

Chapter 9: Hazard Identification, Risk Assessment and Risk Control

Introduction

Hazards are a source of danger to workers.

Risk assessment is a systematic method of identifying and analyzing the hazards associated with an activity and establishing a level of risk for each hazard.

Risk control involves establishing methods or processes to eliminate or mitigate those hazards which pose an unacceptable risk to workers.

There are three steps to hazard and risk assessment, analysis and control. BCTS calls it the “RAC IT” approach to dealing with hazards (Recognize/Report, Assess, Control IT).

Step 1 Hazard Identification – “Recognize/Report it”

The purpose of hazard identification and analysis is to identify and develop a list of hazards for each job in the organization that are reasonably likely to cause people to be exposed to injury, illness or disease if not effectively controlled. BCTS staff and other workers can then be informed of these hazards and of the controls put in place to protect workers prior to them being exposed to the actual hazard.

The hazard identification phase involves reviewing equipment, machinery, work areas, work practices, processes, procedures, and hazardous substances to carefully evaluate all sources of hazards for BCTS employees.

During the creation of this manual, the BCTS safety task team examined the hazards previously identified and used as a basis for MOFR safety manuals. The team went through exhaustive listings of work processes during face-to-face sessions to identify hazards. Team members came from various job functions across the organization, and were requested to seek input from other staff in their home offices to ensure comprehensive consideration of common BCTS concerns.

Hazards were identified and ranked on a provincial scale and may not fully describe every local situation.

Identification of Additional or New Hazards

If a known hazard is not listed in the task inventory analysis attached to this manual, it is important to report the hazard to your supervisor. Chapter 15 describes the reporting process. Supervisors must review the hazard in consideration of the risk assessment process below, discuss it with workers and take immediate action to control any hazard which poses an unacceptable level of risk to workers.

In addition, new hazards identified by BCTS staff should be discussed at safety meetings and reported on appropriate forms to the district safety contact. District Safety contacts should forward these forms to the provincial safety co-ordinator to review and include in future revisions to the manual as approved by senior management. Wherever practicable, BCTS wishes to maintain consistent safe work procedures on a provincial basis, acknowledging that these may need to be modified or added to cover local conditions or practices.

New hazards which may pose a threat to BCTS or other workers in other areas should also be immediately advised by way of a BCTS Safety Alert or incident report (See Chapter 16). Do not wait for the administrative process to work through to alert other workers of hazards.

See Table 9-1 BCTS Task Inventory Listing and Risk Analysis located in Appendix 9-1.

Step 2 Risk Assessment – “Assess it”

Risk assessment is the process used to determine the likelihood that people may be exposed to injury, illness or disease in the workplace arising from any situation identified during the hazard identification process prior to consideration or implementation of control measures.

Risk occurs when a person is exposed to a hazard. Risk is the likelihood that exposure to a hazard will lead to an injury or a health issue. It is a measure of the probability and potential severity of harm or loss.

To establish risk, BCTS uses a ranking system developed by the US National Safety Council. Two things are being determined:

1. How severe an injury would be if it occurred, and
2. What the probability is that it could happen.

BCTS uses the same categories for the severity of risk in this assessment as it does to describe what level of investigation is needed in the event of an incident or close call. See Chapter 16.

Severity

0. Negligible – minor injury, requiring First Aid or less.
1. Minor – includes injuries which are non time loss incidents and equipment damage less than \$5,000.
2. Serious - includes loss of time injuries which do not involve loss of life or limb and equipment damage of more than \$5,000, but less than \$100 000.00.
3. Imminent danger - when a catastrophic event may occur. This includes major disabling injuries, fatally injured workers, and equipment damage in excess of \$100,000.

Probability

- A. Probable – likely to occur immediately or soon
- B. Reasonably probable – likely to occur eventually
- C. Remote – could occur at some point
- D. Extremely remote – unlikely to occur

BCTS has listed the identified hazards in the task inventory analysis. All of those hazards identified by the task team have been assessed and those deemed to be 2B or greater will be further addressed within the BCTS Safety Program with control measures.

BCTS will conduct a task inventory analysis for any new jobs created and will risk rate and add any new hazards to the list.

In the future as additional hazards are determined or described, the provincial safety co-ordinator will utilise the 12 business area safety contacts and risk rank any new hazards and include them in revisions to the BCTS task inventory analysis. In addition, management may on review of program performance or on the basis of staff input change the risk ranking process or add additional controls as they see necessary to improve the program and worker safety

Step 3 Risk Control – “Control it”

Risk control is the process used to identify, develop, implement and continually review all practicable measures for eliminating or reducing the likelihood of injury, illness or disease in the workplace.

The most effective methods of control are;

1. Elimination of hazards (i.e., removing exposure to the hazard – an example would be falling a danger tree along side an access road).

2. Substitute something safer (i.e., change the sequence of steps, or a process, as an example use different machine).
3. Use engineering/design controls (i.e., by utilizing enclosures, guards, restraints, etc.).
4. Use administrative controls such as safe work procedures (fully describe and train staff in how do the jobs in a manner that reduces the exposure to the hazard/reduces the risk).
5. Protect the workers (i.e., use of PPE, ensuring competence through supervision and training, etc.).

Control Measures

Control Measures are discussed in Chapter 10.

Local Procedures

Are intended to augment provincial procedures where local circumstance dictate's the necessity for specific procedures in order to adequately control risk to BCTS staff.

Forms and Checklists

Appendix 9-1 BCTS Task Inventory Listing and Risk Analysis