

Readiness Review 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

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

B. Radiation Concerns

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

C. Electrical Concerns

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

D. Environmental Concerns

1. 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.
2. 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.
3. Transportation of hazardous or radioactive materials, including laboratory-to-laboratory and on-site or off-site.
4. Activities requiring an emission permit.

E. Physical and Mechanical Concerns

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

F. Workplace Concerns

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

G. Other Concerns

1. Activities involving sub-contractors.
2. Public tours of Ames Laboratory facilities or the use of equipment/materials for public displays.
3. Area renovation.
4. Activities that involve equipment valued at \$100,000 or more in one room or laboratory.
5. 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

Activity Number	
<input type="checkbox"/> New Activity	_____
<input type="checkbox"/> 5-Year Review	_____
<input type="checkbox"/> New Hazard	Last Reviewed

Readiness Review Activity Approval Form

Part 1: Activity Identification Information Complete form and send with Hazard Identification Checklist, Hazard Management Statement, and other supporting documentation to ESH&A in G40 TASF.
(to be completed by activity supervisor or group leader)

Activity Title: _____ **Bldg:** _____ **Room:** _____
Activity Supervisor: _____ **Phone:** _____
Office Address: _____ **Email:** _____
Please provide a brief description of your proposed activity:

I have reviewed the hazards identified and approve this activity:

_____	Employee #: _____	Date: _____
Group/Section Leader		
_____	Employee #: _____	Date: _____
Program Director/Department Manager		
_____	Employee #: _____	Date: _____
Reviewed by SC/SR		

Part 2: Developmental Approval ESH&A will categorize the activity as a Hazard Level II or III. This step must be completed before acquisition, fabrication, or testing.
(to be completed by ESH&A)

Safety Review Facilitator: _____ **ESH&A Hazard Level:** _____
ESH&A Lead Specialist: _____ **Test Plan Date:** _____
Activity Approval:

_____	Employee #: _____	Date: _____
ESH&A Lead Specialist		
_____	Employee #: _____	Date: _____
Hazard Level Concurrence: SRC Facilitator		

Part 3: Operational Approval Recommendation Approval is required before operation of an activity rated ESH&A Hazard Level II or III.
(to be completed by ESH&A Lead Specialist)

Confirmed:
 SOP: Training: Chemical Inventory on File:
Recommended by: _____ **Employee #:** _____ **Date:** _____

Part 4: Operational Approval *(to be completed by Safety Review Committee)*

_____	Employee #: _____	Date: _____
SRC Approval Signature		



Readiness Review PPE Needs Certification

Group / Department _____

Building _____ Room _____

Activity Name _____

Activity Number _____

Task / Process _____

MARK THE APPROPRIATE BOXES AND INDICATE SPECIFIC INFORMATION IF NECESSARY

	Safety Glasses (with side shields)
	Lab Goggles (Chemical Quantities Greater than 1 Liter)
	Face Shield (Chemical Quantities Greater than 1 Liter)
	Laser Glasses / Goggles
	Hard Hats
	Safety Shoes / Boots

	Hearing Protection
	Respiratory Protection (HF, FF, Dust, SAR)
	Gloves (Latex, Nitrile, Leather, Cryo, etc.)
	Protective Clothing (Aprons, Lab Coats, Sleeves, etc.)
	Other

NOTE: A new PPE Certification Form shall be completed when changes are made to the work activity.

Comments:

Activity Lead Specialist Name (print): _____

Signature: _____

Date: _____

Activity Supervisor Name (print): _____

Signature: _____

Date: _____

EMPLOYEES SHALL COMPLY WITH THE PPE REQUIREMENTS

Readiness Review Training Identification Form

For Activity # _____ **Title:** _____

Instructions: Indicate all necessary training modules for employees to complete prior to being exposed to the hazards associated with this activity. Completion of training will be verified at the time of review; verification of subsequent authorized users is the responsibility of the Activity Supervisor.

All Users	See Comments	Program	Module #
		INDUSTRIAL HYGIENE	
		Chemical Hazard Communication	AL-137
		Cylinder Safety	AL-022
		Respirator User Safety Training	AL-011
		Dust Mask Usage (Form)	AL-211
		BBP Exposure Control Plan Training	AL-035
		Hydrofluoric Acid Training	AL-134
		Safe Use of Cryogenes	AL-206
		Asbestos Awareness	AL-141
		Asbestos & 16 hr. O & M	AL-142
		Asbestos Contractor/Supervisor	AL-159
		Lead Awareness	INH 06
		Nano Technology Awareness	AL-208
		Biohazardous Materials	AL-202
		ELECTRICAL SAFETY	
		Research Electrical Safety Training (Awareness Training)	AL-191
		Basic Electrical Safety (Qualified Electrical Worker Training – QEW) (< 600 Volts)	AL-019
		High Voltage Electrical (> 600 V)	AL-020
		Safe Equipment Wiring (For those building equipment)	AL-063
		ENVIRONMENTAL	
		Hazardous Waste Generator Training	AL-073

All Users	See Comments	Program	Module #
		INDUSTRIAL SAFETY	
		Personal Protective Equipment (PPE)	AL-133
		Hoisting & Rigging (Crane Safety)	AL-014
		Machine Safeguarding	AL-131
		Scaffolding Training	AL-139
		Ladder Safety (Pamphlet)	AL-136
		Lockout/Tagout (LOTO)	AL-012
		Confined Space Entry (CSE)	AL-023
		Fall Protection Training	AL-145
		Vehicle Mounted Elevating & Rotating Work Platforms (Boom Lifts)	AL-144
		Aerial Lift (Scissors Lift)	AL-179
		Welding Safety & Hot Work	AL-149
		Torch Work (Pamphlet)	AL-184
		Hoisting & Rigging Inspector	AL-158
		Fork Truck Training (EHS)	AL-013
		Sprains and Strains	AL-183
		RADIOLOGICAL	
		GERT	AL-074
		Laser Safety Training	AL-070
		Radiological Worker II (Materials)	AL-077
		X-ray Safety Training	AL-076
		Radiation Survey Instrument Training	AL-157/AL-207
		Radiation Technician	AL-122
		OTHER:	

Comments: _____



Readiness Review Lifting Hazard Identification Form

Activity Supervisor: _____

Activity: _____

Does this activity involve lifting of 20 pounds or more, lifting from awkward positions, or pushing/pulling? Yes _____ No _____

If yes, Please complete the following table.

Lifting, Pushing, Pulling	Never	Occasional	Frequent	Remarks/Comments (specific examples)
20 to 40 lbs.				
More than 40 lbs.				

Activity Supervisor Signature: _____

ESH&A Lead Specialist: _____