



## Environmental Health Safety & Risk Management

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### Chemical Exposure and Spill Response Procedure

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Accidental release of chemicals can occur on campus at any time. A chemical release can result in either an exposure to a person or as a spill contaminating work areas or the environment. There is a potential for the development of harmful effects depending on the chemical involved and the associated hazards.

The following sections are provided as general guidance for response to a chemical exposure or a spill, however; if in doubt, STOP and call 911.

#### Chemical Exposure to a Person

- Remove person from exposure, if you can safely do so. Avoid breathing the vapors of spilled substances.
- Alert people in the immediate area to evacuate.
- Call 911 immediately and request emergency and medical responders.
  - Provide as much information known about the incident including specific location, nature and extent of injuries, name and quantity of chemical involved, any control measures taken and possible health hazards associated with the spill.
  - Provide your name and phone number and remain available.
- Use eyewash or safety showers (in area away from the spill) to rinse chemicals off the contaminated person.
  - For exposure affecting small portions of skin, immediately flush with flowing water for at least 15 minutes. If pain returns after 15 minutes of flushing, resume flushing the area.
  - For splashes in the eye, use eyewash and immediately flush for 15 minutes. Hold the eyelids away from the eyeball, moving eye in all directions to wash thoroughly behind the eyelids.
  - For spills on clothes, quickly begin showering while removing all contaminated clothing, shoes and jewelry. It may be necessary to cut clothes off in some instances to prevent contamination of eyes. Contaminated clothes should be discarded or laundered separately from other clothing.
- Consult the chemical safety data sheet (SDS) for any potential delayed effects. Keep the SDS with the victim.
- Obtain medical evaluation and necessary treatment, if needed.
- Students and Employees, for follow-up treatment – Contact the Campus Health Center at 646-1512.
- All injuries of this type must be reported properly. Please use this [link](#) for guidance on reporting injuries.

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Please contact EHS&RM for any additional assistance at (575) 646-3327 or [ehsrm@nmsu.edu](mailto:ehsrm@nmsu.edu)

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## Chemical Spill Response

### Categories of Chemical Spills

The chart below is for liquid spills and the additional information below the chart will help determine the appropriate response to a chemical spill; however, it should not be taken as absolute, as some substances will be considerably more hazardous. Each spill should be judged individually for appropriate action.

Category	Size	Response	Treatment Materials
Small	Less 50 ml	Absorption or Chemical Treatment	Paper towels (if compatible), appropriate absorption spill kit and/or neutralization
Small to Medium	50 ml to 250 ml	Absorption or Chemical Treatment	Appropriate absorption spill kit and/or neutralization
Medium to Large	250 ml to 2.5 liters	Absorption	Appropriate absorption spill kit
Large	More than 2.5 liters	Evacuate and Call 911	Appropriate absorption spill kit and consider outside help to ensure nothing can enter stormwater drains.

In addition to this chart, there are three basic categories of chemical spills or release events. The following information should be used as guidance in the event of these types of spills.

#### **1. Spills/Releases That Are Immediately Dangerous to Life or Health (IDLH):**

A spill/release that, in the opinion of the area supervisor or individual responsible for the chemical or area, poses an immediate health threat to the individual and/or other occupants in the building. In this case, the following must be done:

- Sound the fire alarm to notify others in the area for evacuation.
- Call 911 from a safe location and provide the following information to the dispatcher:
  - Nature of emergency.
  - Chemical involved and quantity.
  - NMSU building name and room number or nearest building location if outdoors.
  - If calling from a cell phone, report location as NMSU campus.
- Remain on scene to meet response personnel and provide additional information.

#### **2. Spills/Releases That Are Not IDLH But Require Technical Assistance:**

This refers to a spill/release that an individual and/or a supervisor feel there is not an immediate health threat but require technical assistance for proper clean-up. In the event any of the following statements are a factor, contact EHS&RM at (575) 646-3327 or after hours, contact the NMSU Police Department at (575) 646-3311.

- Individual is not familiar with the hazards of the material and not comfortable performing clean-up.

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- Individual does not have proper training to perform clean-up.
- Equipment needed for clean-up is not available.

### 3. Spill/Releases That Can Be Cleaned Up By Area Personnel:

This refers to a spill/release that an individual and/or a supervisor feel that there is not an immediate health threat and safe for work area personnel to clean-up. Guidelines include the following:

- Individual is thoroughly familiar with the hazards of the material. (**Reference SDS**)
- Individual has been trained to deal with spills/releases of the size in question.
- Individual has the proper Personal Protective Equipment (PPE) needed for spill clean-up.
- The appropriate absorbent/neutralizers are readily available.
- Take appropriate steps to confine and limit the spill without risk.
- Clean-up spill using appropriate equipment and procedures.
- It is essential that all spill clean-up waste is properly disposed of:
  - Do not place in or around the regular trash.
  - Place the spill clean-up waste in a closed container and attach a NMSU Waste/Material Tracking Form or a label with contents.
  - Contact EHS&RM for waste pick-up.

#### Preparation

Hazardous chemical spills must be dealt with promptly, however, due to the range and quantities of chemicals used within laboratories and shops of NMSU, spill response procedures must be clearly defined before work commences. Knowledge and preparedness can minimize potential problems and enhance personnel's ability to deal with routine spills effectively. Personnel should be instructed on the following in the event of a spill:

1. Location and knowledge of the Safety Data Sheets (SDS) for the chemicals used and stored in the work area.
2. The location of emergency equipment (fire extinguishers, safety shower and eyewash).
3. The location of appropriate personal protective equipment and spill control equipment (see below for Spill Kit contents).
4. The location of available exits.
5. The location and content of department Chemical Hygiene Plan (applicable to laboratories).
6. When and who a spill shall be reported to.
7. Name and phone number of individual responsible for the work area.

#### Spill Material Kits

EHS&RM recommends that spill materials be situated within easy reach of the chemical storage and use areas. A spill kit should contain appropriate absorbent, adsorbent, neutralizers and personal protective equipment (PPE). Please call EHS&RM to request a spill kit for small spills.

Items in a small NMSU spill kit are as follows:

Spill Kit Contents	
Chemically resistant gloves	Small broom & dustpan
Chemically resistant booties	Absorbent pads
Safety goggles	Small plastic spatula
Zip-lock baggies	5 gallon bucket with lid
Drum liners	NMSU Hazardous Spill Response Procedure
Baking Soda	NMSU Waste Tracking Form
Vermiculite	NMSU Chemical Spill Report Form

### Spill Reporting Procedures

A [chemical spill report](#) must be completed and forwarded to EHS&RM whenever a hazardous chemical spill occurred that impacted adjoining work areas or resulted in a release to the environment. The information will be used by workers and EHS&RM to assist in the determination of the root cause of the spill and to help identify preventative actions that could be implemented to avoid future spills or improve spill response activities. This report is in addition to injury reporting for exposed personnel.

### Spills to Drains

All spills that involve hazardous materials which have or are likely to be released to the sanitary sewers (sink or floor drain) must be reported to NMSU Police Department at 911 or (575) 646-3311. This is to help prevent damage to the city wastewater system. For additional information, see the [Spill/Slug Control Plan](#) in the [Wastewater](#) section of the EHS&RM Webpage.

### Special Hazard Spill Response Procedures

In addition to the general guidance for chemical spill response described above, EHS&RM has developed spill response procedures for specific hazardous materials. Use the following links for specialty procedures:

- Mercury Spill ([link to New location of Mercury Spill](#))
- Biohazard Material Spill ([link to page 65 in the Biosafety Manual](#))
- Radioactive Material Spill ([link to page 49 of Radiation Safety Manual](#))
- [Microblaze: Bio-digestion of Organic Spills](#) (make the home base of this link on Emergency Tab/Hazardous Spills)