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## Legal Standards & References

Occupational Health and Safety Act, R.S.O. 1990, c. O.1 provides, among other things, that an employer shall;

- acquaint a worker or a person in authority over a worker with any hazard in the work and in the handling, storage, use, disposal and transport of any article, device, equipment or a biological, chemical or physical agent;
- ensure the measures and procedures are carried out in the workplace

## Definitions

“JSA” means Job Safety Analysis

“job” means a specific work assignment; “task” has similar meaning

## Policy Statement

It is the policy of The Corporation to:

- continually strive for the elimination of foreseeable hazards and control accidental loss
- protect workers and visitors from workplace hazards including workplace violence and workplace harassment from all sources
- provide workers with job-specific, appropriate and regular health and safety information, instruction and skills upgrades

## Purpose and Scope

This Standard describes the process for conducting a Job Safety Analysis. A Job Safety Analysis (JSA) is a procedure for systematically identifying and evaluating hazards associated with a particular job or task and integrating accepted safety and health principles and practices into that job. In a JSA, each basic step of the job is identified along with potential hazards and recommendations for doing the

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job safely. It is a process that can prevent work-related deaths, injuries and illnesses.

The development of JSA'S is an ongoing process which can take several years to complete. The Town therefore expects the JSA development to start in one work area and gradually proceed to other work areas over time. This method of development provides a basic foundation and examples for other working groups to proceed forward with assistance and standard formatting.

A JSA, or better still, a written work procedure based on it, can form the basis for regular contact between supervisors and workers. It can serve as a teaching aid for initial job training and as a briefing guide for infrequent jobs. It may be used as a standard for health and safety inspections or observations. In particular, a JSA will assist in completing comprehensive accident investigations.

JSA's are not suitable for jobs defined too broadly - for example, "overhauling an engine" - or too narrowly; for example, "positioning car jack." The job, not the individual, is being studied in an effort to make it safer by identifying hazards and making modifications to eliminate or reduce the hazards.

### **Standards/Procedures**

There are four basis steps to conducting a JSA

- selecting the job to be analyzed
- breaking the job down into a sequence of steps
- identifying potential hazards
- determining preventive measures to eliminate or control these hazards

#### **Step One: Selecting the Job**

Even if analysis of all jobs is planned, this step ensures that the most critical jobs are examined first. Factors to be considered in setting a priority for analysis of jobs include:

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- *Severity of injury or illness:* Consider the severity of the injury or illness if something were to go wrong.
- *Probability:* Think about how often a worker is exposed to the hazard. The more often a worker is exposed, the higher the probability of an incident.
- *Accident frequency and severity:* Look for jobs with a history of injuries or near misses and those with catastrophic potential.
- *Newly established jobs:* Due to lack of experience in these jobs, hazards may not be evident or anticipated.
- *Modified jobs:* New hazards may be associated with changes in job procedures.
- *Rarely performed jobs:* Workers may be at greater risk when undertaking non-routine jobs and a JSA provides a means of reviewing hazards.

### **Step Two: Breaking Down the Job into Steps**

In this step, identify and list the main activities of the job as a series of steps. A job step is defined as a segment of the operation necessary to advance the work.

1. This part of the analysis is usually prepared by knowing or watching a worker do the job. The observers are normally the immediate supervisor and co-workers.
2. The job observers should have experience and be capable in all parts of the job. The worker's experience contributes in making job and safety improvements.
3. Care must be taken not to make the steps too general. Missing specific steps and their associated hazards will not help. On the other hand, if they are too detailed, there will be too many steps. A rule of thumb is that most jobs can be described in less than ten steps. If more steps are required, you might want to divide the job into two segments, each with its separate JSA, or combine steps where appropriate. *As an example, the job of changing a flat tire will be used in this document.*
4. An important point to remember is to 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 actually exist.

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5. The job should be observed during normal times and situations. For example, if a job is routinely done only at night, the JSA review should also be done at night. Similarly, only regular tools and equipment should be used. The only difference from normal operations is the fact that the worker is being observed.
6. When completed, the breakdown of steps should be discussed by all the participants (always including the worker) to make sure that all basic steps have been noted and are in the correct order.
7. Each step is recorded onto a worksheet in sequence. Make notes about *what* is done rather than *how* it is done. Each item is started with an action verb. Job steps are recorded in the left hand column, as shown in the example below:

Sequence of Steps	Potential Accidents or Hazards	Preventive Measures
Park vehicle		
Remove spare and tool kit		
Pry off hub cap and loosen lug bolts (nuts)		
And so on.....		

### **Step Three: Identifying Potential Hazards**

Once the basic steps have been recorded, actual and potential hazards must be identified at each step.

1. Based on observations of the job, knowledge of accident and injury causes, and personal experience, list the things that could go wrong at each step. A second observation of the job being performed may be needed.
2. Since the basic steps have already been recorded, more attention can now be focused on each potential hazards. At this stage, no attempt is made to solve any problems which may have been detected.

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3. To help identify potential hazards, the job observers may use questions such as these (this is not a complete list):

- Can any body part get caught in or between objects or electricity?
- 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 vapours in the air?

4. Potential hazards are listed in the middle column of the worksheet, numbered to match the corresponding job step. For example:

Sequence of Steps	Potential Accidents or Hazards	Preventive Measures
Park vehicle	a) Vehicle too close to passing traffic b) Vehicle on uneven, soft ground c) Vehicle may roll.	
Remove spare and tool kit	a) Strain from lifting spare.	
Pry off hub cap and loosen lug bolts (nuts).	a) Hub cap may pop off and hit you b) Lug wrench may slip	
And so on.....	a) ...	

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#### **Step Four: Determining Preventive Measures to Eliminate/Control Hazards**

The final stage in a JSA is to determine ways to eliminate or control the hazards identified.

1. The generally accepted preventative measures, in order of preference, are:

a) Eliminate the hazard

This is the most effective measure. These techniques should be used to eliminate the hazards:

- Choose a different process
- Modify an existing process
- Substitute with less hazardous substance
- Improve environment (ventilation)
- Modify or change equipment or tools

b) Contain the hazard

If the hazard cannot be eliminated, contact might be prevented by using enclosures, machine guards, worker booths or similar devices.

c) Revise work procedures

Consideration might be given to modifying steps which are hazardous, changing the sequence of steps, or adding additional steps (such as locking out energy sources).

d) Reduce the exposure

These measures are the least effective and should only be used if no other solutions are possible. Measures may include;

- reducing the number of times the hazard is encountered
- modifying machinery so that less maintenance is necessary
- using personal protective equipment
- installing emergency facilities, such as eyewash stations

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2. 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 recommended measures are listed in the right hand column of the worksheet, numbered to match the hazard in question. For example:

<b>Sequence of Steps</b>	<b>Potential Accidents or Hazards</b>	<b>Preventive Measures</b>
Park vehicle	a) Vehicle too close to passing traffic  b) Vehicle on uneven, soft ground  c) Vehicle may roll.	a) Drive to area well clear of traffic. Turn on emergency flashers  b) Choose a firm, level parking area  c) Apply the parking brake; leave transmission in PARK; place blocks in front and back of the wheel diagonally opposite to the flat
Remove spare and tool kit	a) Strain from lifting spare.	a) Turn spare into upright position in the wheel well. Using your legs and standing as close as possible, lift spare out of truck and roll to flat tire.
Pry off hub cap and loosen lug bolts (nuts).	a) Hub cap may pop off and hit you b) Lug wrench may slip	a) Pry off hub cap using steady pressure  b) Use proper lug wrench; apply steady pressure slowly.
And so on.....	a) ...	a) ...

### **Creating a Written Safe Work Standard**

Once the analysis is completed, the results must be communicated to all workers who are, or will be, performing that job. This can take the form of a Safe Work Standard. The Standard based on the partial JSA developed in this example might start out like this:

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### 1. Park vehicle

- a) Drive vehicle off the road to an area well clear of traffic, even if it requires rolling on a flat tire. Turn on the emergency flashers to alert passing drivers so that they will not hit you.
- b) Choose a firm and level area for parking. You can jack up the vehicle to prevent rolling.
- c) Apply the parking brake, leave the transmission in PARK, place blocks in front and back of the wheel diagonally opposite the flat. These actions will also help prevent the vehicle from rolling.

### 2. Remove spare and tool kit

- a) To avoid back strain, turn the spare up into an upright position in its well. Stand as close to the trunk as possible and slide the spare close to your body. Lift out and roll to flat tire.

### 3. Pry off hub cap, loosen lug bolts (nuts)

- a) Pry off hub cap slowly with steady pressure to prevent it from popping off and striking you.
- b) Using the proper lug wrench, apply steady pressure slowly to loosen the lug bolts (nuts) so that the wrench will not slip, get lost or and hurt your knuckles.

### 4. And so on.....

#### Communication

- Every new and amended standard is shared with the Joint Health and Safety Committee for review and comment prior to approval
- Notice of approval is communicated via email and Health and Safety bulletin boards
- Copies of all standards are consolidated in binders available in every workplace

#### Training

- Every employee receives health and safety learning at orientation and regularly thereafter.

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### Evaluation

The Corporation's Health and Safety Policy is reviewed and updated annually in consultation with the JHSC.

### Acknowledge Success/Make Improvements

Human Resources and/or the JHSC may make recommendations regarding the provision and maintenance of a corporate health and safety policy.

Improvements are incorporated as part of the annual review. Successes are acknowledged at the annual Safety and Attendance Banquet.

### Forms

**This Standard takes effect immediately and remains in effect until replaced by a new Standard of superseded by legislation/regulation.**

\_\_\_\_\_  
Chief Administrative Officer

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Worker Co-Chair, JHSC

Reviewed (Date):	By (Name and Initial):
June 24, 2015	T. Mather

*\*This document can be made available in an accessible format upon request.*