


Job Safety Analysis/Job Hazard Analysis template

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|---|--|---|--|--|
|  | The Grainger College of Engineering <small>UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN</small> | <h3>Job Safety Analysis (JSA) or Job Hazard Analysis (JHA)</h3> | | |
| Activity, Task or Job: | | | | |
| Completed by: | | Date completed: | | |
| Group name: | | Job location: | | |
| Other information: | | | | |

| Work steps | Hazards identified for each step | Risk level | Hazard Controls/Safe Work Procedures/PPE |
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See following pages for instructions and job aids.

Instructions for writing the JSA

Select the Job to be Analyzed

Jobs that have potential to cause injuries or illnesses are good candidates for a JSA, such as those that use hazardous materials or involve hazardous processes, especially those with a known history of accidents. Ideally, one JSA should be written for every Job.

Break Down the Job into Steps

Most jobs can be described in 6-8 steps. If a job requires many steps, divide into two or more segments, each with their own JHA. Keep the steps in order, since listing out of order may cause an oversight. Describe what is being done instead of how it is done.

Identify Hazards and Estimate Risk Level

Examine each step to identify hazardous actions, conditions and potentials that can lead to an accident. Use the Energy Wheel to identify hazards. All hazards should be identified including those that are not obvious. Using the Risk Matrix, identify the Risk Level of each step by thinking about the severity of the consequence (how badly someone can get hurt) in combination with the likelihood of occurrence.

Determine Controls and Preventive Measures

Use the Hierarchy of Controls to choose the most effective method of controlling the hazard—multiple controls may better than one, especially if the Risk Level is High or Critical. If the risk level is Critical, you may want to think about changing how the job is performed to reduce the Risk Level. Be specific and list exactly what needs to be done to control the hazard.

Implement and Communicate Controls

Train all personnel performing the job on the specific JSA to recognize the hazards and understand what appropriate control measures need to be taken. Make sure resources are available for implementing the controls—if the controls are not readily available, they will likely *not* be utilized.

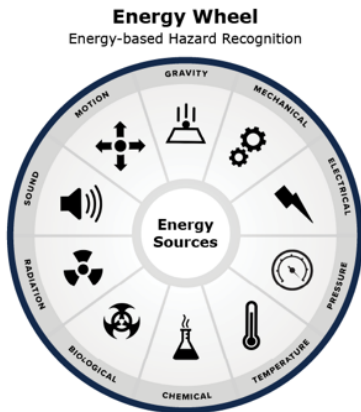
Review and Update the JSA

The JSA should be reviewed regularly and may need to be updated whenever there is a change in the nature and circumstances of the job, for example:

- There is a change in how the job is performed (for example: different procedure, new tools or new materials)
- Personnel are new or unfamiliar with the job.
- The job will be performed in a new location or environment.

Aids to writing a JSA

Energy Wheel



| Energy Sources | Examples |
|--------------------|--|
| GRAVITY | Enables objects to fall, roofs to collapse, people to trip and fall |
| MECHANICAL | Rotating equipment, drive belts, conveyors, motors, compressed springs |
| ELECTRICAL | Power lines, transformers, static charges, lightning, wiring, batteries |
| PRESSURE | Piping, compressed cylinders, hoses, pneumatic, hydraulic equipment |
| TEMPERATURE | Ignition sources, hot or cold surfaces, steam, friction, weather |
| CHEMICAL | Chemical vapors, toxic compounds, combustibles, corrosives |
| BIOLOGICAL | Bacteria, viruses, animals, insects, human materials, contaminated food or water |
| RADIATION | Solar rays, microwaves, X-rays, radioactive materials, welding arcs |
| SOUND | Equipment noise, vibration, high-pressure release |
| MOTION | Vehicles, vessels, water, wind, body movement |

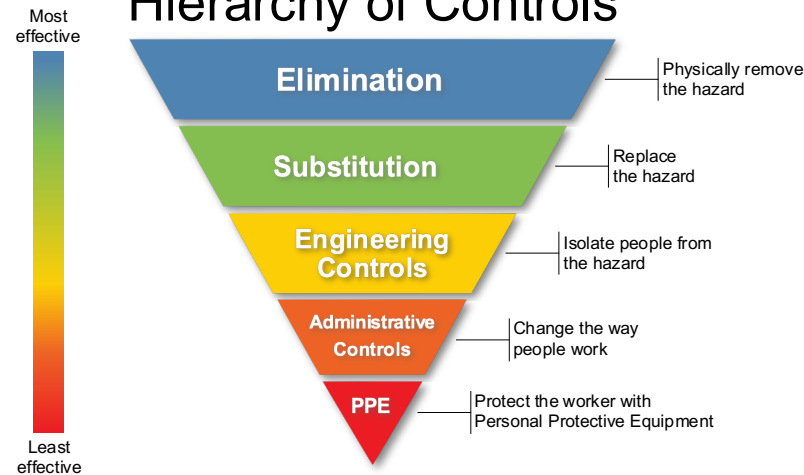
Hallowell, M. R. (2021) *Prof. Safety* 66 (12): 27–33.

Risk Matrix

| RISK ANALYSIS | | CONSEQUENCE | | | | |
|---------------|--|--|---|---|--|---|
| | | 1. INSIGNIFICANT Dealt with by in house first aid | 2. MINOR Treated by medical professionals, hospital out patients | 3. MODERATE Significant non permanent injury overnight hospital stay | 4. MAJOR Extensive permanent injury eg. Loss of fingers, extended hospital stay | 5. CATASTROPHIC Death, permanent disabling injury eg. Loss of hand, quadriplegia |
| LIKELIHOOD | A. Almost certain to occur in most circumstances | MEDIUM 8 | HIGH 16 | HIGH 18 | CRITICAL 23 | CRITICAL 25 |
| | B. Likely to occur frequently | MEDIUM 7 | MEDIUM 10 | HIGH 17 | HIGH 20 | CRITICAL 24 |
| | C. Possibly and likely to occur at sometime | LOW 3 | MEDIUM 9 | MEDIUM 12 | HIGH 19 | HIGH 22 |
| | D. Unlikely to occur but could happen | LOW 2 | LOW 5 | MEDIUM 11 | MEDIUM 14 | HIGH 21 |
| | E. May occur but only in rare circumstances | LOW 1 | LOW 4 | LOW 6 | MEDIUM 13 | MEDIUM 15 |

<https://www.assessor.com.au/resources/news-articles/how-to-read-a-risk-matrix>

Hierarchy of Controls



<https://www.cdc.gov/niosh/hierarchy-of-controls/about/index.html>