INTRODUCTION

Careful planning of work assures that the work is performed efficiently and safely and a hazard analysis is a critical part of work planning. Work planning ensures the scope of work is understood, appropriate materials are available, all hazards have been identified and mitigative efforts established, and all affected employees understand what is expected of them.

DEFINITIONS

Job Hazard Analysis – Tool used to plan work.

Job Site Walk Down – A visit to the job site for the purpose of identifying work control and Environmental Safety and Health (ES&H) issues that must be completed prior to employees beginning work.

Pre-job Briefing – Dialogue between supervisor and those involved in the work to ensure that all understand the scope of what is to be accomplished, procedural steps, roles and responsibilities, and hazards and controls.

Post-job Review – A review of the work that has been performed to identify any improvements or experiences that should be recorded for future job planning efforts.

Pre-Job Planning – Systematic process for determining methods for completing the assigned task safely and efficiently. The process includes defining the work to be performed and the methods for performing the work, identifying the hazards and their controls, job hazard analysis (possibly a written one), scheduling and a pre-job briefing.

SETTING A POLICY

All work activities should be subjected to pre-job planning and a job hazard analysis (JHA). Depending on the complexity of the task and the hazards involved, the JHA process may be a mental exercise and verbal discussion, or more likely, it may be more formal with a written JHA and pre-job briefing. Employees and supervisors can use their professional judgment in determining the need for a written JHA. The advice of a safety professional should be sought if assistance is needed or complex issues require specific knowledge safety training or experience.

RESPONSIBILITIES

Managers and Superintendents should be responsible for ensuring that a JHA policy is utilized within their respective operations. Managers and Superintendents should be free to impose more stringent requirements than those described by company policy.

Foremen and employees should be responsible for planning their work, and identifying those activities that require a written JHA. Foreman should also be responsible for:

- Ensuring that JHAs are developed and reviewed by the employee before work begins.
- Seeking advice from safety professionals or others, as appropriate.
- Approving written JHAs completed by employees in their group.
Conducting a job walk-down in those instances where a written job hazard analysis is required.

Ensuring that employees are trained in the process of developing a JHA.

Ensuring that employees are trained to complete the task at hand and trained in the tools/equipment to be used in the completion of the task.

Assuring that the work is performed in accordance with the hazard analysis.

If employed by the company, a safety professional should be responsible for providing technical expertise in job planning and preparing written JHAs. The safety professional should provide training support by developing standard lesson plans for preparing a work plan and for writing JHAs, and should provide assistance in preparing and reviewing JHAs upon request.

PRE-JOB PLANNING PROCESS

A work plan process consists of six elements: job site walk down, hazard analysis, pre-job briefing, and execution of the work, post-job review, and JHA record retention.

1. Job Site Walk Down. When the job site can be safely accessed, an inspection of the job site should be conducted. Ideally, this inspection should be conducted prior to developing the hazard analysis in order to assure all job site hazards and work control issues are identified and addressed. A job site walk down should also be conducted by the workers performing the work prior to beginning work, as part of the pre-job briefing.

2. Hazard Analysis.
   a. The supervisor and employees develop the hazard analysis. The results of the job site walk-through need be incorporated into the job hazard analysis.
   b. If a similar written JHA already exists, it must be reviewed and revised as appropriate to reflect differing job site conditions.
   c. The preparation of the JHA needs to include or involve the following aspects.
      - Detailed scope of work, including how the person/crew intends to complete the work;
      - Walk through or inspection of the work area and equipment while planning the work;
      - Identification of materials to be used;
      - Identification of hazards;

3. Pre-Job Briefing.
   a. Regardless of whether the JHA is a mental or written exercise, the foreman and employees performing the job need discuss the work plan to ensure identification of work requirements, controls, procedures, instructions and personal protective equipment necessary to perform the work safely (including permits); and

   b. Involvement of the workers in the preparation of the work plan.

   d. The level of detail in the JHA should be relative to the complexity of the work and the hazards involved with the activity. For instance, cleaning and repairing a hydraulic cylinder on an open workbench in a shop would require less detail than a similar activity at a remote job site while standing on a ladder.

   e. Foremen need to review each JHA for completeness and thoroughness and determine whether the hazards for the work activity have been adequately identified and controlled. Where appropriate, permits, Material Safety Data Sheets, etc., should be attached to the written hazard analysis to consolidate the work package.

   f. An additional written JHA is not required if the work activity is performed under a standard operating procedure (i.e., an existing JHA for a repetitive task) or if the work activity involves the use of a permit where all the hazards and their mitigation requirements are identified and addressed. Examples of this might include lockout/tagout procedures, hot work permits, confined space permits, excavation permits, and electrical hazard analysis/work permits. In all cases, job planning and some form of pre-job briefing still need to be completed.

   g. “Generic” JHAs may be used. Generic JHAs are those that would be routinely used for a specific activity (e.g., changing engine oil in a shop environment). They should be reviewed periodically and updated as necessary prior to each specific activity to ensure that all hazards of the work and the job site are addressed.

   h. When emergency repair activities are required and a hazard analysis for the work to be performed exists, it needs to be reviewed and updated to incorporate new conditions. If a hazard analysis needs to be written, this can be done in the field. In all cases, a pre-job briefing should still be required. Under no circumstances should an emergency serve as reason for ignoring established safe work practices.
everyone is aware of how the job will proceed. For low-risk tasks the briefing may be a quick exchange between the foreman and employee(s), or a mental review by the employee. For more complex and higher-risk tasks, a more detailed and formal pre-job briefing is required. The JHA form can be used to conduct this briefing. The pre-job briefing should consist of the following:

■ **Summarizing the critical steps and materials.** This would include steps where the success depends solely on the individual work, and that serious injury or significant loss of property could result from not following the prescribed safe work procedures.

■ **Anticipating what can go wrong or where errors can occur.** This would include distractions, confusing procedures, inexperience and assumptions. Examining what errors have occurred with an activity in the past may be helpful.

■ **Foreseeing consequences.** What is the worst that could happen? Work plans should incorporate specific methods to prevent the incident.

■ **Review operating experience.** How well has the task gone in the past? Work plans should incorporate defenses to prevent a repeat incident. The accident investigation reports and near-miss data are a good informational source in this area.

■ **Review of Equipment.** Review of Personal Protective Equipment (PPE), equipment necessary for the job, engineering controls, and equipment controls.

4. **Performance of Work.**
   a. The pre-job plan/job hazard analysis should be posted in the work area or otherwise be readily available to those performing the work. Visitors or others exposed to the hazards on the job site also need to review the written JHA.

   b. The work activity must be completed in accordance with the JHA. If there is a change in the scope of the work, if work conditions change or if new hazards are identified, or the controls prove inadequate or ineffective, the work activity must cease immediately. The JHA needs be reviewed by the employees and foreman/supervisor, revised as necessary to accommodate these conditions

5. **Post Job Review.** After the activity has been completed, the JHA should be updated to include improvements that were identified while performing the work. This will help assure better planning and a safer work experience the next time the job has to be performed.

6. **JHA Record Retention.** The foreman should keep a copy of the JHA for training employees. A copy should be made available to the company’s safety professional upon completion of the Post Job Review for the purposes of providing oversight and ensuring a central source for information for other operations within an organization.

In general, a written pre-job plan and/or job hazard analysis should be kept on file indefinitely. Storing this information electronically and creating an easy to use library of JHA’s can reduce the time required to develop a JHA, make modification of existing JHA’s easier, and ensure that the information is easily accessible.