Oregon OSHA

Tools and Techniques for Job Hazard Analysis (JHA)

OSHA | Oregon OSHA
Department of Consumer and Business Services

Oregon OSHA Tools and Techniques for Job Hazard Analysis (JHA)

Presented by Oregon OSHA Public Education — Our Mission:

We provide knowledge and tools to advance self-sufficiency in workplace safety and health.

Department of Consumer and Business Services

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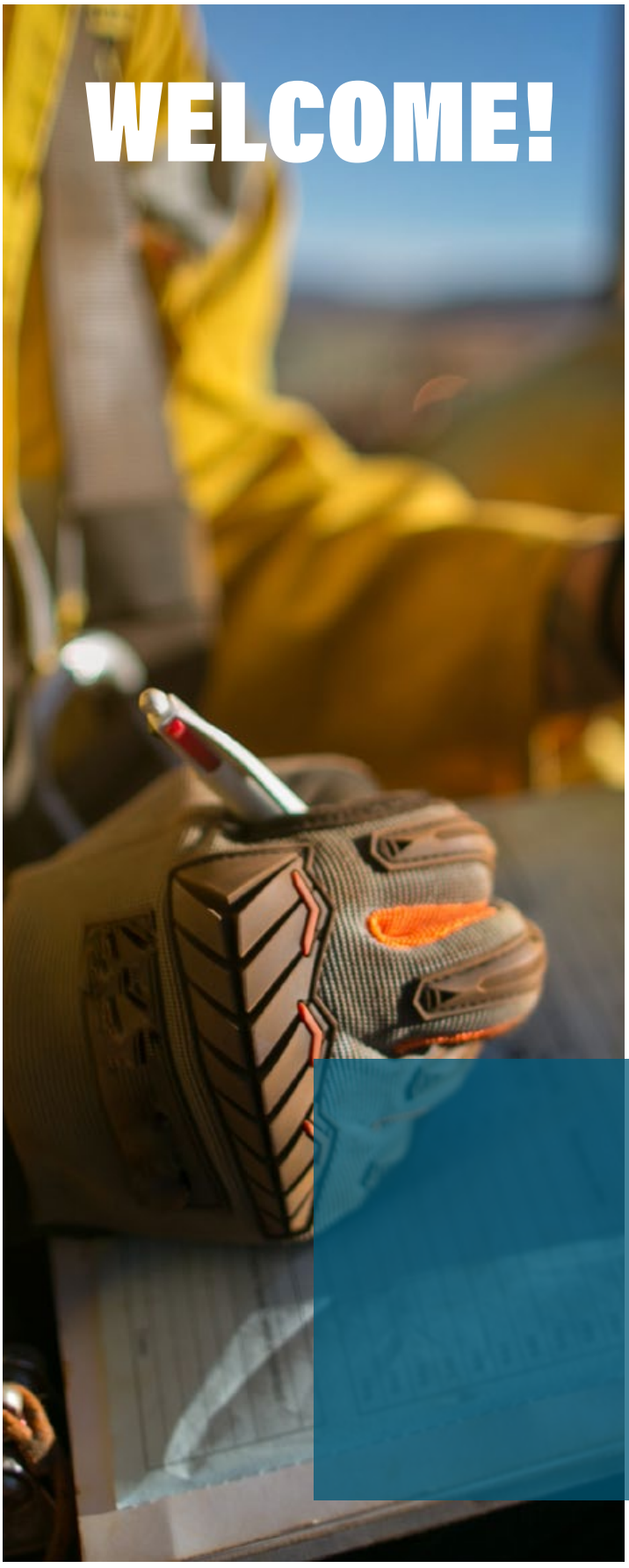


Welcome to Oregon OSHA's Conducting a Job Hazard Analysis (JHA). This workshop is designed to include you as much as possible in the learning experience. You're not just going to learn about the JHA; you're going to join a team and conduct one!

This workshop targets the employees, safety staff, supervisors, and others responsible for safety performance. We will introduce a new approach to conducting JHAs that will help make sure you're able to design job procedures that are as safe as possible. We'll also discuss ways to help you write effective safe job procedures that may be used as lesson plans for on-the-job training (OJT).

The more you contribute, the more you'll get out of this training. Participate and have fun!

Goals

Given the information and exercises in this workshop, you should be better able to:

1. Explain why JHAs are important
2. Describe the five-step JHA procedure
3. Conduct a JHA for a hazardous task

Introductions!

Getting around

Ground rules

Form teams

Please Note: This material or any other material used to inform employers of safety and health issues or of compliance requirements of Oregon OSHA standards through simplification of the regulations should not be considered a substitute for any provisions of the Oregon Safe Employment Act or for any standards issued by Oregon OSHA. This workbook is intended for classroom training use only.

What is a job hazard analysis (JHA)?

The JHA is an analysis and improvement process that can transform workplace safety. The JHA is a structured process that can discover the causes for the vast majority of workplace injuries and illnesses.

Is an employer required to conduct a job hazard analysis?

Most Oregon OSHA standards do not specifically require the employer to conduct a JHA. However, the employer is required to take the necessary steps to furnish employment (jobs, tasks, procedures) that is safe and healthful. The JHA helps fulfill this requirement.

Employers applying for Oregon OSHA's Safety and Health Achievement Recognition Program (SHARP) and the Voluntary Protection Program (VPP) usually conduct JHAs.

ORS 654.010 Employers to furnish safe place of employment:

> **Every employer shall …**
> - furnish employment and a place of employment which are safe and healthful for employees therein, and …
> - shall do every other thing reasonably necessary to protect the life, safety and health of such employees.

Why is a job hazard analysis important?

Workers are injured and killed at the workplace every day in the United States.

Safety and health can add value to your business, your job, and your life. One of the best ways to ensure safe work procedures is to conduct a JHA.

What is a "job"?

It's important to understand that a "job" in this procedure does not refer to the employee's job title or occupation, such as forklift operator or roofer. Actually, we're analyzing a "task" that is composed of a series of steps. A typical job includes a number of tasks. For instance, a forklift operator not only operates the forklift, but may inspect, perform maintenance, change tires, load materials, change batteries, etc. One or more of those tasks may be hazardous and in need of a JHA.

Conducting the JHA

Step 1: Prepare to conduct the JHA

Conduct an initial job review

Discuss with your employees the jobs and related hazards they know exist in their current work and surroundings. Ask them for ideas to eliminate or control those hazards.

Any problems that can be corrected easily should be done so as soon as possible. Do not wait to complete the JHA. This will demonstrate a commitment to safety and health and enable you to focus on the hazards and jobs that need more study due to their complexity.

Review your accident history

Review the history of accidents and illnesses that needed treatment, losses that required repair or replacement, and any "near misses" (events in which an accident or loss did not occur, but could have). These events may indicate existing hazard controls (if any) may not be adequate and deserve more scrutiny.

What records and reports will you review?

_____

_____

_____

_____

_____

_____

Involve your employees

It's important to involve employees in every step of the JHA process.

What are some reasons to involve employees in the JHA?

_____

_____

_____

_____

_____

_____

List Hazardous Jobs

There's usually not enough time or resources to conduct a JHA and write a safe job procedure for every job being done in your workplace.

Ask each supervisor and employee to identify the various jobs that will require an evaluation in each department. There may be quite a few job titles listed for a large manufacturing facility.

The quantity of jobs listed on the master list will vary depending on the size, complexity, and type of production process.

Discuss the various hazardous jobs where you work.

Make a list of four tasks below.

Example: "Removing scrap out of the paper cutter."

1. _____

2. _____

3. _____

4. _____

Conduct a Risk Analysis

Probability x Severity = Risk

Risk is a function of probability and severity

What is the probability?

Factors that can increase risk include:

- Number of employees exposed
- Frequency of each exposure
- Duration of each exposure
- Proximity of employees to the point of danger
- Unreasonable workload
- Working under stress (hurry, fatigue, illness, personal problems)
- Environment (noise, light, wind, rain)

Look at the four jobs listed in the previous exercise.

How probable is an injury in each of the jobs (unlikely, likely, very likely)?

Job 1_____

Job 2 _____

Job 3 _____

Job 4 _____

What is the severity?

Look at the four jobs again. How severe might the injury be as a result of an exposure in each (minor, serious, fatal)?

Job 1_____

Job 2 _____

Job 3 _____

Job 4 _____

Prioritize Hazardous Jobs

Once you have identified tasks you believe might be hazardous, you need to determine which tasks:

- Are most likely to cause injury or illness
- Will cause the most severe injury or illness

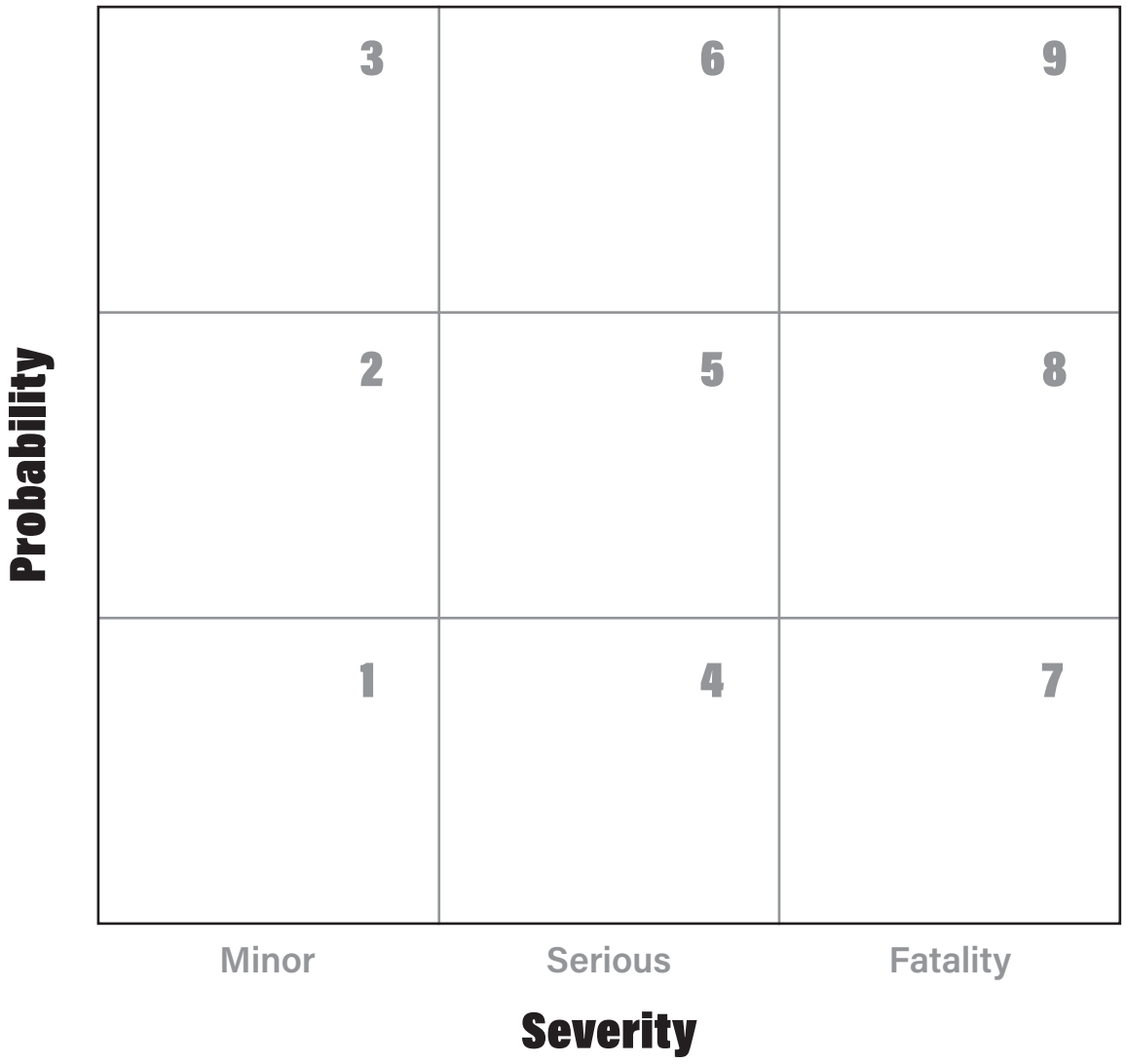
Analyze the "Worst First"

The hazards presenting the most risk need to be analyzed first. To determine risk objectively, use a structured method to prioritize hazards.

Another Way to Prioritize Jobs

To help prioritize jobs in your workplace, you might use a matrix like the one shown below.

Use this risk matrix to prioritize the four jobs listed in the previous exercise. (1=lowest priority, 9=highest priority)



Step 2: Observe the Job and List the Steps

Now that you've got jobs to analyze, you need to come up with a way to observe a job so you can develop a list of steps. Each step in a task describes an event. Once the step is understood, we can then analyze that step for hazardous conditions and/or unsafe behaviors. Developing the steps for a job is critical in the analysis process to improve the job and safety programs.

What are some ways to observe and record job steps?

_____

_____

_____

What is a "step"?

Each step describes an _____ : what the worker does in each step.

Tips on conducting the JHA

- Record enough information to describe each job action without getting overly detailed
- Do not combine steps (look for "and" in the step)
- Get input from other workers who have performed the same job
- Review the steps with workers to make sure you have not omitted something
- Point out that you are evaluating the task, not the worker's job performance
- Include the employee in all phases of the analysis, from reviewing the job steps and procedures to discussing uncontrolled hazards and recommended solutions
- It may be helpful to photograph or record the worker performing the job

Below, discuss and write a brief description of each step for any of the following common jobs:

- Filling a lawn mower with gasoline
- Changing a ceiling light bulb
- Cleaning out a rain gutter
- Cutting a piece of wood with a handsaw
- Mixing a pesticide/herbicide in a portable sprayer
- Moving a box
- Pounding a nail into a piece of wood
- Choose another common task at work or home

  Describe: _____

Job Hazard Analysis Worksheet

Task _____ Date _____

Location _____

Example: Step 3 – "Place lock and tag on the circuit breaker."

Step 1

_____

Step 2

_____

Step 3

_____

Step 4

_____

Step 5

_____

Step 6

_____

Step 7

_____

Step 8

_____

Step 9

_____

Step 10

_____

Step 11

_____

Step 12

_____

Step 13

_____

Step 14

_____

Step 15

_____

Be prepared to read your steps to the class.
Do not move on to the next exercise.

Step 3: Describe the hazards in each step

Hazards and Exposure

A hazard is an unsafe _____ that could cause injury or illness to an employee.

Exposure usually refers to an employee's placement relative to the hazard's _____.

Don't forget to look for potential hazards

To ensure that all hazards associated with a step are identified, analyze each step to identify potential as well as actual hazards produced by both work environment and the activity being performed. Be sure to consider the following:

- Is there danger of striking against, being struck by, or otherwise making harmful contact with an object?
- Can the worker be caught in, by, or between objects?
- Is there potential for a slip or trip?
- Can the employee fall from one level to another, or even on the same level?
- Can pushing, pulling, lifting, lowering, bending, or twisting cause strain?
- Is the work environment hazardous to safety or health?
- Are there concentrations of toxic gas, vapor, fumes, or dust?
- Are there potential exposures to heat, cold, noise, or ionizing radiation?
- Are there flammable, explosive, or electrical hazards?

Types of Hazards in the Workplace

1. **Falls.** The most common types of accidents are falls to the same surface and falls to below. The severity of injury from a fall depends on three factors:
    1. Velocity of the initial impact
    2. Magnitude of deceleration – due to hardness of the surface
    3. Orientation of the body on impact

    Examples: _____
2. **Impact.** Impacts resulting from **struck by** and **struck against** may cause serious injury. The severity of injury from impacting objects depends on three factors:
    - Velocity of the impact
    - Characteristics of the object (size, hardness, shape etc.)
    - Body part impacted

    Examples: _____
3. **Mechanical.** If it's mechanical and it moves, it's a hazard. There are as many hazards created by moving machine parts as there are types of machines. Mechanical hazards cause caught-

in, caught-on, and crush accidents that can cut, crush, amputate, break bones, strain muscles, and even cause asphyxiation.

Mechanical Hazard Motions:

Rotating Reciprocating Transverse

Mechanical Hazard Actions:

Cutting Shearing Bending Punching

Examples: _____

4. **Vibration and Noise.** Tools, equipment, and machinery that vibrate at a low frequency can injure a part of the body or the whole body. However, the most common sound-induced injury is due to high-frequency vibration. Low-frequency vibration hazards exist in two primary categories:
   - **Segmental Vibration.** Exposure to equipment that vibrates at various frequencies can affect different parts of the body. For instance, the hands are most sensitive to vibrations at 30-40 cycles per second. Internal organs can be affected by vibrations as low as 4-10 cycles per second.
   - **Whole-Body Vibration.** Very low frequencies can affect the entire body. For instance, truck drivers experience continuous whole-body vibration as they travel. That's one reason truck driving is considered one of the most hazardous tasks for lower back injuries.

   Examples: _____

5. **Toxics.** Virtually all materials may be toxic to some extent. In the workplace, a material is toxic if a small quantity can cause an injurious effect, such as tissue damage, cancer, mutations. It's important to consider the routes of entry of toxic materials into the human body. There are four possible routes of entry:
   - **Inhalation**. Breathing in toxics is the most common and dangerous route.
   - **Ingestion.** Toxics enter through the gastrointestinal tract.
   - **Absorption.** Toxics pass through skin into the bloodstream.
   - **Injection.** Toxics may be injected into the body by (needles, etc.). Injection is the least common, yet most direct route of entry.

   Examples: _____

6. **Heat and Temperature.** Overexposure to heat and temperature extremes may result in a

range of injuries, from burns to frostbite. Temperature indicates the level of heat present. The second law of thermodynamics states that heat will flow from an area of higher temperature to one of lower temperature. Heat is produced as a result of chemical reaction, combustion, electrical current, mechanical motion, and metabolism. Heat is transferred by:

- **Convection.** Heat is transferred by the movement of molecules through a gas or liquid.
- **Radiation.** Heat is transferred by heat waves and occurs when an object's temperature is below that of an object near to it which has a temperature above the object's temperature.
- **Conduction.** Heat is transferred from one body to another by direct contact of the two bodies or by an intervening heat conducting medium.

Examples: _____

7. **Flammability/Fire.** Fire may cause burn injuries. In order for combustion to take place, the fuel and oxidizer (oxygen) must be present in gaseous form. Flammable materials include:

fuel	coatings	plastics	fabrics
solvents	chemicals	hydraulic fluid	metals
cleaning agents	refrigerants	vegetation	rubber products
lubricants	insecticides	wood/paper	

Examples: _____

8. **Explosives.** The results of an explosion may range from minor injury to major catastrophe (e.g. the Space Shuttle Challenger). Instantaneous release of gas, heat, noise, or light and over-pressure creates a wave front that damages anything in its path. About 2 billion pounds of explosives are used by industry annually in construction, mining, quarrying, and seismographic work. Many types of explosions may occur:

chemicals	gases	vapors
solids	dusts	equipment

Examples: _____

9. **Pressure Hazards.** High and low pressure conditions in the workplace can result in injury. Standard atmospheric pressure is 14.7 pounds per square inch (psi). Gas distribution lines are considered high-pressure when operating at 2 psi or higher. The American Society of Mechanical Engineers (ASME) rates boilers that operate at more than 15 psi as high-pressure.

The pressure in full cylinders of compressed air, oxygen, or carbon dioxide are more than 2000 psi! Examples of pressure hazards include:

- **Ruptured cylinders.** The thrust generated by gas flowing through a puncture or rupture of a cylinder can be 20 times greater than the weight of the cylinder and reach velocity of 50 feet per second in 1/10th of a second! The result: a missile.
- **Whipping hoses and lines.** Compressed air and water hoses can kill when end fittings become loose. Such hoses and lines should be restrained by weighting with sandbags at short intervals, chained, clamped, etc. Never try to grab a whipping hose or line; turn off the controlling valve.
- **Water hammer.** The effect caused by a sudden stop of liquid flow causing a shock wave (water hammer) that can cause a line rupture. Have you ever heard a pipe "clang"?

10. **Electrical Contact.** Exposure to electrical current may cause injury or death. The voltage is not as important as the amount of current. It doesn't take much current to kill. There are five principle categories of electrical hazards:

    - **Shock.** Electrical shock is a sudden and accidental stimulation of the body's nervous system by an electrical current. Look for bare conductors, insulation failures, buildup of static electricity, and faulty electrical equipment.
    - **Ignition of combustible (or explosive) material.** Ignition is usually caused by a spark, arc, or corona effect (ionized gas allows a current between conductors).
    - **Overheating.** High current creates high heat that can result in fires, equipment burnout, and burns to employees.
    - **Electrical explosions.** Rapid overheating of circuit breakers, transformers, and other equipment may result in an explosion.
    - **Inadvertent activation of equipment.** Unexpected startup of equipment and machinery can injure and kill. That's why we have lockout/tagout procedures.

    Examples: _____

11. **Ergonomics.** Improper lifting, lowering, pushing, pulling, and twisting can cause strains and sprains. Hazards from poor ergonomics are the most common source of injury in the workplace. About 45 percent of all claims are related to poor ergonomics! Risk factors for poor ergonomics hazards exist in:

    - **The worker –** physical/mental capability, preexisting conditions, etc.
    - **The task –** work that includes high force, repetition, frequency and duration, inappropriate posture, point of operation, contact stress, etc.
    - **The environment –** noise, temperature, humidity, color, etc.

    Examples: _____

12. **Biohazards.** Exposure to plants, animals, or their products that may be infectious, toxic, or allergenic may cause illness and disease. People who work with animals, animal products or animal waste have a greater risk of infection. Biohazard agents include:
    - **Bacteria –** simple, one-celled organisms may or may not be harmful.
    - **Viruses –** organisms that depend on a host cell for development and reproduction.
    - **Fungi –** may be small or large, (mushroom) parasitic organisms growing in a living or dead plant or animal matter.
    - **Rickettsia –** rod-shaped microorganisms that are smaller than bacteria and depend on a host for development and reproduction. Microorganisms are transmitted by fleas, ticks, and lice.

    Examples: _____

Hazards Cause Accidents: The Final Effect

- **Struck-by.** A person is forcefully struck by an object. The force of contact is provided by the object.
- **Struck-against.** A person forcefully strikes an object. The person provides the force or energy.
- **Contact-by.** Contact by a substance or material that, by its very nature, is harmful and causes injury.
- **Contact-with.** A person comes in contact with a harmful substance or material. The person initiates the contact.
- **Caught-on.** A person or part of his/her clothing or equipment is caught on an object that is either moving or stationary.
- **Caught-in.** A person or part of him/her is trapped or otherwise caught in an opening or enclosure.
- **Caught-between.** A person is crushed, pinched, or otherwise caught between a moving and a stationary object or between two moving objects.
- **Fall-to-surface.** A person slips or trips and falls to the surface he/she is standing or walking on. A "top 10" cause of injury.
- **Fall-to-below.** A person slips or trips and falls to a level below the one he/she was walking or standing on.
- **Overexertion.** A person overextends or strains himself/herself while performing work. A "top 10" cause of injury.
- **Bodily reaction.** Caused solely from stress imposed by free movement of the body. Sudden motions, bends, slips, or trips without falling. A common cause of injury.
- **Overexposure.** Over a period of time, a person is exposed to harmful energy (noise, heat), lack of energy (cold), or substances (toxic chemicals/atmospheres).

Use the worksheet below to list the steps that have hazards. Describe the hazards and the type of injury/accident that could result. **Note:** Not all steps will have hazards.

EXAMPLE

Step 3 Hazards *Potential slip and trip hazard*

Injury/Accident *Fall to same surface*

Step _____ Hazards _____

Injury/Accident _____

Step _____ Hazards _____

Injury/Accident _____

Step _____ Hazards _____

Injury/Accident _____

Step _____ Hazards _____

Injury/Accident _____

Step _____ Hazards _____

Injury/Accident _____

Step _____ Hazards _____

Injury/Accident _____

Step _____ Hazards _____

Injury/Accident _____

Step _____ Hazards _____

Injury/Accident _____

Step _____ Hazards _____

Injury/Accident _____

Step 4: Develop Preventive Measures

How do I correct or prevent hazards?

After reviewing your list of hazards with the employee, consider control methods. The most effective measures are engineering controls that physically change a machine or work environment. The less likely a hazard control can be circumvented, the better. If this is not feasible, management controls may be appropriate. The JHA itself can be an effective management control.

Hazard Control strategies

There are four approaches used to eliminate or reduce hazards and exposures:

1. **Engineering controls –** Strategies to eliminate or reduce the hazard primarily through equipment replacement, substitution, redesign, or other engineering methods. If you can get rid of the hazards in a job, you may not need to conduct the JHA!
2. **Management controls (also called administrative or work practice controls) –** Strategies to eliminate or reduce exposure. You do this primarily by changing work practices, procedures, and schedules. Developing effective management controls is what the JHA is all about!
3. **Personal Protective Equipment (PPE) –** Using PPE is considered a safe work practice and can be expected to be a part of most JHAs. PPE establishes a barrier between the hazard and the worker. PPE is typically used in conjunction with management and engineering controls.
4. **Interim (temporary) measures.** Cones, guards, tape, etc., can all serve to temporarily protect employees from hazards until permanent control strategies are in place. You may need to temporarily protect employees while working toward a permanent solution.

Use the worksheet below to identify and list preventive measures in each step of the task your team has developed.

Step _____ Preventive Measures _____

_____

Step _____ Preventive Measures _____

_____

Step _____ Preventive Measures _____

_____

Step _____ Preventive Measures _____

_____

Step _____ Preventive Measures _____

_____

Step _____ Preventive Measures _____

_____

Step _____ Preventive Measures _____

_____

Step _____ Preventive Measures _____

_____

Step _____ Preventive Measures _____

_____

Step _____ Preventive Measures _____

_____

Step 5: Write the Safe Job Procedure (SJP)

Criteria for an Effective Safe Job Procedure

- Write in a step-by-step format, in paragraphs
- If no hazard or possible unsafe behavior exists in a step, state the action
- If a hazard does exist in a step, state the action and identify:
    1. the hazard
    2. the injury it could cause
    3. safety measures to prevent the injury
- Paint a word picture using details rather than concepts
- Write in the active voice – i.e., "take," not "should be taken"
- Use simple words – i.e., "use," not "utilize"
- Keep sentences to about 7-15 words
- Write in a conversational style

Example Safe Job Procedure: Pounding a nail into a piece of wood

Before you begin, get a hammer, nails and 2x4 lumber. Be sure to check tools to make sure they are not defective. Check to ensure you have enough light to see the work. Select and put on leather gloves, goggles, and a face shield. Make sure these items are clean, in good repair, and comfortable so they won't interfere with work.

1. Place a 2x4 on the work surface directly in front of you, and be sure it's secured and stable.
2. Take a nail and place it on the 2x4 where you want to pound it. Use your thumb and forefinger to hold the nail just below the head of the nail. Make sure you hold the nail so that the hammer will not hit your thumb or fingers.
3. Take the hammer and carefully tap the nail into the wood until it stands by itself. Brace the 2x4 with your free hand if you need to make sure the board does not move as you finish nailing.
4. Hammer the nail into the wood until the head of the nail is flush with the surface of the wood.

Using the worksheet below, write a safe job procedure for your team's job. Evaluate the SJP using the criteria on the previous page. Be prepared to analyze and evaluate SJPs developed by other groups.

Team leader: Assign different members of the team to make sure hazards, injuries, and safety measures are included in each step.

Safe Job Procedure

Reviewing the JHA

Reviewing JHAs Supports Continual Improvement

Periodically reviewing your job hazard analysis ensures that it remains current and continues to help reduce workplace accidents and injuries. Even if the job has not changed, it is possible that during the review process you will identify hazards not identified in the initial analysis.

- It is particularly important to review your job hazard analysis if an illness or injury occurs on a specific job. Based on the circumstances, you may determine that you need to change the job procedure to prevent similar incidents in the future.
- Any time you revise a job hazard analysis, it is important to train all employees affected by the changes in the new job methods, procedures, or protective measures adopted.

Use the JHA as a lesson plan

To get more value out of the JHA program, consider using the completed JHA as a lesson plan when training new employees. Incorporate the SJP into the organization's safety training plan. Doing so helps guarantee safe job procedures are taught from the start.

Review

1. It is important to involve the employee in the JHA because it builds _____ :

   a. doubt

   b. interest

   c. ownership

   d. complacency

2. Which of the following is not a good idea when conducting a JHA?

   a. Prioritize jobs to be analyzed

   b. Review accident history

   c. Arrange for no-notice observations

   d. Conduct preliminary job review

3. Which of the following is not included in a typical JHA?

   a. Description of each step

   b. Review of employee capabilities

   c. Identification of hazards

   d. Identification of safety precautions

4. Risk is determined by considering _____ and _____ :

   a. frequency, duration

   b. posture, behavior

   c. attitude, altitude

   d. probability, severity

5. When writing a safe job procedure make sure you:

   a. Write for clarity and understanding

   b. Write as abstract as possible

   c. Write in good technical jargon

   d. Do not include the obvious

Reference Materials

To determine risk, crunch the numbers

It may be useful to quantify your risk assessment, especially if your employer wants you to justify investing the time and money needed to conduct the JHA. To help you do that, use the criteria and ratings below to determine the overall risk of a task.

Probability – The likelihood of Injury or Illness

Criteria	Rating
Is the most likely and expected result if employee enters danger zone.	100
Is quite possible, would not be unusual, has an even 50/50 chance.	20
Would be unusual sequence or coincidence.	8
Would be a remotely possible coincidence. It has been known to have happened.	4
Extremely remote but possible. Has never happened after many years of exposure.	2
Practically impossible sequence or coincidence. Has never happened when exposed.	1

Severity – The most likely consequence

Criteria	Rating
Fatality	100*
Lost-time injury.	50*
Non-loss-time injury	10
Minor cuts, bruises, bumps; minor damage.	1

**multiply score by the number of workers*

Determine the risk scores for the jobs under analysis.

Job 1 – Probability Score _____ x Severity Score _____ = Risk Score _____

Job 2 – Probability Score _____ x Severity Score _____ = Risk Score _____

Job 3 – Probability Score _____ x Severity Score _____ = Risk Score _____

Job Hazard Analysis

Date: _____ JHA Number:_____ Steps: _____ to _____

Location of Job/Task: _____

Job/Task Title:_____

Step:____Description:_____

Hazard	Preventive Measure(s) Required

Step:____Description:_____

Hazard	Preventive Measure(s) Required

Step:____Description:_____

Hazard	Preventive Measure(s) Required

Step:____Description:_____

Hazard	Preventive Measure(s) Required

Safe Job Procedure (SJP)

Reviewed by:_____ Date: _____

S&H Representative: _____

Approved by:_____ Date: _____

Notes

Oregon OSHA Services

Oregon OSHA offers a wide variety of safety and health services to employers and employees:

Appeals

- **503-947-7426; 800-922-2689; admin.web@dcbs.oregon.gov**
- Provides the opportunity for employers to hold informal meetings with Oregon OSHA on concerns about workplace safety and health.
- Discusses Oregon OSHA's requirements and clarifies workplace safety or health violations.
- Discusses abatement dates and negotiates settlement agreements to resolve disputed citations.

Conferences

- **503-378-3272; 888-292-5247, Option 1; oregon.conferences@dcbs.oregon.gov**
- Co-hosts conferences throughout Oregon that enable employees and employers to learn and share ideas with local and nationally recognized safety and health professionals.

Consultative Services

- **503-378-3272; 800-922-2689; consult.web@dcbs.oregon.gov**
- Offers no-cost, on-site safety and health assistance to help Oregon employers recognize and correct workplace safety and health problems.
- Provides consultations in the areas of safety, industrial hygiene, ergonomics, occupational safety and health programs, assistance to new businesses, the Safety and Health Achievement Recognition Program (SHARP), and the Voluntary Protection Program (VPP).

Enforcement

- **503-378-3272; 800-922-2689; enforce.web@dcbs.oregon.gov**
- Offers pre-job conferences for mobile employers in industries such as logging and construction.
- Inspects places of employment for occupational safety and health hazards and investigates workplace complaints and accidents.
- Provides abatement assistance to employers who have received citations and provides compliance and technical assistance by phone.

Public Education

- **503-947-7443; 888-292-5247, Option 2; ed.web@dcbs.oregon.gov**
- Provides workshops and materials covering management of basic safety and health programs, safety committees, accident investigation, technical topics, and job safety analysis.

Standards and Technical Resources

- **503-378-3272; 800-922-2689; tech.web@dcbs.oregon.gov**
- D evelops, interprets, and gives technical advice on Oregon OSHA's safety and health rules.
- Publishes safe-practices guides, pamphlets, and other materials for employers and employees.
- Manages the Oregon OSHA Resource Center, which offers safety videos, books, periodicals, and research assistance for employers and employees.

Need more information? Call your nearest Oregon OSHA office.

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Bend

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Consultation: 541-388-6068

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