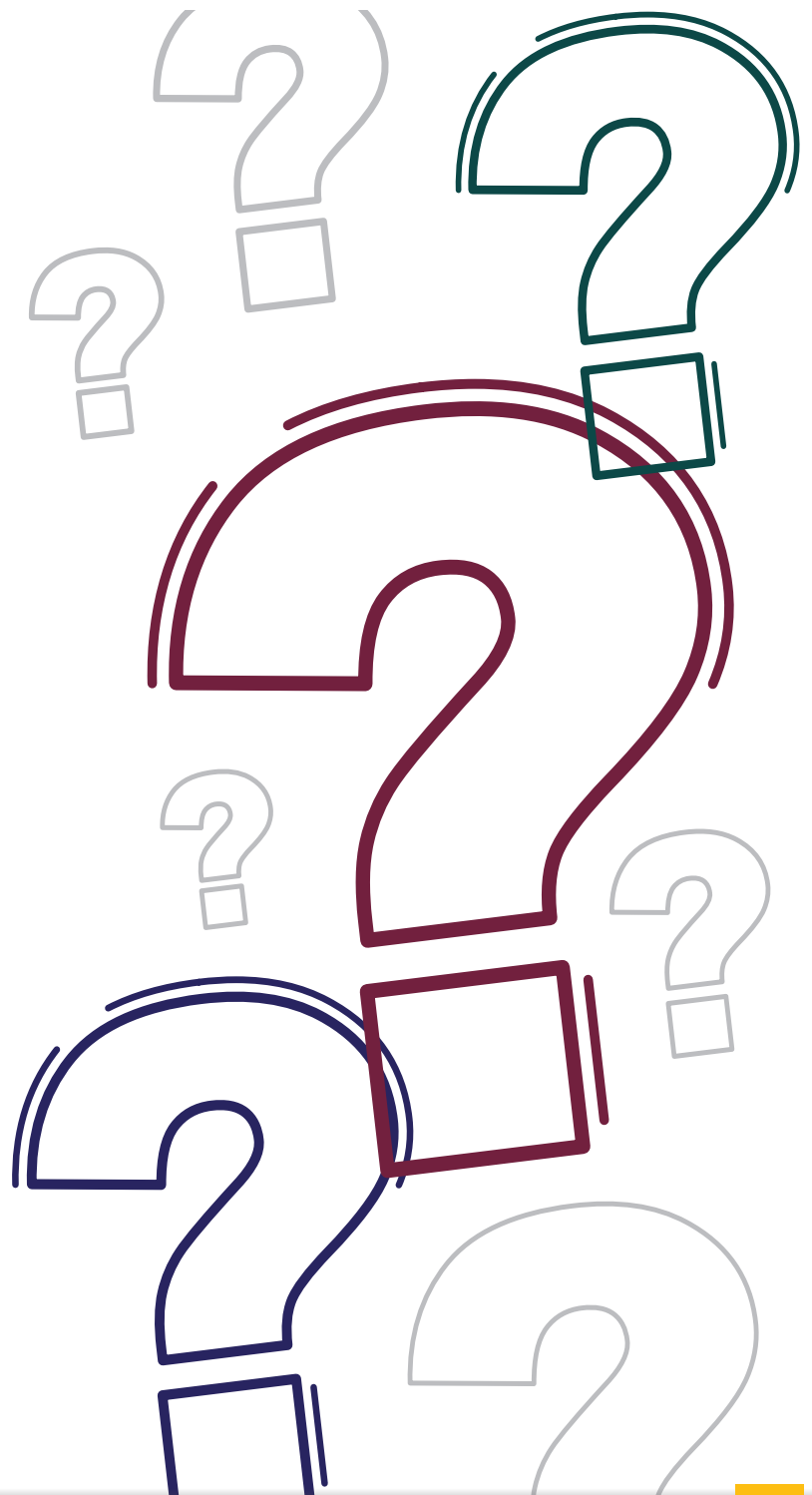
What could happen? What types of substances are nearby? What's the potential for fire, explosion, and more spills? Where are personnel relative to hazardous areas? Is there any potential danger to the public or the environment?



What can be done? What equipment and personnel resources are needed for rescue and spill control? How many uninjured personnel are available? What resources are available onsite and off-site? How long before outside help can arrive? What are the hazards involved in rescue and spill control?

If possible, taking a few minutes up front to assess the situation will help responders form a more effective action plan before implementing their response operation. As part of these preparations, your responders should:

- ▶ Request any necessary aid from outside sources (ambulance, fire department, police, etc.); and
- ▶ Allocate personnel and equipment for the rescue and response.



SELECT PPE ENSEMBLES

Anyone entering a spill area must be protected against the hazards and potential hazards he or she is likely to encounter. The purpose of PPE and protective clothing is to shield or isolate individuals from the chemical, physical, and biological hazards. PPE includes:

- ▶ Respirators;
- ▶ Hard hats;
- ▶ Goggles, safety glasses, and face shields;
- ▶ Facemasks to protect against splashes, sprays, or droplets;
- ▶ Ear plugs and muffs;
- ▶ Inner and outer gloves;
- ▶ Safety boots and boot covers;
- ▶ Personal fall protection systems;
- ▶ Cooling garments; and
- ▶ Life jackets.

GLOVES ARE BOTH PPE AND CHEMICAL PROTECTIVE CLOTHING.



Chemical protective clothing, or CPC, protects the skin and/or the body from exposure to hazardous substances, including splashes, dusts, gases, and vapors. Gloves are considered both PPE and CPC. Other common types of CPC include:

- ▶ Totally encapsulating chemical-protective suits;
- ▶ Hooded one- or two-piece chemical-protective suits;
- ▶ Long-sleeved jackets;
- ▶ Protective sleeves and leggings;
- ▶ Aprons;
- ▶ Coveralls and overalls;
- ▶ Fire-protective suits;
- ▶ Proximity, or approach, garments;
- ▶ Blast and fragmentation suits; and
- ▶ Radiation-protective suits.

Selection of the appropriate PPE and CPC should take into consideration the hazards or suspected hazards, the routes of exposure (inhalation, skin/eye contact, ingestion, and injection), exposure limits, ambient temperature, and the demands of the response task. Be sure to weigh performance factors of the equipment or clothing items, such as permeation, degradation, penetration, durability, and mobility. Your written spill plan, SDSs, and the step of sizing up the spill should allow you and your responders to select the best ensemble for a spill-control effort.

Other resources will also help you begin to select appropriate PPE and CPC. The OSHA Respiratory Protection Standard at 29 CFR 1910.134(d) lists criteria for selecting respirator types. Appendix B to the HAZWOPER Standard recommends four “PPE ensemble” levels, based on the degree of hazard. What’s more, National Fire Protection Association (NFPA) 1990 provides a crosswalk between NFPA performance standards/classes and OSHA’s PPE ensemble levels.

Regardless, OSHA explains that no single ensemble is capable of protecting against all hazards. Thus PPE and CPC should be used in conjunction with other protective methods and their effectiveness evaluated periodically. In fact, the ensemble level may need upgrading or downgrading with any new insights or changing conditions.





RESPOND PROPERLY

Based on the available information and your written spill plan, your responders will decide what needs to be done. This will generally take seven major sub-steps:

1. Take care of any victims —

- ▶ Locate all victims and assess their condition.
- ▶ Determine what they need for stabilization and transport.
- ▶ Remove or assist victims from the area.
- ▶ Decontaminate them before/after stabilization as their medical condition indicates.
- ▶ Stabilize victims by administering any medical aid necessary before moving them.
- ▶ If decontamination is not possible before transport, cover the victims with adequate sheeting.
- ▶ Determine the level of protection necessary for transport personnel.
- ▶ Accompany victims to the medical facility to advise on decontamination, if appropriate.

2. Evacuate employees and the public —

- ▶ Move site personnel to a safe distance upwind of the spill incident, or, if safer, shelter them in place (close windows and turn off ventilation/heating/cooling).
- ▶ Monitor the hazards.
- ▶ Inform public safety officials when there is a potential or actual need to evacuate the off-site population.
- ▶ Coordinate with drinking water authorities if impacted.

3. Promptly monitor and control the spill hazard —

- ▶ Ensure you have at least four individuals for any spill response effort.
- ▶ Have a commander assume control of the incident scene and designate a safety officer. The commander may take that role too.
- ▶ Use the buddy system within the hazardous area if the spill is more than incidental, meaning it is an emergency response release.
- ▶ Ensure at least two additional personnel stand by outside the hazardous area, with equipment ready to provide assistance or rescue.
- ▶ Ensure advance first-aid-support personnel stand by with medical equipment/transport capability.
- ▶ Initiate any water, soil, and air monitoring as outlined in your plan.
- ▶ Confine the spill to keep it from flowing any further by using techniques such as absorption, diversion, dam building, and/or trench digging. Covering storm drains is another example. The confinement method is selected by factors like substance type, the extent of the release, and site characteristics.
- ▶ Contain the spill by keeping the remaining hazardous substance inside its container, if the container is not compromised and the substance is stable. Plugging a leak, patching a leak, or turning or tipping a container so that the leak opening faces upward are some containment examples.
- ▶ Control the spill hazard by improving ventilation, diluting the spill with water if it is not water-reactive, neutralizing the substance, or taking some other action to limit exposure and damages.





4. Clean up the area —

- ▶ Transfer contaminated sorbents or waste solids to compatible waste containers.
- ▶ Decontaminate the spill area.
- ▶ Transfer contaminated wash and rinse solutions to compatible waste containers.

5. Decontaminate personnel and equipment —

- ▶ Properly decontaminate all personnel leaving the spill area.
- ▶ Properly dispose of or decontaminate all contaminated clothing and equipment leaving the spill area.
- ▶ Properly dispose of or decontaminate all equipment and solvents used for decontamination.
- ▶ Be sure to follow established procedures to decontaminate personnel and equipment in the contamination reduction zone. See OSHA 1910.120(k) for more information on decontamination procedures.

6. Dispose of the waste —

- ▶ Characterize the waste (Is it hazardous waste?).
- ▶ Refer to the instructions for disposal found on the substance label and SDS.
- ▶ Obtain the appropriate federal, state, and local permits to manage recovered product and contaminated soil, water, and equipment.
- ▶ Label and dispose of waste according to applicable federal, state, and local laws, regulations, and permits.

7. Ship hazardous waste properly —

- ▶ Properly package, label, and mark hazardous waste shipments and placard vehicles used for shipping the wastes according to DOT regulations.
- ▶ Prepare and sign the hazardous waste manifest before shipping, if applicable.



TAKE FOLLOW-UP ACTIONS

A spill response effort does not end when the spill has been controlled and the area cleaned up. To terminate the response process, five further sub-steps are suggested:

- 1. Restocking equipment and supplies** — Before normal site activities may be resumed, you should always restock equipment and supplies so that you are fully equipped to handle another spill. Equipment must be clean and refueled, and damaged equipment must be replaced or repaired.
- 2. Debriefing** — Within a few days after the response, all responders should meet to share and gather information to go in an incident report. This is the time to openly share opinions and details on how the effort unfolded.
- 3. Critique of response** — After the response effort, it is important to review what happened and ask questions about the cause of the spill, how it could be prevented, how the response effort went right, how it could be improved, etc.
- 4. Recordkeeping and follow-up reporting activities** — Federal, state, or local government agencies may require you to keep employee exposure and medical records, monitoring records, incident reports, and other information. They may also require you to complete follow-up reports in writing. Electronic submissions may be required.
- 5. Written plan updates** — Review and update any related written plans as necessary, based on what you learned during the spill response and follow-up efforts. Ensure the plans are working effectively and efficiently. Note, however, that applicable regulations may require plan reviews and updates at certain frequencies. Regulatory changes and enforcement activities, too, can call for you to review and update existing plans and/or to develop and implement yet another plan.



FINAL WORDS

Although you do your best to avoid spill incidents, mishaps with hazardous substances can still occur. When one or more of these substances spills at your company, you need to ensure that the correct actions are taken. This report outlined nine important steps to consider when planning for and controlling spills. If you haven't done so already, now is the time to get ready, before facing an actual spill event. The spill control sequence set out in these pages should help you get started.

ABOUT THE AUTHOR

Tricia Hodkiewicz, J. J. Keller & Associates, Inc.

Tricia Hodkiewicz has been an Editor on the Environmental, Safety, & Health (EHS) Publishing Team for over 25 years, specializing in OSHA and EPA regulations. Her areas of expertise include written safety plans, signs/labels, HAZWOPER, hazard communication, bloodborne pathogens, oil spill prevention, and EPCRA. In addition to her editorial work on the *OSHA Compliance for General Industry* manual, *Safety Signs Handbook for Managers and Supervisors*, and the *OSHA Construction Safety Handbook*, Ms. Hodkiewicz writes content for compliance manuals, webcasts, online tools and training, videos, instructor guides, employee handbooks, posters, safety signs/labels, and whitepapers.

As technical advisor and contributing writer, she participated in the rollout of an employee training video program, *“Bloodborne Pathogens: Safety in the Workplace,”* which captured a Telly Award in the category of “training for corporate use.” Her feature articles have appeared in esteemed trade journals, including *Occupational Health & Safety*, *Industrial Safety & Hygiene News*, *Safety+Health*, *Occupational Hazards*, *BIC Magazine*, *Fleet Maintenance*, *Plant Safety & Maintenance*, *Workplace HR & Safety*, and *New North B2B*, among others. Tricia has also successfully fielded several thousand regulatory questions from EHS professionals nationwide.



ABOUT THE AUTHOR

ABOUT J. J. KELLER & ASSOCIATES, INC.

Since its beginning as a one-man consulting firm in 1953, J. J. Keller & Associates, Inc. has grown to become the most respected name in safety and regulatory compliance. Now over 1,500 associates strong, J. J. Keller serves over 500,000 customers — including over 90% of Fortune 1000 companies. The company's subject-matter expertise spans nearly 1,500 topics and its diverse solutions include training via online courses, streaming video, or DVD; online management tools; managed services; advisory services; publications; E-logs and mobile technology; and forms and supplies.

As the nation's leader in regulatory compliance and best practices expertise, J. J. Keller is your reliable source for help complying with motor carrier safety requirements, reducing violations, and preventing crashes. In addition to DOT, we cover OSHA, EPA, DOL, and other agencies.



ABOUT J. J. KELLER & ASSOCIATES, INC.



J. J. Keller®
**COMPLIANCE
NETWORK**

Copyright 2024 J. J. Keller & Associates, Inc.

Government regulations change frequently; therefore, J. J. Keller cannot assume responsibility or be held liable for any losses associated with omissions, errors or misprinting in this publication. This publication is designed to provide reasonably accurate information and is distributed with the understanding that J. J. Keller is not engaged in rendering legal, accounting, or other professional services. If legal or other expert advice is required, the services of such a professional should be sought.