

Activity ES&H Hazard Identification Checklist

Name of Activity: _____

Activity Supervisor: (Print) _____ Location: Room _____ Building _____

ES&H Rep.'s/Coor.'s Signature _____ Employee # _____ Date _____
Group Leader's Signature _____ Employee # _____ Date _____
(Approved by)

IMPORTANT! Attach a hazard management statement for each item checked below.

Check all of the following that are applicable to/or involved with the activity. This checklist will be utilized by ESH&A in review of the activity.

A. Chemical and Biological Concerns

- Mercury or mercury compounds (e.g. dimethyl mercury).
- Research involving human subjects or animal studies.
- Chemicals requiring personnel medical monitoring (see "Federally Regulated Hazards": (https://www.ameslab.gov/files/forms/form_46601.021_rev3.pdf)).
- Hazardous or toxic chemicals (http://www.ameslab.gov/files/documents/epa_plist.pdf).
- Extremely hazardous substances (<http://www.epa.gov/reg5sfun/sfd/cepps/pdf/table355a.pdf>).
- Flammable chemicals (flashpoint < 100°F) in quantities greater than 4 liters (1 gallon) in one room.
- Perchloric or picric acid, peroxide-formers (http://www.ameslab.gov/files/documents/peroxide_forming_chems.pdf).
- Pyrophoric or explosive materials (http://www.ameslab.gov/files/documents/chemical_incompatibilities.pdf).
- Activities that generate potentially hazardous ambient air concentrations of nanoscale and other particulates, mists, fumes, vapors, or asphyxiates.
- Generation of chemical, mixed, or radioactive waste (as defined by the Ames Laboratory Waste Management Program Manual).
- Generation of new waste streams, or a > 20% increase in an existing waste stream.
- Biological materials (including human, plant or animal pathogens) (http://www.ameslab.gov/files/documents/biohazard_materials.pdf).
- Suspected and/or confirmed carcinogens (http://www.ameslab.gov/files/documents/carcinogenic_substances.pdf).
- Activities that involve the use of engineered nanoscale materials (< 100 nanometers).

B. Radiation Concerns

- Radioactive materials, radiation sources.
- Lasers (excludes laser printers and pointers).
- Radio frequency (RF) or microwave generators (excluding personal microwave ovens) of greater than 10 watts average output power.
- Ultraviolet radiation, which could expose personnel (e.g. arc welding, inductively coupled plasma, UV reactors, xenon lamps, etc.).
- Generation of Radioactively contaminated waste as defined by the Ames Laboratory Waste Management Program Manual.
- X-ray generating devices.

C. Electrical Concerns

- Work with exposed electrical wiring or parts with voltages greater than 50 volts.
- Work with stored energy systems (e.g. capacitor banks > 10 joules; station battery systems > 50 volts).
- Voltage systems of greater than 600 volts.
- Current systems of greater than 25 amps.
- Electrical devices not certified by a Nationally Recognized Testing Laboratory (e.g. Underwriters Laboratory, CSA, etc.).

D. Environmental Concerns

- Potential to release hazardous, radioactive materials or oil products (include oil filled equipment/containers with a capacity ≥55 gallons) to the sanitary or storm sewers, soil.
- Potential for release of chemical, physical, radiological agents (nanoscale and other particulates, fumes, mists, or vapors) to the air via hood or other exhaust system.
- Transportation of hazardous or radioactive materials, including laboratory-to-laboratory and on-site or off-site.
- Activities requiring an emission permit.

E. Physical and Mechanical Concerns

- Fabrication of major (large mass or volume) equipment, structural supports.
- Work that is done in the proximity of floor openings or on elevated work platforms or scaffolds.
- Activities that require use of safety eyewear, respirators and/or other forms of personal protective equipment (PPE).
- Use of a glove box.
- Torch work, exposed source hot-work, or exposed heat sources (e.g. welding, soldering, arc welding, furnaces, etc.).
- Rotating parts or pinch points.
- Fluids or gases and pressure delivery systems, other than installed building utilities (> +/- 5 psig).
- Pressure vessels, vacuum vessels, and glass systems (> +/-5 psig).
- Use of hoists, cranes or rigging.
- Cryogenic systems (including thermal and/or oxygen deficiency hazards).
- Mechanical stored energy systems (e.g. flywheels, mechanical springs, etc.).
- Electromagnetic systems.

F. Workplace Concerns

- Confined space (as defined by Ames Laboratory ESH&A Program Manual, Section 5.18).
- Activities that limit means of egress.
- Temperature or humidity extremes.
- Work which produces acute noise that interferes with normal conversation.
- Activities that involve tasks of prolonged repetitive motion.
- Activities that involve lifting/moving of 20 pounds, lifting from awkward positions, or pushing/pulling of heavy objects.

G. Other Concerns

- Activities involving sub-contractors.
- Public tours of Ames Laboratory facilities or the use of equipment/materials for public displays.
- Area renovation.
- Activities that involve equipment valued at \$100,000 or more in one room or laboratory.
- Activities to be performed at an "off-site" location (ISU lab space, field location, or other off-campus facility). Only check this item if any other item is checked