

## Hazardous Substance Spill Prevention

Fixed facilities that produce hazardous substances from raw or starter materials as products, by-products, or waste products; store hazardous substances; or transport hazardous substances should develop a facility spill prevention master plan. The hazardous substances in question number about 700, excluding oil, and are those designated pursuant to Section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, otherwise known as CERCLA.

Suggested procedural steps for developing a facility spill prevention master plan are as follows:

1. Form a facility spill prevention organization supervised by a part-time or full-time manager. Organization should have the full backing and support of plant management.
2. Prepare a spill prevention policy statement approved by plant management.
3. Define facility boundaries and prepare flow sheets indicating generation and storage of all substances within these boundaries, as well as inflow and outflow across the boundaries. Hazardous substances present in raw materials, products, by-products, wastes, fuels, lubricants, paints, pesticides, disinfectants, etc., should be noted.
4. List the substances that are hazardous (as designated in CERCLA, Section 101 (14)). Note the environmental media (air, water, soil) into which the substances would be released, their physical behavior upon release, and the hazards caused by the release.
5. List all facility areas and equipment items that interact with hazardous substances. Include storage vessels of all kinds; process vessels and columns; flow systems including valves and controls; receiving and shipping terminals (road, rail, water, air) and waste storage, treatment and disposal areas.
6. For each area and equipment item identified in step 5., list possible failure modes; amount of hazardous substance involved; hazards caused by possible release of substance (from step 4.) and specific effects expected on the rest of the facility and surroundings. Equipment, personnel, and varying weather conditions should be considered.
7. For each area and equipment item, develop and implement applicable spill prevention practices (SPPs). Spill prevention practices include:
  - Spill prevention organization
  - Risk identification and assessment
  - Materials compatibility

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- Reporting and record-keeping
  - Housekeeping
  - Preventive maintenance
  - Inspection systems
  - Security
  - Employee training
8. For each area and equipment item, develop and implement applicable preventive engineering practices (PEPs). PEPs are specific to groups of toxic and hazardous substances, and to the potential sources of spills: storage areas, loading/unloading areas, inplant transfer, process and material handling areas, drainage from plant site and secondary containment structures, waste storage/ treatment/disposal facilities. PEPs are divided into pre-release (precautionary) and post-release (spill control) groups. Examples include:
- Pre-release PEPs
    - (a) Monitoring and alarm systems
    - (b) Non-destructive testing
    - (c) Proper labeling of all storage, process and flow equipment
    - (d) Proper storage procedures
  - Post-release PEPs
    - (a) Secondary containment systems
    - (b) Flow diversion systems
    - (c) Vapor control systems
    - (d) Dust control systems
9. Write a facility spill prevention master plan utilizing information from Steps 3. through 8. The plan should consider drainage to receiving waters and facility terrain, and should include a timetable for implementing the SPPs and PEPs.
10. Have the plan approved by plant management and implemented under direction of the spill prevention organization. Plan should be reviewed periodically and updated as necessary.

The loss prevention information and advice presented in this brochure are intended only to advise our insureds and their managers of a variety of methods and strategies based on generally accepted safe practices, for controlling potentially loss producing situations commonly occurring in business premises and/or operations. They are not intended to warrant that all potential hazards or conditions have been evaluated or can be controlled. They are not intended as an offer to write insurance coverage for such conditions or exposures, or to simply that Great American Insurance Company will write such coverage. The liability of Great American Insurance Company is limited to the specific terms, limits and conditions of the insurance policies issued.  
301 E. Fourth Street, Cincinnati, OH 45202 F13531B-LP (01/13)

