Spill Response Procedures

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Purpose

To provide the procedures for responding to and containing chemical spills. The result should be immediate and correct response in the event of a spill.

Materials to Have on Hand

- Safety Data Sheets
- Spill containment materials (dike-building materials, absorbents, etc.)
- Personal protective equipment

Introduction

When working with hazardous and combustible substances, leaks and spills are always a concern. Take steps to prevent leaks and spills: Using the proper containers, inspecting them regularly to make sure they're in good condition, and following proper procedures when using and transferring substances. But sometimes accidents still happen.

Spills don't occur often; however, it's important to regularly review how to handle them so that if a spill does occur, personnel will know just what to do to keep it from getting out of hand.

Training Requirements

A training program includes procedures to follow when there's a spill, and to have people trained for the task. All personnel have a role to play in handling accidents quickly and properly. All employees are trained by reviewing the safety data sheets that might affect them in the workplace.

General Hazards

A spill may present a number of hazards; the specific hazards depend on the substance or substances involved. Among the possibilities are:

- Fire
- Explosion
- Hazardous substances released in the air
- Hazardous substances entering the water supply
- Contamination of individuals who come in contact with the spilled substance

Emergency response procedures are designed to minimize the risk of any of these things happening as a result of a spill or, at the very least, reducing the degree of hazard.

Identifying Hazards

The hazards posed by a spill of a particular substance are detailed on the Safety Data Sheet. In most cases, the SDS will even tell what to use, or not to use, to contain or clean up the substance.

As with all work with hazardous materials, read the labels and Safety Data Sheets to keep informed about potential hazards and protective measures. When there's a possibility of a spill, be especially alert to reactions: What could happen if the particular substance comes in contact with another chemical or with air or water? Some substances that aren't too high-risk on their own can be real disasters if they react with the wrong substance.

Protection Against Hazards

The first point about spill containment is to stop it before it gets serious. Personnel seeing a leak or even a damp spot on the floor in an area that contains hazardous chemicals should begin basic spill-handling procedures immediately.

Safety Procedures

Use protective clothing and equipment to do the job safely: Boots, gloves, goggles, and, when necessary, respirators.

The special team may not always be needed for very small spills, but the same overall procedures always apply.

1. **Notify** your supervisor and the safety director immediately if a spill occurs. Report what is leaking and where, as well as the size of the spill and rate of flow. They will make the decision to provide notification to state, federal, and local authorities and fire or police departments or other specialists who might be needed.
2. **Evacuate the area** for personnel not containing the spill. Spill containment personnel should get protective equipment and assemble to get the spill under control. The spill team will look at the SDS to be sure that they understand what they're working with, what its hazards are, and what to do to contain it.
3. **Contain the spill.** This activity has several steps, as outlined below.
   - **Bring SPILL RESPONDER KIT to location.**
   - **Stop the source of the leak.** Close the valves, pumps, or whatever may be allowing the material out.
   - **Cover drains** or other possible escape routes.
   - **Patch holes** with patch kits, valve pluggers, or whatever is needed.
   - **Contain the spill** by the best method. That might be:
     - Building a dike to keep spilled liquid from getting into water.
     - Repairing the container or putting it in a container that won't leak.
     - Channeling the spill to a place where it won't spread, by diking or pumping, or opening a trench to a secure spot.
     - Placing an empty container under the leak.
     - Rotating or shifting the container's position to stop the leak.
   - **Use absorbent materials** to soak up the spill or to solidify it. For spills less than 15 gallons use the pads in the SPILL RESPONDER KIT.
   - Push the absorbent-liquid mixture into an approved container for proper disposal.
4. **Decontaminate.** Protective clothes, as well as any brooms, shovels, or other tools used for the job have to be decontaminated or disposed of in an approved container. If the material spilled was hazardous, then anything that touched it is hazardous, too.
5. **Keep records.** The measures taken and the materials used to contain the spill will have to be written down, as well as notes on who did what when.
6. **Have a medical examination if exposed or injured.**

Spill Containment and Disposal Procedures

Chemical spills must be contained and cleaned up immediately. Personnel must wear adequate personal protective equipment and clothing as warranted. SPILL RESPONDER KIT contains the

spill containment items and protective equipment. Procedures to be followed are those outlined on the safety data sheet of the chemical product.

General Procedures

For any small spill or leak, use sand or absorbent pads and transfer into a chemical waste container. Large spills shall be squeegeed or vacuumed up and placed into chemical waste containers. All clean up material shall be removed and placed into appropriate waste containers, labeled and stored to await proper disposal.

Cleanup Procedures

1. Acid products - Flush spill area with water and neutralize with soda ash or sodium bicarbonate.
2. Hydroxides/Alkali - Flush spill area with water and neutralize with dilute hydrochloric acid or citric acid solution.
3. Amines/Combustible - Remove all ignition sources; ventilate enclosed areas; do not flush to sewer or storm drain; flush spill area with detergent and water.

Disabled Vehicles

Whenever any motor vehicle is stopped (other than routine stops) either on the traveled portion of the highway or shoulder thereof, special care shall be taken to guard the vehicle and its load against possible hazards. Special effort shall be made to move the vehicle to a SAFE location. Once all necessary precaution has been completed, the driver is instructed to contact his supervisor as soon as possible.

Broken or Leaking Containers in Transit

When leaks occur in packages or containers during the course of transportation, the driver is to immediately move the vehicle to a SAFE location and contact his supervisor for instructions.

Packages may be repaired or placed in a salvage drum, then transported to the nearest place to which it may be disposed of safely. Care should be taken to ensure that repair of the packaging is adequate to percent contamination with either material on the same vehicle. Whenever a salvage drum or over pack is required, care should be taken to insure all labeling meeting State and Federal shipping requirements.

Accidents Involving Flammable Liquids

In the event of an accident involving any motor vehicle transporting any flammable liquids, every available means shall be employed to prevent individuals, other than those associated with cleanup operations, from gathering in the area. Efforts should be made to prevent smoking and to keep fire, flames and sparks away.

Whenever any flammable liquid is escaping from a container, all practical and safe means shall be taken to prevent the material from spreading and flowing into sewers, storm drains and streams.

In the event of a leak in a tank vehicle, the leaking vehicle should be removed from the traveled portion of the highway. All safe and practical means shall be employed for the safe disposal of the leaking fluid.

No flammable liquids shall be transferred from one container to another or from one vehicle to another on any public highway, street or road except in the case of an emergency.

Accidents Involving Oxidizing Material

In the event of an accident involving a vehicle transporting corrosive material in which breakage, spillage or leakage has occurred, the interior or any part of the vehicle that a corrosive material has come in contact with must be washed and/or decontaminated.

In the event of leakage of liquid from a cargo tank used for the transportation of corrosive liquids, all practical efforts shall be made to isolate the vehicle from approaching persons and to minimize further hazards.

The vehicle may be transported only the minimum distance to reach a place where the contents may be safely off loaded or disposed of.

In all cases where vehicles transporting hazardous waste or materials have an incident involving either damage to the vehicle, spill or leakage, the operator of the vehicle (when possible) shall contact his/her manager.

Receiving a Call of a Spill or Leakage

Upon receiving a call reporting a spill or leakage, the owner shall obtain and record the following information:

	Type of waste/product		Amount spilled
	Amount being carried on the vehicles		Manifest number
	Profile number of spilled waste		Location
	Lane or ramp closure		Wind direction
	Is the vehicle upright		Generator name and phone number
	Description of situation and scene		Anticipates equipment needed for clean-up
	Is work authorized for appropriate response activities		

Once the information is obtained, the supervisor shall contact the emergency response coordinator for instructions.

After reviewing the information provided by the supervisor, the safety director is responsible for contacting all outside (as applicable) agencies, e.g.:

In an emergency, contact the Local Emergency Response Agency - 911, if the spill is a threat to personnel or the environment.

- Fire Department: 911
- EPA National Response Center: (800) 424-8802
- Safety Manager Tony Nichols
- Supervisor call their cell phone

Emergency information required when reporting a release:

- The name of person reporting and phone number.
- The name of the business, business street address.
- Location of the incident or threatened release.

- Type of incident (spill, gas release, threatened release, etc.).
- Hazardous material(s) involved (chemical name or ID of substance(s) and physical state (solid, liquid, or gas).
- Environment to which the release occurred (soil, water, air, etc.).
- Estimate of the quantity of the hazardous materials involved.
- Time and duration of the release.
- Precautions to take (if known).
- Possible hazards to human health and/or the environment.
- Extent of injuries, if any.
- Methods taken to cleanup/recover hazardous material(s).
- Estimated quantity and disposition of any recovered materials.

Spill Response Checklist

- ☐ Report spills immediately.
- ☐ Evacuate the area if you're not responsible for spill cleanup.
- ☐ If you are responsible for cleaning up a spill:
- ☐ Check the substance's Safety Data Sheet for hazards, reactivity, proper protective equipment, etc.
- ☐ Put on protective clothing.
- ☐ Stop the source of the spill, if possible.
- ☐ Cover drains or other possible escape routes.
- ☐ Patch holes.
- ☐ Contain the spill by:
  - Building a dike
  - Repairing the leaking container
  - Putting the leaking container in one that won't leak
  - Channeling the spill to a place where it won't spread
  - Placing an empty container under the leak
  - Rotating or shifting the container's position to stop the leak.
- ☐ Soak up or solidify the spill with absorbent materials.
- ☐ Push the absorbent-liquid mixture into an EPA-approved container for proper disposal.
- ☐ Decontaminate exposed tools or equipment or dispose of them properly.
- ☐ Decontaminate protective clothing or dispose of it properly before going into clean area.
- ☐ Take notes or help a note taker assemble information on spill containment measures.
- ☐ Get a medical examination if exposed to a hazardous substance.

Neutralization/Decontamination of Liquid Chemical Spills or Leaks

Neutralizer/Product Type		Decontaminant	
A.	Acidic	a. b.	Sodium carbonate Sodium bicarbonate
B.	Alkaline	a. b.	Citric acid (40% solution) Dilute hydrochloric acid
C.	Chlorine and bromine (inorganic compounds)	a.	Sodium sulfite
D.	Chlorine and bromine (organic compounds)	a. b.	Sodium carbonate (to pH 10.5) Sodium sulfite