Workplace injury prevention

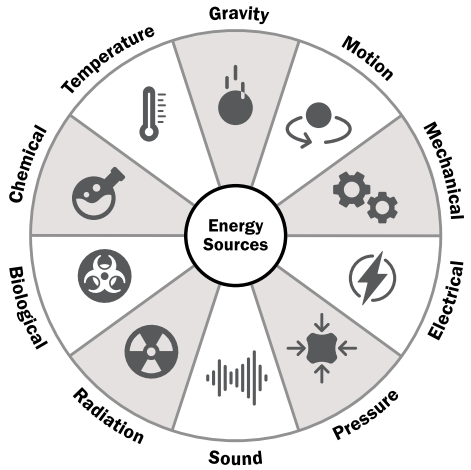
Job safety analysis (raw/controlled risk)

This Job Safety Analysis (JSA) tool is designed to support an energy based risk assessment of various tasks completed in a specific area, position, or work location. This identifies the hazards present, the risk associated with these energy based hazards, and potential controls. There are three versions of the JSA, that increase in complexity from JSA 1 to JSA 3. Employers should select the correct template for their workplace, and train workers on how to understand and complete the JSA(s).

JSA1	
1	Complete task information on the top of form.
2	Document major steps of the job in sequence from start to end of job.
3	Identify energy(s) present for each step.
4	Identify the specific hazard related to each energy for each step.
5	Identify the existing control.

JSA2	
1	Complete JSA 1 steps 1-5.
2	Using risk matrix (below) determine the likelihood and consequence hazard exposure, with existing control in place.

JSA3	
1	Complete JSA 1 steps 1-4.
2	Identify raw risk with no controls in place.
3	Document existing controls.
4	Re-calculate risk based on controls to determine impact of control against raw risk.



The hazardous energy wheel is a visual representation of energy found in the workplace that, if released, has the risk of causing an injury.

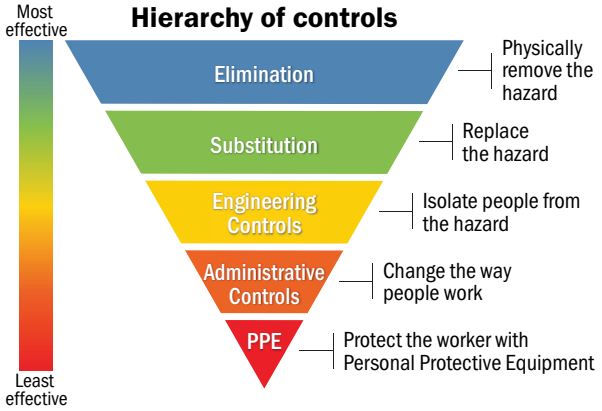
Risk assessment matrix

Likelihood \ Consequence	1	2	3	4	5
5	5	10	15	20	25
4	4	8	12	16	20
3	3	6	9	12	15
2	2	4	6	8	10
1	1	2	3	4	5

Risk rating

High	– work stops until risk is addressed
Medium	– implement temporary precautions until risk is addressed
Low	– address risk as soon as reasonably practical

Hierarchy of controls



Likelihood (probability/frequency)

5. **Almost certain** (expected to occur regularly under normal circumstances)
4. **Likely** (expected to occur at some time under normal circumstances)
3. **Possible** (may occur at some time under normal circumstances)
2. **Unlikely** (not likely to occur under normal circumstances)
1. **Rare** (could happen, but probably never will under normal circumstances)

Consequence

5. **Fatality**
4. **Major injury** (permanent disability)
3. **Serious injury** (time loss incident)
2. **Medical aid incident** (healthcare facility treatment)
1. **Minor injury** (first aid at worksite)

WorkSafe SASKATCHEWAN
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Workplace injury prevention

Job safety analysis (JSA 1)

Task:	Completed by:	JHA ID:
		Date:
Applicable positions:	Location:	Materials/equipment required:

Step	Energy	Hazard	Control

JSA-002

CLEAR FORM

Workplace injury prevention

Job safety analysis (JSA 2)

Task:	Completed by:	JHA ID:
		Date:
Applicable positions:	Location:	Materials/equipment required:

Step	Energy	Hazard	Control	Controlled risk		
				Likelihood	Consequence	Rating

JSA-003

CLEAR FORM

Workplace injury prevention

Job safety analysis (JSA 3)

Task:	Completed by:	JHA ID:
		Date:
Applicable positions:	Location:	Materials/equipment required:

Step	Energy	Hazard	Raw risk			Control	Controlled risk		
			Likelihood	Consequence	Rating		Likelihood	Consequence	Rating

JSA-004

CLEAR FORM

Workplace injury prevention

Job safety analysis (JSA 1)

Task:	**Completed by:**	**JHA ID:** 2342
Replacing a damaged water valve	Jane Doe	**Date:** 2022-05-15
Applicable positions:	**Location:**	**Materials/equipment required:**
Maintenance	Utility room	Soldering torch, copper pipe cutter, valve, flux, steel wool

Step	Energy	Hazard	Control
Inspect area and identify damaged valve	Gravity	Water on the floor near valve	Clean area before work begins, removed water
Turn off water supply to valve	Motion	Awkward position	Turn valve 1/4 turn at a time to reduce hand strain
Drain water from system	Pressure	Release of water	Release pressure in the system before proceeding with work to prevent spray or excess liquid loss
Cut the pipe at broken valve	Motion	Laceration	Ensure that proper pipe cutting tool is used and secured before making cut. Use gloves to ensure tight grip on pipe and cutter.
Remove old valve after cutting	Motion	Laceration	Use gloves to prevent cut on exposed pipe
Clean pipe with steel wool	Motion	Abrasion	Use gloves to protect hands, move slowly to maintain control
Apply flux to cleaned pipe	Chemical	Chemical	Keep flux away from face and eyes, wear eye protection
Install new valve and solder	Temperature	Flame from butane torch	Let the pipe cool for 5 minutes before inspecting solder
Install new valve and solder (2)	Temperature	Flame from butane torch	Implement a fire watch process to check area 30 minutes after completed task to prevent uncontrolled fire, ensure all unnecessary materials removed before using flame
Test valve	Pressure	Water spray	Return water pressure slowly and check for leaking periodically before returning to full pressure
Inspect work for leaks	Gravity	Water leaks causing trip hazard	Clean any excess water off the floor before inspecting or leaving area
Clean up materials and tools	Gravity	Slips and trips, awkward motion	Use proper lifting technique and material moving equipment while cleaning

SAMPLE

Workplace injury prevention

Job safety analysis (JSA 2)

Task:	**Completed by:**	**JHA ID:** 2342
Replacing a damaged water valve	Jane Doe	**Date:** 2022-05-15
Applicable positions:	**Location:**	**Materials/equipment required:**
Maintenance	Utility room	Soldering torch, copper pipe cutter, valve, flux, steel wool

Step	Energy	Hazard	Control	Controlled risk		
				Likelihood	Consequence	Rating
Inspect area and identify damaged valve	Gravity	Water on the floor near valve	Clean area before work begins, removed water	2	3	6
Turn off water supply to valve	Motion	Awkward position	Turn valve 1/4 turn at a time to reduce hand strain	2	2	4
Drain water from system	Pressure	Release of water	Release pressure in the system before proceeding with work to prevent spray or excess liquid loss	3	2	6
Cut the pipe at broken valve	Motion	Laceration	Ensure that proper pipe cutting tool is used and secured before making cut. Use gloves to ensure tight grip on pipe and cutter.	3	2	6
Remove old valve after cutting	Motion	Laceration	Use gloves to prevent cut on exposed pipe	3	2	6
Clean pipe with steel wool	Motion	Abrasion	Use gloves to protect hands, move slowly to maintain control	2	2	4
Apply flux to cleaned pipe	Chemical	Chemical	Keep flux away from face and eyes, wear eye protection	1	2	2
Install new valve and solder	Temperature	Flame from butane torch	Let the pipe cool for 5 minutes before inspecting solder	3	2	6
Install new valve and solder (2)	Temperature	Flame from butane torch	Implement a fire watch process to check area 30 minutes after completed task to prevent uncontrolled fire, ensure all unnecessary materials removed before using flame	3	3	9
Test valve	Pressure	Water spray	Return water pressure slowly and check for leaking periodically before returning to full pressure	2	2	4
Inspect work for leaks	Gravity	Water leaks causing trip hazard	Clean any excess water off the floor before inspecting or leaving area	2	2	4
Clean up materials and tools	Gravity	Slips and trips, awkward motion	Use proper lifting technique and material moving equipment while cleaning	2	2	4

SAMPLE

Workplace injury prevention

Job safety analysis (JSA 3)

Task:	**Completed by:**	**JHA ID:** 2342
Replacing a damaged water valve	Jane Doe	**Date:** 2022-05-15
Applicable positions:	**Location:**	**Materials/equipment required:**
Maintenance	Utility room	Soldering torch, copper pipe cutter, valve, flux, steel wool

Step	Energy	Hazard	Raw risk			Control	Controlled risk		
			Likelihood	Consequence	Rating		Likelihood	Consequence	Rating
Inspect area and identify damaged valve	Gravity	Water on the floor near valve	4	3	12	Clean area before work begins, removed water	2	3	6
Turn off water supply to valve	Motion	Awkward position	3	2	6	Turn valve 1/4 turn at a time to reduce hand strain	2	2	4
Drain water from system	Pressure	Release of water	4	3	12	Release pressure in the system before proceeding with work to prevent spray or excess liquid loss	3	2	6
Cut the pipe at broken valve	Motion	Laceration	4	3	12	Ensure that proper pipe cutting tool is used and secured before making cut. Use gloves to ensure tight grip on pipe and cutter.	3	2	6
Remove old valve after cutting	Motion	Laceration	3	3	9	Use gloves to prevent cut on exposed pipe	3	2	6
Clean pipe with steel wool	Motion	Abrasion	3	3	9	Use gloves to protect hands, move slowly to maintain control	2	2	4
Apply flux to cleaned pipe	Chemical	Chemical	3	3	9	Keep flux away from face and eyes, wear eye protection	1	2	2
Install new valve and solder	Temperature	Flame from butane torch	3	4	12	Let the pipe cool for 5 minutes before inspecting solder	3	2	6
Install new valve and solder (2)	Temperature	Flame from butane torch	4	4	16	Implement a fire watch process to check area 30 minutes after completed task to prevent uncontrolled fire, ensure all unnecessary materials removed before using flame	3	3	9
Test valve	Pressure	Water spray	4	3	12	Return water pressure slowly and check for leaking periodically before returning to full pressure	2	2	4
Inspect work for leaks	Gravity	Water leaks causing trip hazard	3	3	9	Clean any excess water off the floor before inspecting or leaving area	2	2	4
Clean up materials and tools	Gravity	Slips and trips, awkward motion	3	3	9	Use proper lifting technique and material moving equipment while cleaning	2	2	4

SAMPLE