This document describes the baseline requirements necessary for safe storage, use, handling and disposal of chemicals that have been designated as “particularly hazardous” by Cal/OSHA. Careful handling and stringent controls of these chemicals are essential in order to protect workers and the environment from contamination and to comply with Title 8 of the California Code of Regulations, Section 5209.

Additional requirements may apply, depending on the specific chemical. Examples include carcinogens that are also highly flammable and/or reactive. Contact EH&S to see if the chemical you plan to use requires further controls.

1. Type of SOP - check one box

   Hazardous chemical: the SOP will be for an individual chemical such as arsenic, formaldehyde, nitric acid, etc.

2. Describe the Process, Hazardous chemical or Hazard class

   Hazardous chemical: Provide the name of the chemical. Include the full name, common name, and any abbreviations used for the chemical.

3. Potential Hazards

   Describe all the potential hazards for each process, hazardous chemical, or hazard class. Describe potential for both physical and health hazards. Health hazards include carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic systems, and agents which damage the lungs, skin, eyes, or mucous membranes. State the potential for chronic and/or acute health hazard effects of the chemical(s).

   Physical hazards include radioactivity, cryogen, high temperature, electrical, compressed gas or other pressure systems, UV light, laser, flammable or combustible, corrosive, water-reactive, unstable, oxidizer, pyrophoric, explosive, or peroxide formers.

4. Circumstances Requiring Prior Approval

   Discuss the circumstances under which the particular process, hazardous chemical or hazard class will require prior approval (if any) from the principal investigator, laboratory supervisor or chemical hygiene officer. The circumstances may be based on such criteria as: the inherent hazards of the material(s) used, the hazards of the experimental process, the experience level of the worker, the scale of the reaction, etc. Some examples of circumstances that may require prior approval include unattended or
overnight operations, use of highly toxic gas in any amount, use of large quantities of toxic or corrosive gases or use of carcinogens.

5. Personal Protective Equipment (PPE)

Identify the required PPE for the process, hazardous chemical, or hazard class. PPE includes but is not limited to: gloves, aprons, lab coats, safety glasses, goggles, masks, respirators, or faceshields.

6. Engineering Controls

Describe or list engineering controls that will be used to prevent or reduce employee exposure to hazards. Examples of engineering controls are fumehoods, glove boxes, interlocks on equipment, shielding of various kinds, etc.

7. Special Handling and Storage Requirements

Describe storage requirements for hazardous substances including special containment devices, special temperature requirements, special storage areas or cabinets, chemical compatibility storage requirements, etc. State the policy regarding access to substance(s). Provide exact storage location in laboratory. Describe special procedures such as dating peroxide forming chemicals on receipt and opening and disposal or testing after an appropriate amount of time has passed. Describe safe methods of transport such as in a secondary container or/and on a low, stable cart, or using two hands to carry the chemical container.

8. Spill and Accident Procedures

Describe special procedures for spills, releases or exposures (e.g., neutralizing agents, use of fluorescence to detect materials, etc.). Indicate how spills, accidental releases and exposures will be handled. List location of the following emergency equipment: chemical spill clean-up kit, first-aid kit, emergency shower, eyewash, and fire extinguisher.

9. Decontamination Procedures

Describe specific decontamination procedures for equipment, glassware or work areas.