Chapter 14 - Shop Safety

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14.1 Overview

This chapter provides general shop safety requirements for personnel employed by or working at Ames Research Center not specifically covered in other chapters.

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14.2 References

3. CCR, CAL-OSHA, Division of Industrial Safety, State of California
4. APR 1700.1, Chapter 6, Health and Safety Procedural Requirements-Working Alone

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14.3 Responsibilities

14.3.1 Safety, Health and Medical Services Division

1. Provide technical safety evaluations of the shop work areas at the request of the shop supervisor.
2. Maintain oversight of shop hazard assessment activities, safe work procedures, and employee training.

3. Provide specialized safety training at the request of the shop supervisor and maintain training records.

4. Provide specialized safety consulting upon request.

5. Union Contract maintains a list of situations where working alone is prohibited.

14.3.2 Ames Health Unit

- Provide medical consultation and examination relative to the employee’s ability to conduct the shop work assignment, as referred by his/her supervisor.
- Provide prescription safety glasses to qualified government employees.

14.3.3 Supervisors

1. Complete a workplace hazard assessment to determine if applicable hazards are present, or are likely to be present, for all shop operations. Example: Job Hazard Analysis, Safe Operating Plan.

2. Ensure that personnel are trained in shop safety aspects and are qualified to operate equipment authorized by the supervisor.

3. Provide appropriate Personal Protective Equipment (PPE) (e.g., hard hat, safety glasses, etc.) for visitors to ARC shop locations.

4. Resolve safety issues reported by workers.

5. Maintain documentation of hazard assessments and personnel training.

6. Utilize ARC safety resources, as needed, to fulfill safety responsibilities.

7. Perform periodic visual inspections of work areas to ensure that safety controls are in place, are being used, and are effective.

8. Provide supervision to ensure adherence to safety requirements, special instructions, procedure compliance, and the use of protective devices.

14.3.4 Employees

For the safety of employees and their coworkers, employees are required to comply with the following safety requirements:

1. Read and observe the safety requirements delineated in this chapter.

2. Report any potential safety hazard to the supervisor.

3. Use specified PPE.

4. Do not use damaged equipment that could pose a hazard.

5. Seek supervisor guidance on work component questions.
14.4 General Shop Safety Concepts & Requirements

The shops supporting ARC activities contain a number of inherent personnel safety hazards. Hazards may exist from potential energy sources (e.g., electrical power, compressed gases, hot/cold items, suspended items, large amounts of stored liquids, or flammable materials), mechanical systems (e.g., transverse/rotating equipment, power transmission devices, lifting equipment), hazardous materials (paints, lubricants, solvents), and structural features (sharp edges, slip/trip hazards, etc.).

A variety of controls, both mechanical and administrative, have been applied to shop hazards to either eliminate them or minimize the risk to personnel. The requirements of this chapter consist of general operating safety rules and guidelines that complete the list of typical controls applied to mitigating shop hazards. Additional requirements applied to address unique hazards are posted in each shop area, contained in the respective training programs, addressed in work procedures, or identified through the shop supervisor.

14.4.1 Specific Safety Practices

14.4.1.1 Hand Tools

1. Use the approved tool for the job. Makeshift arrangements such as the use of a screwdriver as a chisel, a pair of pliers as a wrench, a wrench as a hammer, or overloading a wrench by using a pipe extension (cheater bar) on the handle are not to be employed.

2. Use only tools that are in good condition and free from broken or splintered parts. Be sure that hammer heads are secure on handles.

3. Mushroomed heads on cold chisels, punches, hammers, etc. are to be ground down to avoid injury from flying particles.

4. Use suitable shields to cover the dangerous parts of sharp-edged or pointed tools. Standard tool belts, grunt bags, pouches, or boxes should be used for carrying tools. The use of pockets for this purpose is to be avoided.

5. Files and similarly constructed tools should be equipped with handles.