

A job safety analysis (JSA) is a process of identifying physical requirements, environmental conditions, and safety risk factors for a specific job or task. JSAs are most effective on stationary, repetitive production tasks in which the job steps and equipment used have little change.

A job safety analysis is a method for observing and recording each step of a job. This is done to identify existing or potential job hazards, and to determine the best way to protect the employee from these hazards. This may result in engineering changes to reduce or eliminate the identified hazard, or administrative controls such as providing personal protective equipment to protect the worker.

Benefits of a JSA

- Establishes written safe-job procedures associated with each job step to prevent or reduce injury potential.
- Identifies unsafe conditions that are inherent in the design of the machinery, equipment, or work space layout.
- Controls or eliminates these unsafe conditions.
- Identifies personal protective equipment required for completing the job.
- Becomes an effective training tool for employees new to performing the job by providing step by step instruction on how to perform key job tasks.

JSA Job Selection

To determine the jobs on which to perform a JSA, examine past accident reports for stationary jobs that are causing employee injury. These reports may be your completed First Report of Injury forms, OSHA 300 logs, and Western National loss history reports. This review may be done by the person with safety coordination responsibility such as the Safety Director.

Look for jobs that are:

- Causing the greater frequency of accidents.
- Causing lost work day or restricted work day accidents.
- A potential for serious injury exists.
- Newly developed, or undergoing change; (Conduct an analysis before assigning a worker to these jobs.)

The JSA Team

The key person in the JSA process is the supervisor. Supervisors know the jobs and hazards in their departments better than others. They may have performed the job themselves before becoming a supervisor. They also know their people better than others. The supervisor is in the best position to recognize and correct unsafe conditions and unsafe acts. A second key person to include is an experienced worker who has demonstrated the ability to perform the selected job safely.

The Safety Director should assist the supervisor in developing JSAs. They should maintain a master file of completed JSAs. The Safety Director should also ensure JSAs are completed for newly created jobs, and for jobs getting new equipment or machinery. The completed JSAs should be posted in areas where the fixed job tasks are performed. The posted document serves as a reference tool for those new to performing the job tasks.



Develop a form for recording the key information for the JSA. State the job being evaluated at the top. Separate the form into three columns. Record the job steps in the left column, job hazards for each step in the center column and safe job procedures for each step in the right column. See the example provided with this document.

Developing the JSA:

The first task in developing the JSA is to define the job on the top of the form. Provide a short explanation without making it very complex. Do provide enough detail for proper identification of the job, differentiating it from other jobs. Include the department, the date completed, and a space to list required personal protective equipment. This space will be filled in after the analysis is completed.

The second task is to break the job into sequential steps, describing what is being done. This requires the assistance of the previously selected experienced worker. Succinctly define what is being done in each step, not how it is done. Start each step with action words such as “open, lift, remove” and end with the action applied (e.g., “lift steel plate”, “insert into die”, etc.). Look for consistency in the steps. Note any deviations observed. After recording the steps, have the experienced worker confirm each step, or explain any irregular deviations. Deviation is where accidents can occur.

The third task is to identify the hazard associated with each step. Look for what can go wrong and result in an accident. Is there potential for strains from lifting a part, being caught between moving objects, being struck by a falling object, or being exposed to loud noise when doing these tasks? Take into account ergonomic risk factors such as weights being lifted and awkward body positions required to do each step. Record the frequency and amount of weights being handled.

Consider these ergonomic risk factors:

- Posture
- Force exerted
- Duration an awkward posture is held
- Frequency of occurrence
- Vibration
- Temperature extremes

The fourth and final task is to determine changes to the job to reduce or eliminate identified hazards. Apply the concept of fitting the job to the employee through engineering controls instead of fitting the employee to the job. If this is not possible, then protect the employee with personal protective equipment.

Evaluate the existing job and:

- Determine changing distance of a lift and/or amount of weight lifted if potential back strain is identified.
- Provide ergonomically designed hand tools and/or counter balanced pneumatic tools.
- Allow employee to work in their core strength position by raising or lowering workstation.
- Provide additional training on proper lifting techniques, proper hand placement when performing material handling, etc.
- Provide additional personal protective equipment to protect employees from newly identified hazards.

Seek the experienced worker’s input on recommended changes to the work steps. Their involvement in the JSA process is essential to have recommended changes accepted by the work force.

The completed JSA should be sufficient as long as the job remains the same. The Safety Director should periodically review existing JSAs, even if jobs seemingly have not changed. Anticipate that employees or supervisors may have made changes to job steps. Review any changes for new hazards needing controls. Also review the JSA for accuracy if an injury occurs on a previously-evaluated job. If an accident does occur, make sure to update the JSA with controls to address the cause of the accident.



Summary

The JSA is a tool for identifying and correcting job steps that can result in an accident. JSAs also help in the writing of new, job specific safety rules such as personal protective equipment use. Written JSA are excellent training tools for supervisors to use when training employees new to the job, and especially for retraining an existing employee returning to the job after suffering an injury.

The JSA also helps in identifying physical demand requirements of the job. Human Resources can use this information to develop written job descriptions with physical demand requirements that meet the Americans with Disabilities Act. Written job descriptions with physical demand requirements can be used to hire new employees physically capable of performing the work identified in the JSA.

Job Safety Analysis-Example

Job Title: Date:

Department:

Required PPE:

Basic Job Steps:	Potential Hazards:	Recommended Procedure:
1. Lift 5 lb. stock, insert into die.	(SA) Sharp metal edges	Wear gloves. Proper hand placement; support corners
2. Depress foot pedal.	(CB) Hand entrance into die (SB) Struck by bending stock, noise from machine action.	Install presence sensing device across point of operation. Wear hearing protection
3. Remove bent stock.	(SA) Sharp edges of stock	Place hands away from edges
4. Stack bent stock on table.	(SB) Falling pieces (F) Oil and debris on floor (S) Strain	Steel toed shoes Maintain housekeeping Limit to 20 lb. lift, proper lifting techniques

Codes: (SA) Struck against (CB) Caught between (SB) Struck by (F) Fall (S) Strain

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