**UCCS Hazard Control Assessment Guide**

If a hazard exists, there must be a means of controlling it. There are 4 types of controls that are available which must be evaluated in the order given:

1. elimination or substitution,
2. engineering,
3. administrative (e.g. procedures, posters, work schedule, etc.) and
4. personal protective equipment.

Supervisor Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Lab Location: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Review the ―type of hazard column check the hazards applicable to your lab, for each hazard checked, mark the type of controls implemented in your lab

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|  | Type of Hazard | Types of Control |
| 1. | [ ]  General | [ ]  Hazard assessment performed by supervisor [ ]  Supervisor ensure proper PPE Used [ ]  Supervisor ensure that working procedures and protocols are developed for lab specific hazard operations  |
| 2.  | [ ]  Hazardous Materials Used and Stored  | [ ]  Safety Manual Procedures are followed: [ ]  Safe Handling, Use & Storage of Hazardous Chemicals [ ]  Personal Protective Equipment [ ]  Personnel receive [ ]  Laboratory Chemical Safety training [ ]  On the job task specific training [ ]  Lab specific protocols developed and followed [ ]  Monthly safety inspection performed  |
| 3.  | [ ]  Compressed gases used or generated [ ]  Flammable [ ]  Oxidizers [ ]  Toxic [ ]  Corrosive [ ]  Reactive  | [ ]  Safety manual procedure, Safe Handling, Use & Storage of Hazardous Chemicals- Compressed gas, followed [ ]  Minimize inventory [ ]  Proper securing and transportation [ ]  Signage [ ]  Leak test ,and storage in exhausted enclosures for hazardous gases  Inspected and dated [ ]  Monitors and alarms  |
| 4.  | [ ]  Flammable materials  | [ ]  Safety manual procedure, Safe Handling, Use & Storage of Hazardous Chemicals- Flammable & combustible materials, followed [ ]  Material kept away from heat spark and open flame [ ]  Minimum quantity kept in work area [ ]  Volume limits observed [ ]  Storage in approved containers, cabinets and spark proof refrigerators [ ]  Stored away from oxidizers [ ]  Proper labels on containers and cabinets [ ]  Proper fire extinguishers in place  |
| 5.  | [ ]  Oxidizing materials  | [ ]  Safety manual procedure, Safe Handling, Use & Storage of Hazardous Chemicals- Oxidizing materials, followed [ ]  Barriers are used to isolate from potential violent reaction [ ]  Only minimum amount necessary used and stored in work area [ ]  Kept away from incompatibles as reducing agents, flammable and combustible materials, organic acids  |
| 6.  | [ ]  Toxic materials  | [ ]  Safety manual procedure, Safe Handling, Use & Storage of Hazardous Chemicals- Toxic materials, followed [ ]  Worker aware of the primary route of entry for materials used [ ]  Appropriate Personal Protective Equipment and engineering controls are used [ ]  The quantities used are minimized [ ]  Signs and symptoms of acute exposure are observed [ ]  Materials toxicity and potential chronic effects reviewed [ ]  Storage according to manufacturer‘s recommendations, away from incompatible chemicals  |
| 7.  | [ ]  Corrosives  | [ ]  Safety manual procedure, Safe Handling, Use & Storage of Hazardous Chemicals- Corrosives, followed [ ]  Proper PPE used (goggles, and splash shield ) [ ]  Ice bath or cold water available to control exothermic reactions [ ]  Additional hazards (toxicity, reactivity are considered) [ ]  Upon exposure immediate action taken to wash away the material [ ]  Eye wash station and safety showers are in place, accessible  |
| 8.  | [ ]  Reactive materials [ ]  Pyrophoric materials [ ]  Water reactive [ ]  Shock sensitive materials  | [ ]  Safety manual procedure, Safe Handling, Use & Storage of Hazardous Chemicals- Reactive materials, followed [ ]  Work bench quantity restricted (amount needed for that day only) [ ]  Equipment shielded, and operator wear suitable Personal Protective Equipment [ ]  Work is isolated from worker by distance [ ]  Storage as required by properties free of stability compromising conditions (i.e. shock, vibration, incompatible chemicals, elevated temperature, rapid temperature change) [ ]  SDS reviewed to determine reactivity and compatibility  |
| 11.  | [ ]  Hazardous Waste Generated  | [ ]  Appropriate containers used [ ]  Container closed when not in use, properly labeled [ ]  Flammable liquids and biohazard waste containers with proper tags, and generator bar code stickers [ ]  UBC hazardous waste procedures are followed [ ]  Sanitary sewer discharge prohibitions are observed [ ]  Traps and back flow restrictors used as necessary [ ]  Worker trained on emergency procedure  |
| 12.  | [ ]  Energy Source/Energy Failures [ ]  Heating and cooling systems [ ]  High voltage [ ]  Machinery [ ]  Water/air [ ]  Ventilation [ ]  Automatic controls or equipment  | [ ]  Automatic shut off systems for machinery, power [ ]  Flow sensors and shut off valves for water, air, gases [ ]  Backup system for power, water, air [ ]  Lockout/ tag out procedures in place and followed [ ]  Process specific handling and emergency procedures developed and followed  |
| 13.  | [ ]  Physical Hazard |  |
| 14. | [ ]  Musculoskeletal Injury (MSI)  | [ ]  Worker aware of factors causing MSI and signs and symptoms of MSI [ ]  Work station arranged to fit task and employee [ ]  Proper PPE used [ ]  Worker implement proper posture while performing tasks [ ]  Sufficient space provided to perform task safely [ ]  Safe lifting rules and weight limits are observed  |
| 15.. | [ ]  Extreme temperature | [ ]  Proper PPE, and materials handling tools used  |
| 16. | [ ]  Biological Hazards | [ ]  Proper PPE available and used[ ]  Proper waste containers available and used |
| 17. | [ ]  Trip/ slip and fall Hazards[ ]  Equipment Hazard[ ]  Physical hazard[ ]  Harmful emission[ ]  Contamination backflow to water system[ ]  Electrical hazard | [ ]  Exists and isles free of tripping hazard [ ]  Walking surface unobstructed, dry [ ]  Step stool available for out of reach items [ ] Operation manuals and procedures, routine inspections[ ]  Hazard identification on equipment (signs/labels)[ ]  Safe guards[ ]  Shields[ ]  Isolation by location[ ]  Exhaust ventilation[ ]  Proper collection drainage and disposal[ ]  Vacuum break device[ ]  Lockout tag out procedure followed, guards in place |
| 18. | [ ] Other |  |