

Job Hazard Analysis Process

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Hazard Analysis

■ Many types of hazards analyses are conducted in the Nuclear Weapons Complex:

- Facility
- Weapon
- Fire
- Security
- Industrial Safety:
Focus of today's
discussion



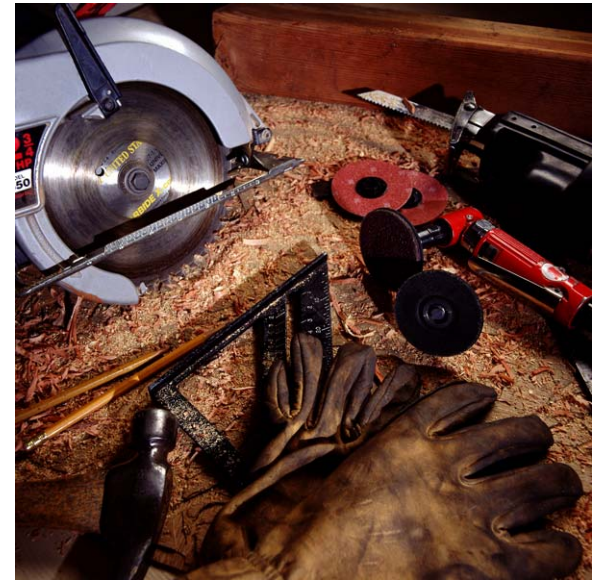
Integrated Safety Management Philosophy

- **Define Scope** – What work is being accomplished?
- **Identify Hazards** – What hazards are involved?
- **Confirm Readiness** – Are my controls in place?
- **Perform Work** – Does the work encounter items not identified in the analysis?
- **Lessons Learned** – What can be improved?

All of the above are a part of the JHA process

Activities Requiring a JHA

- **Subcontract Work**
- **Repetitive Daily Work**
- **Maintenance Operations**
- **New Processes or Operation of New Equipment**
 - ✚ May require assistance from Safety organization
 - ✚ May require Plant Safety Analysis review



Subcontract Work

Activity Hazard Analysis

- Description of Activity (definition of scope)
- Identification of tools/equipment to perform activity
- Identification of potential hazards
- Listing of actions to controls to mitigate potential hazards (confirm readiness)
- Suited for small and large scale activity



Repetitive Daily Work

- Supervisor/Employee review work activities
- Potential hazards identified based on each activity
- Identification of controls to mitigate potential hazards
- Employee review and approval of JHA
- Annual review of each JHA



Maintenance Operations

- Focused on internal, “specific” scopes of work that are straight forward and not overly complex.
- Identification of work (define scope), identify associated hazards, list controls (confirming readiness)
- Review by employees prior to performing work
- Integral part of the maintenance work package



New Processes

- May require assistance from Safety organization
- May require plant safety analysis review
- JHA created using same approach as Repetitive Daily Work



JHA Improvements to Consider

- JHA's can be developed dependent on risk categorization (Low/Medium/High)
- All JHA's reviewed annually and incorporated into task/position-specific training.
- JHA's become automated



JHA Process Basics

■ **Select the job to be analyzed**

- ✚ Jobs with the highest injury or illness rates.
- ✚ Jobs with the potential to cause severe or disabling injuries or illness,
 - ✚ even if there is no history of previous accidents.
 - ✚ Jobs that are new to your operation or jobs that have changed.

■ **Break the job down into a sequence of steps**

- ✚ After a job has been chosen for analysis, break the job into steps.
- ✚ A job step is a segment of the operation necessary to advance the work.
- ✚ Involve the employees in the hazard analysis process.

JHA Process Basics (cont)

■ Identify potential hazards

- ✚ Can any body part get caught in or between objects?
- ✚ Do tools, machines, or equipment present any hazards?
- ✚ Can the worker slip, trip, or fall? Can the worker suffer strain from lifting, pushing, or pulling
- ✚ Is the worker exposed to extreme heat or cold?
- ✚ Is excessive noise or vibration a problem?
- ✚ Is there a danger from falling objects?
- ✚ Can weather conditions affect safety?
- ✚ Is harmful radiation a possibility?
- ✚ Can contact be made with hot, toxic, or caustic substances?
- ✚ Are there dusts, fumes, mists, or vapors in the air?

JHA Process Basics (cont)

■ **Determine preventive measures**

- ✚ The most effective measure is to eliminate the hazard!
 - ▶ Choose a different process.
 - ▶ Modify an existing process.
 - ▶ Substitute with less hazardous substances.
 - ▶ Improve environment (ventilation).
 - ▶ Modify or change equipment or tools.

■ **Techniques to control identified hazards**

- ✚ Contain the hazard (machine guarding).
- ✚ Revise work procedures (locking out energy sources).
- ✚ Reduce the exposure. (using personal protective equipment)



JHA Process

■ Industrial Safety Organization

- ✦ Once the hazard analysis has been completed, the Safety organization reviews all hazards analysis for completeness, content, and form.
- ✦ The Safety Organization logs each JHA into the system.

■ Supervisors

- ✦ Maintain a log that documents that the employees have reviewed the JHA annually.
- ✦ Verify that before employees conduct a task, they have reviewed the current JHA.
- ✦ Review JHA's annually with involved employees.
- ✦ Make changes as necessary.

Questions?



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