



# Supervisors' Safety Update

Ideas and Strategies for Leaders



SSU 2009-04

## JOB SAFETY ANALYSIS

*By SeaBright Insurance Loss Control*

**D**etermining the hazards and how to control them before a project or task begins is an integral part of being a supervisor. Your job is to manage the work in a way that will provide the highest level of production and quality, while at the same time keeping your employees injury free. The most common method today of determining these hazards is through a job safety analysis. But what exactly is this type of analysis and how does it work?

A Job Safety Analysis (JSA), also known as a Job Hazard Analysis (JHA), is a detailed study of job methods to learn what potential safety and health hazards exist during the various stages of the job. Once these hazards are identified, the JSA works by making your crew aware of the hazards, so they can be eliminated or minimized prior to performing the job. Developing proper solutions to prevent accidents and injuries from occurring is the purpose of the JSA. The JSA is also used for job clarification and as a tool to educate employees of specific job hazards and protective measures. Solutions can take three different forms:

**PHYSICAL CHANGES** that minimize or control job hazards:

For example; placing guards over exposed moving machine parts reduces the potential of a person entering or placing a part of their body in a dangerous area.

**JOB PROCEDURE CHANGES** are other types of solutions that can eliminate or minimize hazards:

For example; making changes to the forklift operator's job procedures, so materials are stacked at lower heights to reduce the potential of material or product tipping-over and being damaged.

**ENGINEERING SOLUTIONS** often provide the best controls, since they remove the chance of human error or the potential of an unsafe act to be committed.

For example; a fish hatchery harvesting salmon eggs greatly reduced repetitive motion injuries by utilizing electro-anesthesia. Fish now swim into a holding tank and are stunned prior to harvesting the eggs. This eliminated the manual handling of battling salmon. This solution paid for itself in a very short amount of time by increasing efficiency and reducing injuries.

### Why Conduct a Job Safety Analysis?

Every company is in business to make a profit. Mistakes or errors that result in damaged products, production delays, substandard quality, or employee injuries affect profits. A job analysis is a simple system which can help you attain maximum efficiency, safety and profits.

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**Other benefits that arise from Job Safety Analysis include:**

- Facilitate individual training in safe and efficient procedures.
- Instruct new employees on health and safety aspects of the job.
- Help supervisors to conduct better safety meetings.
- Provide pre-job instructions for occasional tasks or jobs performed infrequently.
- Provide a reference to assist in accident investigations.
- Supply a method to analyze jobs for possible improvements.

**How should a Job Safety Analysis be made?**

A JSA consists of four basic steps:

**1. SELECT THE JOB TO BE ANALYZED.**

Use the following factors as a guide in selecting jobs to be analyzed. Consider the purpose of the job. What has to be done? Who must do it? Think through all of the activities involved. How is it done? When is it done? Where is it done?

Remember that those tasks with the worst accident experience should be evaluated first if the JSA is to yield the quickest possible results.

- A. Frequency of accidents.
- B. Disabling injuries.
- C. Potential for severe injury.
- D. New operations/jobs.

**2. BREAK THE JOB DOWN INTO SUCCESSIVE STEPS.** Avoid making the breakdown too detailed or too general.

- A. Select an experienced and cooperative employee to perform the job.
- B. Explain the purpose of the analysis to this employee.
- C. Observe the employee as the job is performed.
- D. Record each job step in the JSA breakdown.
- E. Review the steps you recorded with the employee and seek comments.

**3. IDENTIFY THE POTENTIAL HAZARDS.**

Remember throughout this process that the goal of the JSA is to make each step, as well as the entire job, as safe and efficient as possible. With this focus, review the tasks recorded during the observation with these items.

- A. Is there a danger of striking against, being struck by, or incurring other injurious contact with an object?
- B. Can the worker be caught in, between, or by objects?
- C. Is there a potential slip, trip, or fall hazard?
- D. Are there strain exposures from pushing, pulling, reaching, twisting or lifting?
- E. Are there environmental hazards in the form of gases, vapors, fumes, mists, or dusts?

**4. DEVELOP WAYS TO ELIMINATE HAZARDS.**

- A. Work out a new way to do the job.
- B. Change the physical conditions that create hazards.
- C. Change the work process to eliminate hazards that still may be present.
- D. Reduce the necessity or the frequency of a job.
- E. Require appropriate personal protective equipment.

## Summary

The major benefits of a JSA are realized after their completion. However, even during JSA development you will learn more about the jobs you supervise. Employees who have been involved in the JSA process frequently demonstrate improved safety attitudes and increased safety knowledge regarding the tasks they perform. The JSA is an excellent guide for training new employees, refresher training of experienced employees, assisting in accident investigations, and identifying methods for continuous improvement. Through effective JSA development and use, supervisors like you can play a very significant role in maximizing efficiency, safety and profits for the company.

The best way to recognize the advantages of using Job Safety Analyses is by developing several JSAs yourself. Attached are instructions for completing a JSA, a completed example of a JSA, and a blank form to get you started. If you have questions, be sure to contact your SeaBright Loss Control Consultant.



## JOB SAFETY ANALYSIS – Guideline Form

<b>JSA#</b>	<b>Job Title</b>	<b>Page</b>
<b>Date</b>	<b>Title of Person Doing Job</b>	
<b>New</b> <b>Revised</b>	<b>Company</b>	
<b>Location</b>	<b>Department</b>	<b>Supervisor</b>
<b>Analysis By</b>	<b>Reviewed By</b>	<b>Approved By</b>
<b>Required / Recommended Personal Protective Equipment:</b>		

<b>JOB STEPS</b>	<b>POTENTIAL HAZARDS</b>	<b>RECOMMENDED ACTION</b>
<p>Break down the specific job into steps or tasks. This identifies potential hazards that employees may face.</p> <p>A change in activity, direction, or movement will determine where a step starts or finishes. List all steps needed to perform the job.</p>	<p>Identify all hazards - those caused by conditions, the environment, or associated with the job procedure. Hazards are potential dangers.</p> <p>Ask yourself these questions to identify hazards regarding each step.</p> <p>Is the environment hazardous to safety and/or health? For example, is there exposure to radiation, heat, dust, gases, vapors, or fumes.</p> <p>Are there tripping, slipping, or falling hazards?</p> <p>Is there potential for strains from pushing, pulling, bending, twisting, or lifting?</p> <p>Can body parts be caught by, in, or between objects?</p> <p>Can the employees strike against, be struck by, or have contact with objects that may cause injury?</p>	<p>Determine what actions or procedures are needed to eliminate or reduce hazards that can lead to an accident, injury, or work related illness.</p> <p>First, try to (1) engineer the hazard out, (2) provide safety devices or guards, (3) provide personal protective equipment (PPE), (4) provide training, (5) sustain decent housekeeping practices, (6) exercise effective ergonomic principles.</p> <p>Provide a recommended action or procedure for each hazard. Serious hazards should be eliminated and a new JSA completed to represent the changed situation.</p> <p>Describe the safe operating procedures to eliminate the hazards by starting statements with action words, i.e. "Wear safety glasses while grinding, or Lift using leg muscles."</p> <p>List all required PPE for each step.</p>

## JOB SAFETY ANALYSIS – \*\* Partial Sample Only

<b>JSA#</b> 25-99	<b>Job Title</b> Filling Propane Bottles	<b>Page</b> 1 of 3**
<b>Date</b> 8-20-99	<b>Title of Person Doing Job</b> Laborer	
<b>New</b> X <b>Revised</b>	<b>Company</b> ABC Industries, Inc.	
<b>Location</b> Main Plant	<b>Department</b> Warehouse	<b>Supervisor</b> George D.
<b>Analysis By</b> Jim A.	<b>Reviewed By</b> Joe B.	<b>Approved By</b> Jack C.
<b>Required / Recommended Personal Protective Equipment:</b> Rubber or leather gloves, rubber boots, rubber apron, hard hat, safety glasses, and face shield.		

JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION
1. Instruct employee in proper job procedures.	1. Working with unknown hazards.	1. Read entire JSA prior to starting work.
2. Gather and arrange all tools and materials necessary to perform the job.	2. Improper or incomplete tool or material selection resulting in muscle strain.	2. a) Review job procedure prior to performing job tasks to confirm which tools or materials are appropriate.
3. Obtain and wear designated PPE.	3. Incorrect selection of PPE resulting in unnecessary exposure to hazardous chemicals.	3. a) Review list of required PPE. b) Ask supervisor if you have any questions regarding this procedure.
4. Check each empty propane bottle for proper operation of pressure relief valve and primary shut-off valve.	4. Relief Valve or main shut-off valve stuck.	4. a) Red tag and send for repair any bottle with valves that cannot be operated by hand
5. Load empty bottles into vehicle and transport to filling station.	5. Damage to bottles or valves. Muscle strain potential during loading.	5. a) Carefully load bottles individually using proper lifting techniques. b) Secure all bottles to prevent movement during transport and install valve caps.

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