Chapter 28
SPILL RESPONSE PLAN

A. References

1. WAC 296-843 Hazardous Waste Operations
2. WAC 296-901 Hazard Communication
3. WAC 173-303 Dangerous Waste
4. WAC 296-62 General Occupational Health Standards, Part R
5. Biosafety in Microbiological and Biomedical Laboratories
6. Office of Research Assurances IBC: Investigator Responsibilities
7. National Institute of Health (NIH) Guidelines
8. Radiation Safety Office: Radioactive Waste
9. SPPM 4.24: Disposal of Biohazard Wastes
10. SPPM 5.62: Chemical Spill Control
11. SPPM 9.80: Radiological Incident and Emergency Response
12. Asbestos Awareness: Fatal Fibers
13. Property 20.77: Mercury-Containing Devices
14. 49 CFR 173.117-173.119
15. 49 CFR 173.121
16. 49 CFR 173.133

B. Scope

This chapter establishes spill response requirements for College of Arts and Sciences (CAS) employees. Spills include chemical spills, spills involving radioactive materials, or spills involving biohazards.

WSU Environmental Health and Safety (EHS) may respond to chemical spills on the WSU Pullman campus depending on size and/or the hazard. EHS collects and provides spill and hazard information to first responders (WSU Police and Pullman Fire). EHS spill-response personnel assist with identifying and coordinating necessary evacuation efforts, establishing exclusion zones, evaluating spill hazards using monitoring equipment and/or observations and calculations, performing spill cleanup, and performing other necessary functions that promote the protection of human health and of the environment.

The CAS Level 3 Safety, Health and Security Committee reviews and approves this plan and associated appendices annually.

C. Responsibilities

Supervisors:

- Ensures employees or students who may respond to a spill are familiar with this plan.
- Requires all personnel that may respond to a simple spill receive appropriate training associated with spill risks in their respective laboratories.
- Assigns personnel to maintain spill response supplies and stock materials.
- Personal protective equipment requirements are communicated to students and

employees in accordance with this APP's Personal Protective Equipment (PPE) Chapter.
- Provides oversight or assigns a designee to oversee cleanup activities.
- Evaluates spill response locations after cleanup and approves or provides criteria to approve the area for reoccupation by any non-spill response trained personnel.
- Coordinates after action/spill cleanup review/debriefing when necessary.

Employees:
- Immediately inform their supervisor when hazards outside the scope of the employee's training, ability or understanding are encountered.
- Immediately inform their supervisor when cleanup location hazards are inconsistent with or exceed those assigned/described.
- Familiarize themselves with this plan; personnel not adhering to the contents of this plan may be subject to disciplinary action.
- Wear personal monitoring equipment when necessary or required.
- Maintain emergency response equipment and stock materials.
- Attend PPE training and maintain PPE. Based upon knowledge and training, employees are expected to be capable of identifying the appropriate PPE for a spill response.
- Cleanup spills safely.
- Request an evaluation of the spill response location after cleanup or evaluate location after cleanup per supervisor's direction.
- Participate in after action/spill cleanup review/debriefing.

D. Training

EH&S spill response employees receive the following training, referencing WAC 296-843-200.
- The contents of this APP Chapter;
- A minimum 24 hours HAZWOPER (29 CFR 1910.120) training with 16 hours simulated/situational training and an additional 2 days supervised field experience with 8 hour annual HAZWOPER refreshers thereafter;
- Personnel required to wear self-contained breathing apparatus (SCBA) respirators receive the minimum training identified above, and an additional 40 hours of training emphasizing the use of SCBA and chemical protective clothing (Level B PPE) *Note: EHS personnel do not perform spill response requiring Level A PPE*;
- Engineering and administrative controls (exclusion zone monitoring and entry strategies including the use of existing laboratory hazardous exhaust systems) that may reduce or preclude the need for PPE;
- Available sources of chemical hazard information, including SDS (see also this APP's Hazard Communication chapter), the NIOSH pocket guide and WSU specific information sources (e.g. laboratory signage or departmental chemical inventories) to assist in identifying potential spill hazards;
- Training documentation is provided to the EHS OHS AD and,
- Re-training will be required when:

- There have been changes in the workplace, such as new processes and equipment, which render previous training obsolete;
- Changes in the types of equipment that render the previous training obsolete;
- When an employee exhibits inadequate knowledge, skill and understanding or non-conforming use of the equipment; and/or
- When regulatory requirements change.

E. Procedures

CHEMICAL SPILLS

Chemical spills are classified into either simple or complicated spills. Simple spills do not necessarily need the assistance of EHS. Laboratory personnel who have had proper training and possess the appropriate equipment can safely and effectively handle most chemical spills that occur in the laboratory. This is true for both research and instructional laboratories.

Depending on associated hazards, available resources, and the experience or competence of laboratory personnel, the spill may be classified as complicated. Use the information below to differentiate between simple and complicated chemical spills.

Complicated Spills

If any *one* of the following conditions are met, the spill is classified as complicated. Call 911 and notify Environmental Health & Safety at 509-335-3041.

1. A person is injured.
2. You feel any symptoms to exposure.
3. The identity of the chemical or hazard is unknown.
4. The chemical or hazard is highly toxic, flammable, or reactive.
5. The spill rapidly spreads in or toward a public space, such as a hallway.
6. The spill has the potential to spread to other parts of the building, such as through the ventilation system.
7. The cleanup procedures for the chemical or hazard spilled are not known, or the appropriate materials for cleanup are not available.
8. The spill or hazard may endanger the environment, e.g., the spilled chemical may reach waterways or ground water.

Simple Spills

Follow the general procedure below. For consultative assistance, call EH&S at 509-335-3041.

1. If someone comes into contact with the chemical, immediately rinse the affected area with cold water for 15 minutes; seek medical attention.
2. Wear proper personal protective equipment.
3. Close lab doors and windows.
4. Outline spill area with absorbent [Oil-Dri, cat litter, vermiculite, spill pillows or blankets, 3M Powersorb, or 1:1:1 sand:soda ash:cat litter—but do not use silica-based absorbents (including sand) for hydrofluoric acid spills];

5. Eliminate potential sources of ignition.
6. Continue using absorbent, moving toward the center of the spill.
7. When dry, scoop up absorbent and place in an appropriate container (plastic jar or bag).
8. Seal and label container; treat as hazardous waste and dispose through normal channels.
9. Clean the spill area with water.
10. Replenish the lab spill kit, as necessary.

SPILLS INVOLVING RADIOACTIVE MATERIAL

Outside of the Nuclear Science Center, the amounts and/or concentrations of radioactive material on campus are at levels such that spills are cleaned up by laboratory personnel. However, the Radiation Safety Office (RSO) should be notified, and the RSO will verify via testing that cleanup and decontamination has been adequately completed.

1. If personnel are injured and contaminated with radioactive material RSO will assist to ensure that non-disposable equipment and buildings (i.e., ambulance, hospital) are decontaminated. The spilled materials in the laboratory are to be cleaned up by laboratory personnel.
2. In the event of a mixed-waste spill (radioactive material and chemicals), RSO will not respond to the spill. RSO will provide guidance on the hazards associated with the radioactive material, provide guidance about monitoring equipment, provide any necessary training on use of monitoring equipment, provide readings where the radioactive material becomes a hazard and cleanup should be aborted, and suggestions on how to safely mitigate the release. Once the emergency is over and the chemical hazard has been eliminated, RSO will verify cleanup and decontamination has been completed via testing. If not, lab personnel will decontaminate area.

SPILLS INVOLVING BIOHAZARDOUS MATERIAL

The amounts and/or concentrations of biohazardous material on campus are at levels such that spills are cleaned up by the laboratory personnel. The Biosafety Office (BSO) will verify cleanup and decontamination.

1. If personnel are injured and contaminated with biohazard material the Office of Research Assurances will assist to ensure that non disposable equipment and buildings (i.e., ambulance, hospital) are decontaminated. The spilled materials are to be cleaned up by laboratory personnel.
2. In the event of a mixed waste (biohazard material and chemicals), the Biosafety Officer will not be part of the response team. BSO will provide guidance on the hazards associated with the biohazard material and how material can be deactivated. Once the emergency is over and the chemical hazard has been eliminated, they will verify cleanup and decontamination has been completed. If not, lab personnel will decontaminate area.
3. In the event a spill occurs that is beyond the capabilities of the lab personnel, WSU has contracts with EnV Services and Bioquell to clean up the spill.