
 <p><b>HEALTH, SAFETY &amp; ENVIRONMENTAL PROGRAM</b></p>	<b>Section 2.2: Job Hazard Analysis (JHA)</b>		
	APPROVED BY: Sarhan Abu-Kwiek	COR Elements: 2	
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## JOB HAZARD ANALYSIS PROCEDURE

### PURPOSE

The purpose of this procedure is to reduce or eliminate incidents by providing information and guidance to ensure consistent and effective Job Hazard Analyses (JHA) are conducted as a part of job planning.

The JSA process will ensure that hazards are identified, and adequate mitigation measures implemented to eliminate or reduce the risk to people, property, equipment, and the environment. In addition, a JHA will help:

- Prompt recognition of hazards and methods of control or mitigation
- Promote acceptance of consistent work procedures
- Reduce workers reliance on memory and increase consistency
- Identify previously undetected hazards
- Increase job knowledge
- Raise health and safety awareness
- Promote improved communication between workers and Supervisors
- Serve as a teaching aid for initial job training and as a briefing guide for infrequent jobs
- Assist in completing observations during site audits or accident investigations

### DEFINITIONS

**Assessment:**

A process used to identify hazards, assess risk, and identify controls for tasks, processes, work methods, etc. that may cause harm to worker, environment, or equipment.

**Consequence:**

The effect of the hazard, risk, and control (assigned a numerical value from 1 to 5).

**Control:**

Procedures, methods, tools, machines, or training adopted to minimize risks, injury, adverse health effects and damage to equipment or the environment.

**Hazard:**

A source of potential damage, harm or adverse health effects on something or someone

**Job Hazard Analysis:**



A documented hazard, risk, and control assessment completed at the time and place of specific task or job.

**Likelihood:**

The chance of an incident happening. (assigned a numerical value from 1 to 5)

**Residual Risk:**

The remaining exposure after all efforts to identify, eliminate and control hazards are implemented to reduce risk to the lowest practical level

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### Risk:

The numerical values of likelihood multiplied by the consequence using the risk matrix

### SCOPE

Most projects require several JHAs. Wherever possible input will be solicited from workers, supervisors, managers, JHSC/worker rep and others who may be affected.

JHAs are living documents that may change as the job scope or project evolves and when new information becomes available. They must be reviewed and revised as required and cover all main steps in a specific task to be effective.

#### Competent Persons

JHA(s) must be carried out by a competent person meeting the following requirements:

- Training in the organization of the work and its performance including hazard assessment, analysis control, specific hazard assessment documents, safe work practices and procedures contained in the OHSMS
- Knowledge, training, and experience in the work methods, organization of the work and its performance.
- Familiar with the regulatory requirements, codes of practice and industry standards that apply to the work
- Knowledge of actual and potential hazards and danger to health and safety in the workplace

It is J-AAR's policy that the JHA is reviewed for each task carried out by a field worker before work commences every day.

### PURPOSE



#### 1. JOB OR TASK SELECTION

The terms "job" and "task" are used interchangeably to mean a specific work assignment, such as pulling cable, insulator installation, steel erection, setting forms, unloading materials etc.

JHAs are not suitable for jobs defined too broadly, for example, "overhauling an engine"; or too narrowly, for example, "positioning a car jack".

When selecting a job to be analyzed, the following points should be considered:

- Jobs where accidents occur frequently or occur infrequently but result in disabling injuries
- Potential for severe injuries or illnesses
- The consequences of an accident, hazardous condition, or exposure to harmful substance
- Newly established jobs
- Lack of worker experience with jobs or tasks (hazards may not be evident or anticipated)
- Modified jobs (new hazards may be associated with changes in job procedures)
- Infrequently performed jobs (workers may be at greater risk when undertaking non-routine jobs, and a JSA provides a means of reviewing hazards)
- Separate JHA(s) are required when workers perform similar tasks in different locations
- Training and Competency

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### 2. BREAKING THE JOB DOWN

After a job has been chosen for analysis, the next stage is to break down into steps:

- A job step is defined as a segment of the operation necessary to advance the work.
- If steps are too detailed, the JHA will be burdensome and difficult to follow.
- If not detailed enough, hazards may be missed.
- Be as specific as you can.
- Keep the steps in their correct sequence. Any step, which is out of order, may miss serious potential hazards or introduce hazards, which do not exist if documented in the sequentially.
- Each step should be documented in the left-hand column of the JHA form.

### 3. IDENTIFYING POTENTIAL HAZARDS



Think about what could go wrong from a health and safety point of view and how people, equipment, materials, subcontractors, and the surrounding environment could pose a hazard.

To help identify potential hazards consider questions such as:

- Is there other work going on near the work area?
- Are there Legislative and Regulatory requirements?
- Do manufacturer's equipment instructions apply?
- Is there live apparatus in the area or do Limits of Approach apply?
- Can any body part get caught in or between objects?
- Do tools, machines, or equipment present any hazards?
- Can the worker make harmful contact with moving objects?
- 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?
- Is lighting a problem?
- 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?
- Is there any stored energy (pneumatic, hydraulic, gravity, electric, etc.)?

List all hazards associated in each step of a job task (both potential and actual hazards must be identified).

Document the hazards on the JHA corresponding with the task or job step. At this stage of the JHA process simply listing the hazards is the goal. No attempt is made to resolve them.

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Note: It may be possible for more than one hazard to be associated with any step.

### 4. DETERMINING PREVENTATIVE CONTROL MEASURES:

The final step in gathering information for a JHA is to determine ways to eliminate or control the hazards identified.

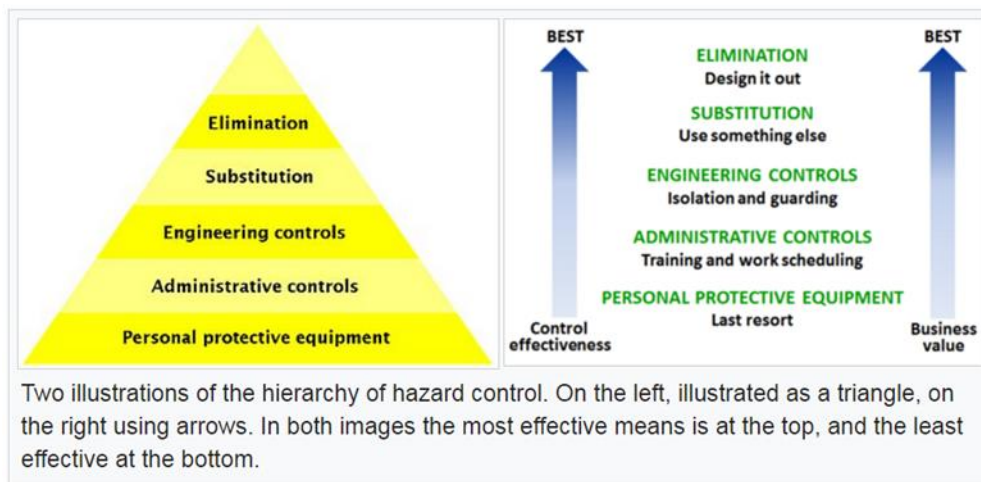
Using the hierarchy of controls will ensure the highest level of protection possible is realized.

When Considering Implementation of Controls:

- Identify all actions necessary to eliminate or control the risk
- Consider processing, use, handling or storage of substance, materials, equipment, etc.
- Consider both the actual and the potential exposure of Worker

Controls can be implemented in three basic areas:


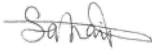
1. At the Source of the Hazard (Elimination or Substitution):
2. Along the Path between the Workers and Hazard
3. At the Worker



**Elimination** -The most effective measure. Choose a different process or modify an existing process.

**Substitution** - Substituting for a less harmful chemical or process

**Engineering Controls** – Contain the hazard. If the hazard cannot be eliminated, exposure might be prevented by using a barrier between Workers and the hazard (sound enclosures, machine guards, paint booths, ventilation, fencing, proximity guarding, extraction systems, hot sticks etc.)

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Administrative Controls – Revise work procedures. Administrative controls address how the work is structured, such as work procedure, pace and breaks. Consideration might be given to modifying steps which are hazardous, changing the sequence of steps, adding additional steps, training, rotation of Workers to reduce exposure, removing a Worker to a remote location away from the hazard lock out, work protection procedures etc.

PPE - Should only be used if no other solutions are possible. They are the least effective way to protect Workers from hazards. If they fail, Workers are still exposed to the hazard.

### Documenting Preventative Control Measures

In listing the preventive measures, do not use general statements such as "be careful" or "use caution". Specific statements, which describe both what action is to be taken and how it is to be performed, are preferable. The preventive measure must mitigate the risk.

Recommended measures are listed in the right-hand column of the JHA in the column titled Controls.

### 5. COMMUNICATION

- Supervisors or delegates must communicate results of the JHA to all workers assigned tasks, working in close proximity or exposed to workplace hazards.
- The daily safety meetings will include two-way communication in regards to content, assignments, and requirements of the JHA(s) including the job or task being carried out, hazards associated with the tasks and control measures to eliminate or reduce risk.
- Safe work practices and procedures must be reviewed as required to ensure worker familiarity.
- Anyone working on the site who may be effected by the work being carried out after the JHA discussion, is required to review the JHA with the supervisor or delegate
- Sign off indicating review and understanding of the JHA is mandatory for all workplace parties involved.



J-AAR's Health and Safety team creates JHA templates for tasks and provides them to field supervisors through the HCSS Safety App. All J-AAR supervisors are provided with an iPad with a data connection by the company at the time of their hire. These templates are created by assessing the corporate HIRA, reviewing company policies and procedures, equipment/devices available to the company, and consulting with supervisors and workers who are actually carrying out the work. These templates are intended to be a starting point for daily JHA's. They can be edited/updated as required through the app to account for changes in condition and unforeseen hazards. Supervisors also have the ability to create a JHA from scratch on the app.

### 6. FOLLOW UP

- Supervisors must follow up in the field to ensure requirements are understood, implemented and effective.
- Any major changes must be reported to head office for evaluation and possible addition to the HIRA

### Reassessment Review and Approval

- JSA(s) must be documented using the appropriate forms and approved by management.

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- If the scope of work changes, new operations are undertaken, new tools, materials, equipment, or procedures are added or when legislative changes impact our work the JSA must be reviewed and revised as required.
- Changes must be communicated to workers and all parties affected by the work.
- After any major incident, the JSA if applicable will be reviewed to ensure practices, procedures, tools, and equipment are appropriate for the protection of workers and that risks have been evaluated accurately.
- Senior management will review and approve the JSA process as required. Reviews will include new regulatory requirements, tools, equipment, operations, industry practices, standards, and guidelines.

### RESPONSIBILITIES

#### Health and Safety Team:

- Develop and implement a procedure and template for completing JHAs
- Provide assistance, training and resources to the site teams
- Review and update this procedure as required
- Solicit assistance of workers, supervisors, management, subcontractors and suppliers when developing and reviewing JHAs and forms
- Ensure JHA(s) for commonly competed tasks are available on HCSS

#### Senior Management:

- Provide time, resources and materials required.
- Review this procedure as required Review JSAs and ensure procedures are being implemented
- Ensure the JSA process is implemented on projects under their responsibility
- Periodically review JSA(s) and provide feedback to Supervisors
- Make recommendations for change

#### Supervisors:



- Ensure JHAs are completed including all potential hazards and control methods
- Communicate JHA to workers and others as required prior to the task beginning
- Revise JHA as required and communicate any changes made to workers
- Ensure workers are adequately trained
- Follow up to ensure requirements are understood, implemented and effective
- Encourage worker participation and input including two-way communications

#### Workers:

- Work in accordance with the instruction provided
- Report any changing conditions or hazards that arise during task completion
- Participate in the assessment and process and provide input at daily safety meetings
- Ask for clarification if unclear about information provided or the task assigned

#### JHSC/Worker Reps:

- Review this policy as required

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- Provide input and recommendation for changes

### REQUIREMENTS

**Documentation:**

- JHA Procedure
- JHA form on HCSS
- Corporate Hazard Identification and Risk Analysis (HIRA)
- Applicable safe work practices and procedures

**Training:**

- Hazard Assessment and Control
- JHA procedure
- Rights, duties, and responsibilities of workplace parties
- Job specific training
- OHSMS specific training

### REVIEW

This procedure will be reviewed and revised as required. Revisions are required when there are changes in business conditions, scope of work, regulatory requirements or when deficiencies become known.

### ENFORCEMENT

Following this procedure is a condition of employment for all employees. This will be enforced strictly by management and supervision. Failure to follow this procedure, as set out, may lead to progressive discipline up to and including dismissal or removal from site as deemed appropriate by J-AAR Excavating.

### DOCUMENT AND RECORD CONTROL

All documents and records generated as part of this procedure will be stored on HCSS/J-AAR's servers indefinitely. Any hard copies generated will be stored at J-AAR's head office for two years after project completion.