

NSLS OHSAS Facility Risk Assessment

The only official copy of this file is the one on-line in the NSLS ESH website. Before using a printed copy, verify that it is the most current version by checking the document issue date on the NSLS ESH website.

| | | | | | | |
|---|--------------------------------------|--|---------------------------------|-------------------------------------|---------------------------|--------------------------------------|
| Name(s) of Risk Team Members: Reviewed by OHSAS Committee | Point Value → Parameter ↓ | 1 | 2 | 3 | 4 | 5 |
| Area/Facility Description Title: General Chemical Hazards | Occupancy or Use | ≤once/year | ≤once/month | ≤once/week | ≤once/shift | >once/shift |
| Area/Facility # (if applicable): LS-FRA-0001 | | | | | | |
| Area/Facility Description: General Chemical Hazards throughout the NSLS complex, including labs and gas cylinder storage areas. | Severity | First Aid Only | Medical Treatment | Lost Time | Partial Disability | Death or Permanent Disability |
| | Likelihood | Extremely Unlikely <<1x/20yrs | Unlikely 1x/10-20yrs | Possible >1x/10-20yrs | Probable 1x/yr | Multiple >1x/yr |
| Approved by: A. Ackerman Date: 8/15/08 Rev.#: 2 Revision Log | | | | | | |
| Reason for Revision (if applicable): | | | | Comments: | | |

| Physical Item or Activity | Hazard(s) | Before Controls | | | | Initial Controls | After Initial Controls | | | | Control(s) Added to Reduce Risk | After Additional Controls | | | | % Risk Reduction |
|---------------------------|---|-----------------|------------|--------------|-------------|--|------------------------|------------|--------------|-------------|---------------------------------|---------------------------|------------|--------------|-------------|------------------|
| | | Occupancy A | Severity B | Likelihood C | Risk* AxBxC | | Occupancy A | Severity B | Likelihood C | Risk* AxBxC | | Occupancy A | Severity B | Likelihood C | Risk* AxBxC | |
| Stored gas cylinders | Fire or explosion due to ignition of flammable gas release. | 3 | 5 | 3 | 45 | Cylinder certification, proper separation of flammables and oxidizers, cylinders capped and secured, Tier I inspection, storage area well maintained, outdoor storage (good ventilation) | 3 | 5 | 2 | 30 | | | | | | |
| | Being struck by an object due to pressure release. | 3 | 5 | 3 | 45 | | 3 | 5 | 2 | 30 | | | | | | |
| | Exposure to release of toxic substances. | 3 | 4 | 2 | 24 | | 3 | 4 | 1 | 12 | | | | | | |

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| Physical Item or Activity | Hazard(s) | Before Controls | | | | Initial Controls | After Initial Controls | | | | Control(s) Added to Reduce Risk | After Additional Controls | | | | % Risk Reduction |
|---|--|-----------------|------------|--------------|-------------|--|------------------------|------------|--------------|-------------|---------------------------------|---------------------------|------------|--------------|-------------|------------------|
| | | Occupancy A | Severity B | Likelihood C | Risk* AxBxC | | Occupancy A | Severity B | Likelihood C | Risk* AxBxC | | Occupancy A | Severity B | Likelihood C | Risk* AxBxC | |
| Stored containers of hazardous materials | Spill due to container failure may result in explosion or fire from flammable/combustible materials coming in contact with an ignition source or chemical reaction | 3 | 4 | 2 | 24 | Segregation of incompatibles, chemical storage cabinets, work planning/experimental review, ventilation, secondary containment, spill response, use of safer substitutes, Tier 1 inspections, container labeling, area posting, peroxide forming compound testing, containers specific for the hazard and operation, applicable subject areas, eye wash/shower | 3 | 4 | 1 | 12 | | | | | | |
| | Spill due to container failure may result in exposure to toxic materials or corrosive splash | 3 | 3 | 4 | 36 | Chemical storage cabinets, work planning/experimental review, ventilation, secondary containment, use of safer substitutes, Tier 1 inspections, container labeling, area posting, peroxide forming compound testing, containers specific for the hazard and operation, applicable subject areas, eye wash/shower | 3 | 2 | 3 | 18 | | | | | | |
| Being near others mixing and reacting hazardous materials | Exposure to toxic materials including inhalation, absorption, ingestion and injection | 3 | 4 | 3 | 36 | Work planning/experimental review, use of small volumes, fume hood, use of safer substitutes, container labeling, area posting, applicable subject areas, area monitoring, eye wash/shower | 3 | 2 | 2 | 12 | | | | | | |
| | Fire or explosion due to ignition of flammable vapors/exothermic reaction | 3 | 4 | 2 | 24 | | 3 | 4 | 1 | 12 | | | | | | |

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| | | Before Controls | | | | | After Initial Controls | | | | | After Additional Controls | | | | | |
|--|------------------------------------|-------------------------------|------------|--------------------------------|-------------|--|------------------------------|------------|--------------|---------------------------------|---------------------------------|---------------------------|--------------------------------------|--------------|-------------|------------------|--|
| Physical Item or Activity | Hazard(s) | Occupancy A | Severity B | Likelihood C | Risk* AxBxC | Initial Controls | Occupancy A | Severity B | Likelihood C | Risk* AxBxC | Control(s) Added to Reduce Risk | Occupancy A | Severity B | Likelihood C | Risk* AxBxC | % Risk Reduction | |
| | | | | | | | | | | | | | | | | | |
| Near containers being moved around a lab work area or the building | Spill with fire | 3 | 4 | 3 | 36 | Spill response, secondary containment, proper labeling, training, work planning-experimental review, eye wash/shower | 3 | 4 | 2 | 24 | | | | | | | |
| | Spill with inhalation exposure | 3 | 4 | 3 | 36 | | 3 | 2 | 2 | 12 | | | | | | | |
| | Spill with direct contact exposure | 3 | 4 | 2 | 24 | | 3 | 2 | 1 | 6 | | | | | | | |
| Further Description of Controls Added to Reduce Risk: | | | | | | | | | | | | | | | | | |
| *Risk: | | 0 to 20 Negligible | | 21 to 40 Acceptable | | | 41 to 60 Moderate | | | 61 to 80 Substantial | | | 81 or greater Intolerable | | | | |