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THE ENVIRONMENT AND DEPLOYMENT: TACTICAL RISK AND SPILL REACTION PROCEDURES

"A soldier's guide to hazardous material (HM) and hazardous waste (HW) spill prevention and cleanup response."

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PURPOSE

This graphic training aid (GTA) provides ways to deal with any spill. Being prepared for a spill, whether it is caused by a tactical advantage or an accident, requires that—

- Pollution prevention devices be in place.
- Necessary response materials be readily available.

Tactical risks are real, accidents happen, and spills occur—so, be prepared!

PREVENTION

Risk management is the process of detecting, assessing, and controlling risk that arises from operational factors and balancing that risk with mission benefits (see Field Manual 3-100.4). One of the main goals of risk management is to reduce the risk to a negligible level. Pollution prevention can greatly reduce that risk.

Fueling points, vehicle maintenance areas, HW collection points, and HM storage and supply areas may not be set up at the deployed destination. The key to pollution prevention is proper planning; for example, plan to build areas to prevent accidental spills and releases.

HAZARDOUS-MATERIAL AND HAZARDOUS-WASTE AREAS

Keep HM and HW areas clean and orderly to reduce accidents in the storage area and ease the cleanup of spills. Remember to **C-H-E-C-K**:

- **Containment.** Ensure that secondary containment is used and in good condition. Empty water from the secondary containment on a regular basis, and properly dispose of it at the HW collection point.
- **HM and HW locations.** Choose appropriate HM and HW locations. Erect warning signs, and keep the areas clean and orderly.
- **Environmental documentation.** Maintain a material safety data sheet (MSDS) for each HM, and update the unit standing operating procedure (SOP) and spill response plan regularly.
- **Containers.** Check the condition of containers, and keep containers of incompatible materials separated. Keep lids and bungs closed when containers are not in use.

- **Kits.** Place spill, first aid, and emergency response kits near HM and HW areas. Ensure that personal protective equipment (PPE) fits and that replacement items are available for the operation.

NOTE: Check the SOP for more reminders on what to keep tabs on while deployed.

Consider the following when choosing a location for HM and HW areas. The proper location also reduces the tactical risk of an adversary using your chemicals against your unit.

- Locate HM and HW areas away from living areas, bunkers, ammunition storage facilities, fence lines, and dining facilities.
- Develop HM areas near locations where they will be used.
- Develop HW areas near generation points to reduce the potential for a spill.

MATERIAL SAFETY DATA SHEETS

Maintain MSDSs as follows:

- Keep an MSDS for each HM stored or collected in HM and HW areas.
- Ensure that MSDSs are readily available to all unit members.
- Review MSDSs before accepting unfamiliar HM.
- Know what the personal protective requirements are for each HM used.
- Keep copies of the unit environmental SOP and spill response plan in HM and HW areas.

COMPATIBILITY OF MATERIALS

Different classes of HM and HW are required to be stored and disposed of separately. MSDSs describe the classifications of HMs. Four common classifications are—

- Flammable (fuels).
- Corrosive (acids).
- Reactive (explosives).
- Toxic (insecticides).

SECONDARY CONTAINMENT

All liquid HM and HW must have secondary containment. In order to effectively contain a spill, the secondary containment should—

- Hold 10 percent of the total HM and HW stored or 110 percent of the largest container.
- Contain a seamless, ultraviolet-resistant plastic liner. Place sand and/or pallets in the drum storage areas to protect the liners.
- Provide overhead cover to reduce the amount of storm water entering the container, thereby reducing the likelihood of contaminants spreading or seeping into the environment.

RESPONSE

Be prepared to respond to any spill immediately. Advanced planning for environmental risk while in garrison can reduce the impact to human health, the environment, and the time spent cleaning up spills while deployed.

Ensure that up-to-date unit SOPs and spill response plans are readily available in HM and HW areas. The spill response plan should include the proper measures involved in responding to a spill—implementing those measures is the key to a successful spill response. Take the following actions:

- Locate PPE at the entrance to every HM and HW area. Check MSDSs for HMs being used to ensure that the proper PPE is available at the location.
- Ensure that MSDSs are available for reacting to spills safely and effectively.
- Maintain spill stations with spill response equipment (first aid kits, fire extinguishers, spill response kits, and PPE) near HM and HW areas.
- Practice the spill response plan on a regular basis to improve readiness.
- Know the spill-reporting process.

PREPAREDNESS

Be prepared to respond to spills (major and minor) immediately to reduce or eliminate the hazards that can cause

personal injury and environmental damage. In any spill situation—

- Protect yourself and other personnel.
  - Evacuate the area, as necessary, based on the type of spill.
  - Take personal precautions as detailed on the MSDS for the material spilled.
  - Use the proper PPE.
  - Extinguish smoking materials and all sources of ignition.
  - Turn off power if there is the possibility of fire.
  - Ventilate the area.
- Stop the flow safely.
  - Shut off valves, turn drums upright, and take other actions as necessary.
  - Do not take unnecessary chances; but stop the flow, if possible, without injuring or contaminating yourself.
  - Shower and change clothes as soon as possible if contact with HW occurs.
- Contain the spill quickly and safely.
  - Contain the spill by throwing absorbent, floor sweep, or dirt on it.
  - Make berms to keep the spill from spreading further, and do not let it enter storm or sewer drains or other waterways. Divert the flow, if necessary.
- Report the spill immediately.
  - Report the spill to the supervisor or a superior.
  - Sound the alarm, or give a verbal warning.
  - Have another person call for assistance while you continue to assess the size and severity of the spill.
  - Report spills immediately to the unit environmental-compliance officer (ECO), the installation environmental-management office (EMO), or the fire department according to the unit SOP.
- Clean up the spill.

- Scoop up contaminated material, and put it in a container. Mark the container *Hazardous Waste, Contaminated Absorbent (Dirt).*
- Check with the unit supply sergeant or the installation defense reutilization and marketing office for proper disposal.

- Replace spill equipment. The spill response team's noncommissioned officer in charge—
  - Accounts for all tools and supplies immediately after the spill is cleaned up.
  - Orders replacement items.
  - Identifies missing property and initiates the appropriate action (statement of charges or report of survey) to maintain accountability.
  - Ensures that spill kit inventories are completed.
- Maintain a point of contact list (name, office, telephone number, and location) for assistance. It should include the—
  - Fire department.
  - Installation EMO.
  - Unit ECO.