HAZARD ASSESSMENT, ELIMINATION AND CONTROL PROCEDURE

INTRODUCTION

The fundamental principle of a health and safety Program is to reduce injury and disease to employees. One of the most important aspects of the University's health and safety program is hazard assessment. Hazard assessments are a requirement of the *Alberta Occupational Health and Safety (OHS) Code* - *Part 2 Hazard Assessment, Elimination and Control.*

TYPES OF HAZARD ASSESSMENTS

Formal hazard assessments involve a thorough review of the overall operations of an organization to identify hazards, assess risk (to help prioritize hazards), and develop, implement and monitor related controls. Worker jobs or types of work are broken down into separate tasks. Formal hazard assessments are detailed, can involve many people, and will require time to complete.

Field-level hazard assessments (site-specific) are performed before work begins at a new site and at a site where conditions change or when non-routine work is added. This flags hazards identified at the location (e.g. overhead power lines, poor lighting, wet surfaces, extreme temperatures, the presence of wildlife), or introduced by a change at the work site (e.g. scaffolding, unfamiliar chemicals, introduction of new equipment). Any hazards identified are to be eliminated or controlled right away, before work begins or continues.

Formal hazard assessments are required for all University of Lethbridge job positions and are completed using the **Hazard Assessment and Control Procedure** below. One Hazard Assessment Form may be completed for a number of job positions with similar tasks. Field-level hazard assessments are required for work sites, as appropriate.

This document includes procedures for conducting both formal and field-level hazard assessments.

PROCEDURE

1. **Prepare a Job Inventory**
   a) The formal hazard assessment process begins with the development of an inventory or listing of all positions and jobs at the workplace. Complete the **Job Inventory Form.**
   b) Using the job inventory, conduct a hazard assessment for each job or group of similar jobs.

2. **Conduct a Formal Hazard Assessment**

   a) List the activities or the tasks for the job on the Hazard Assessment Form. *Example: driving for work*

   b) Identify the health and safety hazards associated with the activity or task. *Example: speed, fatigue, adverse road/weather conditions, in vehicle distraction*

3. Calculate the Hazard Risk Rating

Risk is the chance of injury, damage or loss. Some hazards pose a greater risk than others. By evaluating the risk of the hazards, you can prioritize which hazards to address first. Once you have identified all the hazards of individual tasks, you can evaluate the level of risk that is associated with each hazard.

a. Calculate the risk rating by assessing the severity and likelihood. Multiply the two numbers to reach a total risk rating. See table below.

b. Record the Risk Rating on the Hazard Assessment Form:

SEVERITY(S)	LIKELIHOOD (L)	Hazard Risk Rating
How serious con the consequences be?	How likely is it going to happen?	Totals determine rating **(S x L)**
1. It could make you uncomfortable	1. It is unlikely	High Risk
2. It could send you to the hospital	2. It might happen	Moderate Risk
3. It could kill or cause a permanent disability, today or overtime	3. It is highly likely	Low Risk

		Severity		
		Make you uncomfortable	Send you to hospital	Kill you/cause a permanent disability
		1	2	3
Likelihood	Unlikely 1	1	2	3
	Might Happen 2	2	4	6
	Highly likely 3	3	6	9

High (6/9) means the hazard must be attended to immediately, prior to the commencement of the job. Controls must be put into place. A safe work procedure must be in place prior to the commencement of the job. Employees must be aware of the hazard.
Moderate (3/4) means the hazard requires attention. Controls should be put into place. A safe work procedure should be in place prior to the commencement of the job. Employees must be aware of the hazard.
Low (1/2) means the hazard requires monitoring. Controls are recommended. A safe work procedure is recommended. Employees must be aware of the hazard.

4. Identify Hazard Controls

Depending on the risk rating, **if the hazard cannot be eliminated or substituted**, **a hierarchy of controls must be implemented** to reduce the risk starting with engineering controls, then administrative controls and lastly the use of personal protective equipment:

1. **Engineering Controls (EC)** - Engineering controls provide the highest degree of worker protection because they eliminate or control the hazard at the source. Engineering controls are the preferred method of eliminating and controlling hazards.

2. **Administrative Controls (AC) -** If engineering controls cannot eliminate or control a hazard, administrative controls can be used to control the hazard to a level that is as low as reasonably achievable. Administrative controls are less effective than engineering controls since they do not eliminate the hazards. Examples include safe work policies, practices and procedures, job scheduling or rotation, and training.

3. **Personal Protective Equipment (PPE) -** As a last resort, workers may need to use personal protective equipment (PPE) to reduce the potentially harmful effects of exposure to a known hazard. PPE is much less effective than engineering controls since it does not eliminate the hazards. PPE is used when other controls are not possible and where additional protection is needed. These are considered the last line of control or defense.

4. **Combination of Control Methods -** Sometimes a hazard cannot be adequately controlled by a single type of control (engineering, administrative, or PPE). A combination of these methods may be required to effectively control the hazard. For example, the use of mechanical equipment may eliminate the need for manual lifting (engineering control) but supervisors are required to provide workers with appropriate procedures and training on the use of the mechanical equipment (administrative control).

Examples:
Engineering controls
- Design of a workplace
- Automation/material handling devices
- Machine guard, interlocks, lockouts, warning devices
- Isolation/enclosure
- Limitation (safety valves)
- Ventilation (general dilution/local exhaust)
- Flammable Storage Cabinets
- Air monitoring devices
- Communication devices

Administrative controls
- Purchasing criteria (tools, equipment, chairs, etc.)
- Policies and procedures
- Training
- Organizing and planning work
- Rotation of workers
- Safety plan/procedure

Personal Protective Equipment
- Hard hat
- Goggles
- Hearing Protection
- Safety boots
- Respiratory protective equipment
- Fall protection equipment

For the example described above listed are some controls to address the hazards associated with driving:
- *Drivers will be rested and take required rest breaks.*
- *Cell phones will not be used by drivers.*
- *Driver must be aware and comfortable to drive in various road and weather conditions.*
- *Others in vehicle will not distract the driver with their activities.*
- *Students and instructors will be required to complete a UofL Driver's Agreement.*

5. Communication

Ensure all affected workers understand the hazards and associated controls. Document that a hazard review has been completed by having workers **sign and date** the report.

6. Review of Hazard Assessments

Hazard assessments should be reviewed annually or when there are any changes to the activities or tasks.

7. Field-Level Hazard Assessments (FLHA)

A field-level hazard assessment (also called site-specific) is performed before work begins at a new work site, or if new hazards have been introduced at a familiar work site. FLHAs check for the introduction of any unexpected hazards, or hazards for which additional controls may be needed. Any hazards identified during a FLHA must be addressed right away, before work begins at the location. Using the FLHA template form provided, managers/supervisors should lead the FLHA, and affected workers must be involved.

If a FLHA identifies a hazard that was overlooked by the formal assessment, the formal assessment should be updated to include it. Re-assess as required, but don't overdo these assessments. When hazard assessments are performed too often, they become an exercise of simply going through the motions. Much of their value is lost through excessive repetition.

1. **<u>Assess the work site and identify the tasks for the day</u>** - consider the nature of the work that is being performed and who is scheduled to do it. This includes

the workers on site, as well as any other workers or crews scheduled to be on site for the day.

2. **Identify hazards on the work site** - any situation, condition or thing that may be dangerous to the safety or health of workers (e.g. slippery surfaces, uneven ground, strong wind, moving equipment, poor lighting).

    - Consider materials being used at the work site, and the processes being followed, types of equipment is or is expected to be on site, environmental conditions (e.g. rain, mud, wind) that could affect the site, the level of skill and experience of workers, working extra-long shifts (fatigue), visitors on site, etc.
    - The FLHA template can be customized for a specific work environment (i.e. common hazards in work processes).

3. **Eliminate or control the hazards identified** - there is no point to prioritizing the hazards identified during a FLHA. All of the hazards identified should be either eliminated or controlled before work proceeds.

4. **Communicate:** make sure all affected workers are aware of and understand the hazards and follow the controls. The employer is legally required to inform affected workers about the hazards identified in a hazard assessment, and the measures introduced to control the hazards. Workers are required to follow/use the controls. Ensure affected workers review and sign the completed FLHA. Add any new or previously unidentified hazards noted in a FLHA to formal hazard assessment documentation, as appropriate.

5. **Repeat when there are changes to the work site** - a FLHA must be repeated if conditions at the work site change. They must also be dated and retained for record keeping.