

Spill Containment Tips

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The sooner you can stop a spill, the faster cleanup can begin. Containing spills at facilities is an essential first step in spill response that helps minimize environmental impact and lessen overall response time.

According to National Response Center (NRC) statistics, over 10,000 reportable spills occurred in fixed facilities last year. That's over one spill per hour, and that number doesn't account for spills that are not required to be reported. Of the reported incidents, over 80 percent were attributed to equipment failure or operator errors.

Because spills can happen just about anywhere, there is no single containment method that will work for every spill. So, just as a craftsman carries more than a single tool in his tool belt or truck to handle a variety of tasks throughout the day; having one spill kit tucked in the corner may not be enough to handle every spill at a facility. Knowing where spills can happen and planning for each type helps facilities have the tools needed to contain a variety of spills quickly.

Spills During Delivery

Bulk delivery of fluids most often occurs outdoors, complicating spill containment because spills can quickly travel to storm drains or other unprotected areas. Spills are most likely to occur when hose fittings are not completely connected or if a hose breaks during transfer. Most bulk trucks are equipped with emergency shut-offs to minimize spills if a hose breaks or a connection is not sure, but it is not unreasonable to lose 50 to 100 gallons before the shut-off can be activated.

Some facilities plan for these spills preemptively by requiring trucks to park in portable containment pools that are capable of holding a "worst case scenario" spill. These pools have side walls that fold down to allow the truck to drive into the

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containment area, then pop back up to provide containment if it is needed.

Other facilities that have parking lots which are sloped toward drains, or may deploy covers over the drains and allow the parking lot itself to become a containment area. When this option is chosen, it is important that the lot be impervious to the liquids being delivered.

Alternatively, spill kits containing absorbent booms, polyurethane or water-filled dikes, sand bags, or other containment items can be kept near the off-loading area to facilitate fast response in the event of a spill. When using these items, consider putting the dikes a few feet from the circumference of the spill so that the liquid being contained has less of a chance of splashing over the containment dike.

Not all materials arrive in bulk. Drums, buckets, and smaller packages are also common. These materials can sometimes arrive damaged. Having a spill kit at the loading dock is a convenient way to be prepared for these spills.

Spills From Pipes & in Processing

Just as spills during bulk transfer can be sizable, pipeline failures can also be a source of large spills within a facility, because just like the emergency shut-off on trucks, it takes time to reach and turn off a valve.

Likewise, overspray and spills in manufacturing and processing areas can wreak havoc with production schedules and cause a variety of containment problems because they migrate under machines and into other sensitive or hard-to-access areas.

Floor drains are an important consideration. If the spilled materials are hazardous and the floor drains lead directly to navigable waters, spills may need to be prevented from entering drains to comply with Stormwater regulations (40 CFR 122). Even facilities that have on-site wastewater treatment systems may not be equipped to handle large spills and may need to protect floor drains in spill situations.

Conical drain plugs or portable drain covers can be an important component for containing spills in facilities with floor drains. These items allow the drains to be covered or stopped quickly to prevent pollution.

Once this threat of a release is minimized, spills can be further contained with absorbent or non-absorbent socks or dikes. Consider potential spill volumes and whether or not the liquids can or will be recovered for reuse. While smaller spills can be quickly contained and absorbed, it may be more practical to use non-absorbent dikes and vacuums or pumps to handle larger spills.

Spills During Container Transfers

Dispensing liquids through hand pumps and faucets can often lead to nuisance leaks and spills. Although the spills in these areas typically aren't large, they can

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make the area look messy and can lead to slip and fall injuries.

Because these spills are often predictable or “routine,” they can be easily contained by placing the drums or totes on low-profile spill containment decks, or by installing flexible berms around the dispensing area.

Either method will help keep spills contained to the area so that clean-up time can become part of a regular cleaning routine versus a response to each incident. Keeping wipers or absorbents stocked in these areas can also help minimize messes because employees will have the necessary tools to quickly clean up small spills.

Satellite accumulation areas and other waste collection or storage areas can also be the source of spills. For large quantity generators temporarily storing hazardous waste, containment is required in waste storage areas (40 CFR 264.175). Facilities have the liberty of designing an area that meets the requirements of the standard, or using items such as containment pallets to meet this standard. Either option keeps spills contained to minimize the potential for environmental harm.

Planning For Success

Although it is important to evaluate potential spill areas and have the necessary tools for response, it is also vital that plans be established and communicated to employees so that they will be prepared to respond quickly and safely. Training and hosting regular drills takes time, but both are also essential steps to helping responders become comfortable with response tools and knowing which items will help them contain a spill safely and efficiently.

For more information, visit www.newpig.com [1].

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