

CHEMICAL SPILL CLEAN UP PROCEDURES

The Chemical Spill Clean Up Procedures were created to give students, teachers and St. Vrain District personnel guidance for cleaning up chemical spills. Chemical spills and accidents need to be minimized as much as possible. If a chemical spill should occur, a quick response with a stocked chemical spill kit will help minimize potential harm to personnel, equipment and laboratory space.

Note that the majority of chemical spills can be prevented or minimized by:

1. Maintaining a neat and organized work area
2. Performing a laboratory procedure review prior to conducting new experimental procedures
3. Storing liquid chemicals in secondary containment bins
4. Keeping reagent chemical containers sealed or closed at all times, except when removing contents
5. Ordering reagent chemicals in plastic or plastic coated glass containers whenever possible
6. Using secondary containment to store and move chemicals.

Minor Chemical Spills

A minor chemical spill is considered one that students and teachers are capable of handling safely without assistance and where there is no injury or threat of imminent injury. Typically, a minor spill would be considered less than 0.5 liter (as a rule of thumb) of a material that is not highly toxic. Spill kits are available in each laboratory and should only be used by those with knowledge of the properties and hazards posed by the chemical, and any potential dangers posed by the location of the spill. Spill cleanup materials should be segregated for hazardous waste disposal. The District Environmental Compliance Manager should be contacted for advice and assistance at 720-340-6579.

The basic procedure are as follows:

- Only qualified persons knowledgeable of the material(s) spilled should perform the cleanup
- Alert all persons nearby spill area
- Use eyewash or safety shower if needed to decontaminate
- Use spill kit to clean up and segregate clean up materials for hazardous waste disposal. Use proper personal protective equipment, which at a minimum will include chemical resistant gloves and safety glasses
- Decontaminate spill area with water or soap/water mixture if a non-reactive chemical
- Wash hands thoroughly and seek medical attention if necessary

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Major Chemical Spills

All other spills not described above are considered **Major Spills**. St. Vrain Valley Schools does not have an on-site emergency response team; therefore, our primary response is to evacuate, call 720-340-6579 and or 911, and protect human health. The basic procedure is as follows:

- Avoid breathing vapors of spilled material
- If possible and safe to do so, turn off any ignition source or gas emergency shutoff valve
- Remove any contaminated persons from spill area and decontaminate via eyewash or safety shower. The use of a safety shower is never a mistake – do not be reluctant to use the shower in the event of personal chemical contamination
- Evacuate the area and close the door to the lab
- Post a sign stating “Hazard – Do Not Enter” on the exterior surface of the door once all personnel are evacuated, if safe to do so
- Contact The District Environmental Compliance Manager for advice and assistance at 720-340-6579 or 911 and notify the operator of the location, nature and volume of the spill

The following table contains a list of chemical classes with examples that might require assistance from The District Environmental Compliance Manager.

Chemical Class	Example
Strong Acids - Any acid that is concentrated enough to fume or emit acid gases	Fuming Sulfuric Acid Red Nitric Acid Hydrofluoric Acid Perchloric Acid
Strong Bases - Any base that is concentrated enough to emit vapors	Ammonium Hydroxide
Poison by Inhalation - Any chemical that readily emits vapors / gases at normal temperature and pressure that are extremely toxic by inhalation	Phosphorous Oxychloride Titanium Tetrachloride Formates
Reactive - Any chemical that is sensitive to air, water, shock, friction and/or temperature	Dry Picric Acid Lithium / Aluminum Sodium / Borohydride Phosphorus Metal Organic Peroxides
Mercury - Any mercury compound	Metallic Mercury Mercury Salts Aqueous Mercury Solutions
Extremely Toxic - Any chemical that is readily absorbed through the skin and is extremely toxic at small concentrations	Benzene Sodium Cyanide